BEFORE THE

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF CWA AUTHORITY, INC. FOR (1) AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR WASTEWATER UTILITY SERVICE IN THREE PHASES AND APPROVAL OF NEW SCHEDULES OF RATES AND CHARGES APPLICABLE THERETO; (2) APPROVAL OF A LOW-INCOME CUSTOMER ASSISTANCE PROGRAM; AND (3) APPROVAL OF CERTAIN CHANGES TO ITS GENERAL TERMS AND CONDITIONS FOR WASTEWATER SERVICE.	)	**CAUSE NO. 45151**

DIRECT TESTIMONY
of
JOHN R. BREHM

On
Behalf of
Petitioner,
CWA Authority, Inc.

Petitioner's Exhibit No. 2

INTRODUCTION AND BACKGROUND

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is John R. Brehm. My business address is 2020 North Meridian Street, Indianapolis, Indiana.

Q2. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A2. I am employed by the Board of Directors for Utilities of the Department of Public Utilities of the City of Indianapolis (the "Board of Directors" or "Board"), which does business as Citizens Energy Group ("Citizens Energy Group" or "Citizens"). Citizens Energy Group owns a number of businesses including the gas, steam and water utilities serving Indianapolis. Citizens Energy Group is also affiliated with CWA Authority, Inc. ("CWA Authority" or "CWA"), which owns the wastewater utility that provides wastewater collection and treatment utility services in Indianapolis and wastewater treatment services to surrounding communities. Pursuant to a Management and Operating Agreement approved by this Commission in Cause No. 43936, Citizens Energy Group provides management and operational services for the wastewater utility owned by CWA. CWA is the Petitioner in this proceeding. I am Senior Vice President and Chief Financial Officer of Citizens Energy Group and CWA.

Q3. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A3. I graduated from Indiana State University in 1975 with a degree of Bachelor of Science in Accounting. I am a member of the American Institute of Certified Public Accountants and the Indiana CPA Society.

Q4. PLEASE DESCRIBE YOUR BUSINESS EXPERIENCE.

A4. I have spent over 40 years working in the utility industry, having served over 25 of those years cumulatively as the Chief Financial Officer ("CFO") for two of the largest utility organizations serving Indianapolis. I have served as Citizens Energy Group's Chief Financial Officer for nearly 14 years. Utilities have the privilege of serving as the exclusive provider of essential services to customers. I believe inherent in the privilege of being the exclusive provider is the duty to serve customers well. For my part as Chief Financial Officer, the duty of serving customers well primarily means maintaining the financial integrity and flexibility of the utility to provide reasonable assurance to customers that the utility will have the facilities, workforce and other resources necessary to serve well at a reasonable cost over the long haul.

I worked for Indianapolis Power & Light Company ("IPL") from June 1972 through March 2001, including the first three and one-half years as an accounting co-op student. During my co-op period of employment, I engaged in various accounting tasks in IPL's Financial and Special Reports Division. Upon my full time employment with IPL in 1976, I worked consecutively as an accountant in the Controller Organization and as a Financial Analyst in the Treasurer Organization. From November 1978 to May 1980, I was Supervisor of the Budget and Forecasting Division. From May 1980 to May 1981, I was Director, General Accounting Department. In May 1981, I was elected Assistant Controller of IPL where I was responsible to the Vice President and Controller for overseeing the work customarily performed within an electric utility controller function, including the preparation of internal and external financial statements, tax returns, the annual operating budget, long-range financial forecasts and accounting exhibits presented to regulatory bodies, including the Indiana Utility Regulatory Commission ("Commission"). In 1987, I was elected Treasurer of IPL. In that capacity, under the supervision of the Executive Vice President, I was responsible for recommending, coordinating and implementing security offerings, the daily cash management of funds including short-term borrowings and short-term investments and other related treasury functions.

In April 1989, I was elected Senior Vice President – Financial Services of IPL; in 1991, I was elected Senior Vice President – Finance and Information Services of IPL; and in April 1998 I was elected Senior Vice President – Finance of IPL. In those capacities, among other duties, I assisted in the formulation of financial policy and directed and coordinated the financial and accounting activities of IPL. I also directed the Controller and the Treasurer in the performance of their duties. I was responsible for coordinating, reviewing and approving all major accounting and treasury changes, reports and financial strategies to facilitate the financial management of IPL. I also supervised staff preparation for registration, issuance and sale of securities. Additionally, I set policy and supervised preparation for financial proceedings before all regulatory bodies, including cases to establish basic rates and charges and fuel adjustment charge proceedings that were presented before the Commission. In that capacity, I testified before the Commission on numerous occasions.

From April 1989 to March 2001, I also served as Vice President and Treasurer of IPALCO Enterprises, Inc. ("IPALCO"), the parent holding company of IPL, and was the CFO of both IPALCO and IPL.

From April 2001 to June 2004, I worked as an independent utility consultant providing professional services in a variety of areas, including financial matters, regulatory matters and planning. In that capacity I testified before the Commission as an expert witness.

From June 2004 through March 2005, I served as the Chief Operating Officer of the Indiana Humanities Council, a nonprofit organization dedicated to connecting people, opening minds and enriching lives by creating and facilitating programs that encourage people to think, read and talk.

Since becoming employed by Citizens Energy Group in March 2005, I have, among other duties, served as the Senior Vice President and Chief Financial Officer of CWA since its formation in 2011. I was named by the Indianapolis Business Journal as a CFO of the Year for 2011.

Q5. PLEASE DESCRIBE YOUR DUTIES AND RESPONSIBILITIES AS CHIEF FINANCIAL OFFICER FOR CITIZENS ENERGY GROUP AND CWA.

A5. As CFO, my duties include overall responsibility for the financial functions of Citizens Energy Group and CWA, and the utilities they manage and control, including the wastewater utility. I assist in the formulation of financial policy and direct and coordinate the financial and accounting activities of Citizens Energy Group and CWA. I also direct the Vice President and Controller, the Director of Treasury and the Director of Supply Chain in the performance of their duties. I am responsible for overseeing, reviewing and approving all major accounting and treasury activities, reports and financial strategies to facilitate the financial management of Citizens Energy Group and CWA as well as all major supply chain activities to support efficient operation of the utilities under Citizens Energy Group's operational control, including CWA.

Q6. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?

A6. Yes. I have testified numerous times before the Commission, including CWA's rate cases, Cause Nos. 44305 and 44685, and in Cause No. 43936 that resulted in the Commission's approval of the acquisition of the assets of the wastewater utility previously operated by the Sanitary District of the City.

Q7. WHAT HAVE YOU DONE TO PREPARE YOURSELF TO TESTIFY IN THIS PROCEEDING?

A7. As CFO, I have responsibility for achieving and maintaining sound financial performance for CWA to ensure the long-term financial integrity of the system in order for CWA to be able to provide the critical services it is charged with providing. Consequently, my daily duties prepare me to offer expert testimony on the subject matters I address in this case. In addition, throughout the period of planning for the acquisition of the wastewater utility assets I oversaw the development of the financial strategy for operating the wastewater utility. I also oversaw the planning and execution of the acquisition financing. I have also overseen all matters related to all subsequent financings of CWA. In connection with such financings, I participated in meetings with rating agencies with respect to receiving credit ratings on Petitioner's debt. In fact, I have routinely participated in meetings with rating agencies for over 30 years. In the normal course of my duties during the test year, I met periodically with certain members of Citizens Energy Group's financial staff who administer Petitioner's debt service obligations, as well as with certain members of the financial staff responsible for financial statement preparation. I have read the Petition and the direct testimony and attachments Petitioner filed in this proceeding. I have also familiarized myself with certain parts of the statute that govern ratemaking for the Petitioner.

Q8. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A8. The purpose of my testimony is to explain key financial realities and resulting consequences facing CWA. In particular, I address the financial realities and resulting consequences caused by the 2006 Federal Combined Sewer Overflow Consent Decree, as amended (the "Consent Decree"). Because the Consent Decree, which is discussed in more detail by Petitioner's witness Mark C. Jacob, is a long-term program that involves a number of projects that span multiple past and future Commission regulatory proceedings, I provide a historical financial perspective, as well as a look forward. I also discuss credit matters. From a revenue requirements standpoint, I provide support for and sponsor the pro forma revenue requirement of CWA for the revenue funded portion of total extensions and replacements ("E&R") and for debt service.

SUMMARY OF PROPOSAL

Q9. PLEASE SUMMARIZE CWA'S PROPOSAL FOR THE RATES ESTABLISHED IN THIS CASE, AND HOW THAT PROPOSAL RELATES TO THE AMOUNT OF PRO FORMA DEBT SERVICE, REVENUE FUNDED E&R AND PAYMENTS IN LIEU OF TAXES ("PILOT") CWA IS PROPOSING TO USE IN DETERMINING ITS REVENUE REQUIREMENTS.

A9. The annual revenue requirement and rates and charges currently in effect for CWA (including the applicable system integrity adjustment ("SIA")) were designed to provide for the needs of the wastewater system through July 31, 2018. CWA's base rates and charges were approved by the Commission in Cause No. 44685 and the current SIA was approved in Cause No. 44990. CWA has assumed, given the date of filing the case-in-chief in this Cause and the provisions of SEA 560, IC 8-1-2-42.7, the order establishing new rates and charges in this Cause will be issued by the end of July, 2019 which is almost 300 days from the filing date. CWA is proposing to increase its rates and charges in three steps – step one upon receiving an Order in this case or approximately August 1, 2019, step two one year following implementation of step one or approximately August

1, 2020, and step three one year following implementation of step two or approximately August 1, 2021.[1] The reasons for proposing to increase rates and charges in three steps is due to CWA's debt service obligations increasing materially each year because a significant amount of new debt must be issued each year to finance the large E&R spending requirements of the wastewater system driven largely by the Consent Decree. In its Order in Cause No. 43936 at page 24, the Commission expressed its understanding that annual rate increases were an integral component of CWA's financial reality:

> We further understand the unusual scope and magnitude of [CWA's] need to access the capital markets on an ongoing and regular basis and its need for timely approval of rates sufficient to support frequent future debt issuances. Mr. Brehm testified that annual rate increases are a fundamental requirement in order for [CWA] to have the financial ability to operate, maintain and improve the Wastewater System in order to provide adequate and reliable service to customers.

As I explain later in my testimony, the revenue funded amount of E&R must also increase in each of the three steps in order to sustain CWA's debt service coverage ratio in light of the annual increase in its debt service cost. In addition, CWA's PILOT obligation to the City of Indianapolis is increasing

[1] The fiscal year for CWA is October 1 through September 30. For purposes of my presentation all references to the twelve months ended July 31, 2020 represent the first twelve months following receipt of an Order in this case, all references to the twelve months ended July 31, 2021 represent the second twelve months following receipt of an Order in this case, and all references to the twelve months ended July 31, 2022 represent the third twelve months following receipt of an Order in this case. Due to the significant and recurring nature of its capital spending requirements and attendant annual increases in debt service costs, CWA will likely need to increase rates again after July 31, 2022 either through use of the Environmental Compliance Plan Recovery Mechanism ("ECPRM") or by filing its next general rate case approximately 300 days prior to July 31, 2022. However, CWA does not know and can make no representation at this time regarding the timing of a subsequent rate case.

annually in accordance with the PILOT payment schedule that was approved by the Commission in Cause No. 43936.

Q10. IN ITS PRIOR RATE CASES, CAUSE NOS. 44305 AND 44685, CWA PROPOSED AND THE COMMISSION APPROVED TWO-STEP RATE INCREASES. WHY IS CWA NOW PROPOSING A THREE-STEP RATE INCREASE?

A10. CWA is proposing to increase rates in three steps in order to increase the time span between filing general rate cases during the time remaining to complete the Consent Decree projects. If the proposed three-step approach to general rate increases proves sustainable, it will eliminate one of the general rate increases that otherwise would be required to complete the Consent Decree, as compared to continuing the two-step approach to rate increases. CWA believes it is good for all constituencies to have fewer general rate cases because they are expensive and time consuming.

Q11. WHERE ARE DETAILED EXPLANATIONS PROVIDED IN PETITIONER'S CASE-IN-CHIEF OF THE FINANCING AND PILOT REQUIREMENTS OF CWA DURING THE PERIOD OF TIME YOU ANTICIPATE RATES APPROVED IN THIS PROCEEDING WILL BE IN EFFECT?

A11. I explain in detail the annual financing requirements and resulting pro forma debt service costs of CWA through the twelve months ended July 31, 2022 in

Petitioner's Attachments JRB-1 and JRB-2 to this testimony. The testimony of Petitioner's witness Korlon L. Kilpatrick describes CWA's intention to true-up the proposed rates upon the issuance of the new debt for any material difference between the actual and pro forma debt service costs. The annual PILOT payments through the twelve months ended July 31, 2022 are explained in detail in the testimony of Petitioner's witness Sabine E. Karner.

Q12. WHY HAS CWA PROPOSED THE RATES ESTABLISHED IN THIS CASE BE IMPLEMENTED IN THREE STEPS TO COVER ITS PROJECTED DEBT SERVICE COSTS THROUGH THE TWELVE MONTHS ENDED JULY 31, 2022, RATHER THAN USE THE ENVIRONMENTAL COMPLIANCE PLAN RECOVERY MECHANISM ("ECPRM") TO COVER SUCH COSTS?

A12. The ECPRM is an important component of ratemaking for CWA because it provides a potential means of increasing rates outside of a general rate case to cover annually increasing debt service costs due to new debt issuances to finance approved Environmental Compliance Plan ("ECP") projects. CWA is grateful this mechanism was supported by the Settling Parties in Cause No. 43936 and approved in final form by the Commission in Cause No. 44053. However, this case encompasses many more issues than the recovery of debt service costs. For example, the PILOT payments to the City are increasing. Also, the revenue funded amount of E&R must be increased as I explain below. Consequently, a single issue focused proceeding such as the ECPRM is not appropriate in this context.

<u>FINANCIAL REALITIES AND RESULTING CONSEQUENCES OF CWA</u>

Q13. WHAT ARE THE MOST NOTABLE FINANCIAL REALITIES OF CWA?

A13. As someone who has spent decades working to ensure utilities are successfully financially managed in order to be able to provide the essential services they are charged with providing, the fact that CWA is highly leveraged coupled with imposing E&R investment requirements are striking financial realities. Table 1 provides financial ratios that illuminate the substantial extent to which CWA is leveraged compared to industry benchmarks. In considering these ratios it is important to keep in mind the total amount of outstanding CWA debt, which is over *<u>$1.8 billion</u>* currently and will be increasing to nearly *<u>$2.2 billion</u>*[2] during the time period encompassed in the three rate increase steps proposed in this case.

Table 1 – Key Leverage Ratios for CWA Compared to Industry Benchmarks[3]

Ratio	CWA	Median for Large Municipal Systems	Median for All Municipal Systems
Total Debt to Net Plant	100%	47%	41%
Total Debt Per Customer	$7,570	$2,177	$1,893
Total Debt Service as a % of Revenues	48%	23%	20%

[2] This amount is the net of debt issuances less debt principal payments.
[3] The source of the industry benchmark information in Table 1 is the Fitch Ratings *2018 Water and Sewer Medians* report.

The total debt of CWA amounts to 100 percent of its net plant investment which is more than double the municipal water and wastewater industry benchmark ratio. Moreover, the total debt per CWA customer is three and a half times the industry benchmark for large municipal systems and four times the benchmark for all municipal water and wastewater systems. The extent to which CWA is leveraged is further illustrated by its total dollars of annual debt service amounting to nearly half of total revenues, as compared to the industry benchmark of less than a quarter of revenues for large municipal systems and a fifth of revenues for all municipal water and wastewater systems. Table 1 taken in the aggregate shows that by any reasonable standard CWA is highly leveraged compared to industry norms and particularly so when the over *$1.8 billion increasing to nearly $2.2 billion* of outstanding debt is kept in mind.

Q14. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE SIGNIFICANT SIZE OF CWA'S E&R INVESTMENT REQUIREMENTS?

A14. Yes. In its Order in Cause No. 43936 the Commission stated at page 18:

> The Commission was presented with evidence demonstrating the significant challenges both the Water and Wastewater Systems face in the upcoming years, which underscores the need to ensure these critical utility assets are under the operational control of a qualified and experienced utility organization. Both Systems require a significant amount of capital investment. This is particularly true with respect to the Wastewater utility, which must comply with the terms of the Consent Decree.

Q15. BEFORE ACQUIRING THE WASTEWATER SYSTEM DID YOU RECOGNIZE THE FINANCIAL REALITIES ENUMERATED ABOVE?

A15. Yes. The two excerpts from the Commission's Order in Cause No. 43936, in which the Commission approved the transfer of the wastewater system from the City of Indianapolis to CWA, demonstrate that we informed all parties before the acquisition that CWA's financial realities would be characterized by high leverage as part of the strategy to fund the large E&R investment requirement. My testimony explained that CWA planned to fund the consent decree portion of the E&R investment requirement (referred to as the CSO project) largely through debt in light of concerns related to affordability for its customers:

> Since the CSO project has relatively discrete beginning and end dates, the Authority intends to fund the CSO project largely through annual issuances of new debt rather than have the capital spending amounts be largely included in annual revenue requirements….The use of debt to fund the CSO project allows rates to increase more gradually, although it results in rates being higher at the end of the project in 2025 than would be the case if there was a larger step-up in rates in earlier years of the project in order to reduce the overall amount of new debt issuances. We have assumed customers prefer gradualism in necessary rate increases over experiencing larger rate increases earlier in the life span of the CSO project. [Direct testimony of John R. Brehm in Cause No. 43936 at pages 15-16]

Q16. IN CAUSE NO. 43936, DID YOU ALSO DISCUSS COUNTERMEASURES CWA WOULD NEED TO IMPLEMENT IN LIGHT OF THE FINANCIAL REALITIES DISCUSSED ABOVE?

A16. Yes. I discussed imperatives to successfully operate, maintain and improve the wastewater system, provide high quality and reliable service to customers, and ensure CWA's financial integrity and flexibility. Specifically, I discussed the danger of an over-reliance on debt to fund capital improvements to the wastewater system and the need to gradually increase the amount of revenue funding for the wastewater utility's imposing E&R spending requirements. For example, I explained:

> In addition, Petitioners' due diligence investigation revealed that the long-term revenue plan of DPW was based in part on a level of pay-as-you-go funding in rates for Extensions and Replacements capital spending that may be inadequate for prudent financial management of a utility over the long term. The result of sustaining such a plan over the long term is an over-reliance on debt. Frankly, over-reliance on debt due to inadequate pay-as-you-go funding in rates for Extensions and Replacements is one root cause of the financial emergency that presently plagues the Water System. In order to avoid history repeating itself, CEG's financial model assumes the level of pay-as-you-go funding in rates for Wastewater System Extensions and Replacements will be increased gradually over time as part of the rate increase plan. [Direct testimony of John R. Brehm in Cause No. 43936 at page 16]

Q17. IS THE TERM "PAY-AS-YOU-GO FUNDING IN RATES FOR EXTENSIONS AND REPLACEMENTS" IN THE QUOTE ABOVE SYNONYMOUS WITH THE TERM "REVENUE FUNDED EXTENSIONS AND REPLACEMENTS?"

A17. Yes.

Q18. SINCE ACQUIRING THE WASTEWATER SYSTEM HAS CWA FOLLOWED THE FINANCING PRINCIPLES THAT YOU OUTLINED IN CAUSE NO. 43936 AND FINANCED THE CONSENT DECREE LARGELY WITH DEBT WHILE ALSO INCREASING THE AMOUNT OF REVENUE FUNDED EXTENSIONS AND REPLACEMENTS IN EACH RATE CASE?

A18. Yes.

Q19. IN LIGHT OF YOUR TESTIMONY IN CAUSE NO. 43936, WHY HAS CWA CHOSEN TO CONTINUE FINANCING THE CONSENT DECREE LARGELY WITH DEBT KNOWING THAT THE UTILITY WAS HIGHLY LEVERAGED AND THAT ITS CONTINUING E&R INVESTMENT REQUIREMENT WAS ALSO LARGE?

A19. Our execution of the plan thus far has been consistent with what I testified CWA should and would do if it acquired the wastewater utility and assumed responsibility for completing the Consent Decree projects. The plan was intentionally strategic, oriented toward the twin goals of making the necessary rate increases for fulfilling the requirements of the Consent Decree more gradual, and therefore more affordable in the near term for customers, as well as achieving long-term financial integrity and sustainability for CWA. The plan and its execution demonstrate the level of experienced professional financial utility management expertise the Commission envisioned when it approved CWA's acquisition of the wastewater assets in Cause No. 43936.

In the 2011 timeframe, when we were considering undertaking the responsibility that would accompany our acquisition of the wastewater system, the approximately 230,000 customers of the wastewater system faced a $2.4 billion (in 2016 dollars) capital program imposed by the United States Environmental Protection Agency ("EPA") to comply with the Consent Decree. That amounts to a capital spend of over $10,400 per customer in 2016 dollars.

Moreover, because the system experiences very limited growth in billable volumes, increases in customer rates would be required to raise the additional revenue necessary to pay for the Consent Decree. CWA recognized this mathematical reality and concluded the best way to help customers through this inevitable transition to higher wastewater service rates was by using debt to finance a large portion of the Consent Decree so the transition to higher rates could be accomplished more gradually and therefore create monthly bills for customers that are more manageable.

Q20. IF GRADUALISM AND NEAR-TERM AFFORDABILITY ARE CWA'S CONCERN, WHY HAS CWA SOUGHT TO INCREASE THE REVENUE FUNDED LEVEL OF E&R IN EACH RATE CASE?

A20. In 2011, I testified that gradually increasing the amount of revenue funding for E&R is what CWA should and would do if it acquired the wastewater utility and assumed responsibility for completing the Consent Decree projects, and the phased increases to revenue funded E&R in this case continue executing that plan. Increases to the revenue funded level of E&R in each CWA rate case are necessary to support CWA's long-term financial sustainability and provide CWA the opportunity to issue debt at reasonable cost in all market conditions. The ability of an issuer to raise debt at reasonable cost in all market conditions is known as "financial flexibility," which is a basic principle of financial management. Prior to acquiring the wastewater system, I also testified about financial flexibility in Cause No. 43936:

> The lack of sufficient financial flexibility to raise necessary debt capital across a variety of market conditions would be adverse to the Authority's, or any Wastewater System owner's, financial ability to operate, maintain and improve the Wastewater System in order to provide adequate and reliable service to customers. [Direct testimony of John R. Brehm in Cause No. 43936 at page19]

Financial flexibility is essentially an entity's ability to raise debt during "bad times" whether the bad times are characterized by the firm itself experiencing financial stress or by credit market conditions being under stress due to the general economy, inflation, changing investor requirements or world events, just to name a few examples of the conditions that can cause credit market stress.

Q21. HOW DOES INCREASING THE REVENUE FUNDED LEVEL OF E&R IN EACH RATE CASE SUPPORT CWA'S FINANCIAL FLEXIBILITY SO IT CAN HAVE A REASONABLE OPPORTUNITY TO ISSUE DEBT IN ALL MARKET CONDITIONS?

A21. One measure of financial flexibility is the debt service coverage ratio. The debt service coverage ratio is essentially a measure of a firm's downside protection to absorb business risks and still be able to cover its debt service obligations. Mathematically, each additional increment of debt service requires an increase in the revenue funded portion of E&R to sustain the same level of debt service coverage. This is illustrated in Table 2.

Table 2 – Computation of Debt Service Coverage Ratios[4]

CWA Authority
Computation of Total Debt Service Coverage Ratios
At Approved Rates In Cause Nos. 44305 and 44685

Line No.		Step Two Approved in Cause No. 44305 (A)	Step Two Approved in Cause No. 44685 (B)
1	Net Revenue Available for Debt Service	156,616,111	190,022,736
2	Total Debt Service	110,616,111	133,022,736
3	Revenue Funded E&R	46,000,000	57,000,000
4	Total Debt Service Coverage Ratio (Line 1/Line 2)	1.42	1.43

In the computation of the debt service coverage ratio, the difference between the "Net Revenue Available for Debt Service" amount (which is the numerator in the computation) and the "Total Debt Service" amount (which is the denominator in the computation) is the revenue funded amount of E&R. Column A of Table 2 illustrates that the $46.0 million revenue funded amount of E&R approved in Cause No. 44305 coupled with the $110.6 million total debt service amount in that case produced a total debt service coverage ratio of 1.42x. Column B of Table 2 illustrates that the $57.0 million revenue funded amount of E&R approved in Cause No. 44685 coupled with the $133.0 million total debt service amount in that case produced a total debt service coverage ratio of 1.43x. Each additional increment of debt service necessitates a corresponding increase in the

[4] Lines 1 and 2 of Columns A and B in Table 2 represent the approved pro forma adjusted for the debt service true-up.

revenue funded portion of E&R simply to maintain the same level of debt service coverage.

Table 3 – Pro Forma Debt Service Coverage Ratios

CWA Authority
Computation of Total Debt Service Coverage Ratios
At Proposed Rates

Line No.		Step One Proposed Rates (A)	Step Two Proposed Rates (B)	Step Three Proposed Rates (C)
1	Net Revenue Available for Debt Service	211,508,616	224,578,144	235,210,405
2	Total Debt Service	139,508,616	148,578,144	155,210,405
3	Revenue Funded E&R	72,000,000	76,000,000	80,000,000
4	Total Debt Service Coverage Ratio (Line 1/Line 2)	1.52	1.51	1.52

For this rate case, CWA has included in its proposed annual revenue requirements $72.0 million of revenue funded E&R for the step one rates, $76 million of revenue funded E&R for the step two rates and $80.0 million of revenue funded E&R for the step three rates. Petitioner's Table 3 shows the pro forma debt service in each step of the current rate case coupled with the respective revenue funded portion of E&R results in a pro forma total debt service coverage ratio of 1.51x – 1.52x, which is a slight improvement from the debt service coverage ratio result of the last rate case. However, Table 4 shows a debt service coverage ratio of 1.51x – 1.52x is an erosion of CWA's debt service coverage in comparison to the industry median for large systems.

Table 4–Debt Service Coverage Ratio for CWA Compared to Industry Benchmarks[5]

Cause No.	CWA	Median for Large Municipal Systems	Median for All Municipal Systems
Total Debt Service Coverage Ratio Cause No. 44685	1.43	1.7	2.1
Total Debt Service Coverage Ratio Current Rate Case	1.51-1.52	1.9	2.1

Q22. PLEASE EXPLAIN TABLE 4.

A22. Table 4 presents the total debt service coverage ratio for CWA compared to the municipal water and wastewater industry benchmark information as the benchmark information existed at the time of the last CWA rate case and as it exists today. The table shows the coverage ratio at approved rates in Cause No. 44685 was below the industry benchmark, which means CWA had less protection to absorb downside business risks than the industry benchmark. The table also shows the industry benchmark has improved for large systems[6] since the last rate case. Consequently, even though CWA's proposed revenue funded E&R amounts in this rate case result in a slight improvement in the debt service coverage ratio compared to Cause No. 44685, CWA will need to continue to increase revenue funding of E&R to align its debt service coverage performance with the industry benchmark.

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[5] The source of the industry benchmark information in Table 3 for Cause No. 44685 was the Fitch Ratings *2015 Water and Sewer Medians* report and for the current rate case is the Fitch Ratings *2018 Water and Sewer Medians* report.

[6] CWA falls in the large system category per the Fitch criteria.

Q23. IN AN EARLIER ANSWER, YOU STATED THE CWA FINANCIAL PLAN WAS INTENTIONALLY STRATEGIC. PLEASE ELABORATE.

A23. The concept of "strategic" in the context of the CWA financial plan essentially means to "begin with the end in mind," a concept that I came to appreciate nearly thirty years ago after reading a book by author Steven Covey. For CWA that meant understanding from the start that the upper boundaries of leverage would be pushed by using debt to finance a large portion of the Consent Decree in order to help customers more gradually navigate the inevitable transition to higher wastewater service rates. However, it also meant understanding that annual increases in debt service would drive down financial flexibility as measured by the debt service coverage ratio absent a corresponding increase in revenue funded E&R. Moreover, it meant understanding such high leverage ratios were not permanently sustainable so revenue funded E&R would need to be gradually increased during the Consent Decree construction period to the point of E&R being entirely revenue funded by completion of the Consent Decree projects to position CWA for long-term financial sustainability. Revenue funded E&R then must be maintained at 100 percent for a long time following Consent Decree completion in order to gradually bring CWA's leverage ratios in line with industry benchmarks. Bringing CWA's leverage ratios in line with industry benchmarks to promote long-term financial sustainability is the end in mind. Later in my testimony I will explain this long-term goal will not be realized until the year 2042 or later.

It is also important when you are dealing with such a long-term planning horizon to take to heart another Steven Covey concept which is "the map is not the territory." This concept essentially means that a plan is good and necessary and a great guide, but the plan itself is not real life. Real life is "the territory." The plan needs to be adjusted along the way in light of actual financial performance and with actual real life financial market experience and feedback, such as the feedback we receive from bond investors, rating agencies and the Indiana Finance Authority ("IFA").

Q24. WHAT IS CWA'S STRATEGY WITH RESPECT TO ITS DEBT STRUCTURE?

A24. CWA's strategy is anchored in the prudent use of fixed-rate, long-term debt, which is the most effective and financially sustainable debt mechanism for CWA. The strategic concept underlying the use of fixed rate, long-term debt reflects that a fundamental step for a utility in response to high leverage is to issue debt that amortizes over a long time horizon such as 30 years with a fixed interest rate. This type of debt can be characterized as "plain vanilla," but that is not indicative of a lack of financial sophistication, rather it is just the opposite. So called plain vanilla debt has the broadest and deepest pool of long-term debt investors which is the type of market CWA must target because of its large annual need for debt during the 2011-2025 span of Consent Decree construction.

Q25. AS A FUNDAMENTAL PRINCIPLE OF FINANCE, WHICH IS THE HIGHER STRATEGIC PRIORITY – ACCESS TO CAPITAL OR THE COST OF CAPITAL?

A25. Although cost of capital is important, it is essential for an experienced financial professional to understand that access to capital must always be a higher strategic priority in finance than cost. Access to capital is what drives the comparative cost of debt. Taking the question of access to capital to its logical conclusion, an inability to raise capital when needed would be financially damaging and potentially disastrous.

Q26. CAN YOU PROVIDE AN EXAMPLE OF THE UNINTENDED AND ADVERSE CONSEQUENCES A UTILITY CAN FACE WHEN IT RELIES TOO HEAVILY ON COMPLEX OR NONTRADITIONAL FINANCIAL INSTRUMENTS?

A26. Yes, a local example is the City of Indianapolis Department of Waterworks ("DOW") use of auction rate debt. Auction rate debt was tax-exempt debt that was supported by bond insurance to effectively give it a triple A ("AAA") credit rating. Auction rate debt took advantage of the short end of the yield curve by resetting interest rates every 7 days at a rate determined through an auction conducted by a third-party broker-dealer and auction agent. The DOW had a large portion of its outstanding debt portfolio in auction rate debt. The problem for the DOW was not the use of auction rate debt per se; it was the large degree to which it was used. Unfortunately, credit concerns regarding the bond insurers began to emerge in late 2007 due to the theretofore unknown credit exposure that insurers had to the sub-prime mortgage crisis. As a reminder, the sub-prime mortgage crisis was the precipitating cause of the so called Great Recession in 2008. As a result, several of the primary bond insurers were downgraded from AAA ratings in early 2008.

As a result of actual and rumored insurer downgrades, investor participation in the auction rate market dropped precipitously and auctions across the country began to fail in their weekly remarketing of bonds offered for sale. When bonds that were offered for sale did not receive sufficient clearing bids, the holders of those securities were required to continue holding those bonds at interest rates determined through a formula prescribed in the offering documents. Those formula rates were substantially higher than comparable tax-exempt money market rates in order to compensate the investors for holding securities they no longer desired to hold.

The sudden increase in debt service cost caused the DOW to fail its debt covenants and that, in turn, prevented the DOW from issuing new fixed rate bonds to eliminate the auction rate bonds. DOW had to file for emergency rate relief in Cause No. 43645. In the Commission's Interim Emergency and Prehearing Conference Order in that cause, dated June 30, 2009, the Commission made several findings relative to the DOW's financial situation and financial management capabilities:

> . . . we find . . . that an emergency exists based on the department's potential shortfall to cover its debt service requirement and the need to refund the existing variable rate debt. We find that if an increase in rates and charges is not ordered on an emergency basis, the Department will suffer serious financial deterioration and be unable to meet its daily expenses. (p. 13)

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> . . . we have concerns whether the Department currently has the managerial capabilities to address the financial emergency situation in which it finds itself. (p. 13)

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> . . . several factors related to the Department's financing situation are simply related to poor management. (p. 25)

These DOW financial and managerial issues, as well as the DPW's consent decree massive funding requirements were among the reasons the City sought to transfer its water and wastewater assets to Citizens.

Q27. HOW HAVE THE FINANCIAL REALITIES YOU HAVE DISCUSSED AFFECTED CWA'S ABILITY TO ISSUE DEBT?

A27. Thus far, CWA has been able to cost-effectively issue debt required to fund the Consent Decree projects. That needs to continue, not just for the duration of the Consent Decree construction period, but for the long-term future, as I will explain below. It is important to recognize we have been in a bull market for bonds from the time CWA acquired the wastewater system in 2011 through 2017. When market conditions are favorable (*i.e.*, "bullish"), as was the case for CWA from the time of transfer of the wastewater system through 2017, there are more investment dollars that investors are seeking to invest in bonds than the supply of bonds being offered by issuers. In this bullish market condition, access to capital is favorable which results in favorable interest rates. CWA has been benefitting from this sustained favorable market condition by being able to issue bonds as needed at reasonable cost.

Q28. DO ANY TRENDS INDICATE THE DEBT MARKET FOR CWA IS CHANGING AND BECOMING LESS FAVORABLE THAN IT HAS EXPERIENCED PREVIOUSLY?

A28. Yes. The Federal Reserve began its current cycle of interest rate tightening in December 2015 when it increased the federal funds rate from 0.25% to 0.50%. The most recent increase occurred in September 2018 and the federal funds rate now stands at 2.25%. This means that during the current cycle of interest rate tightening, the Federal Reserve has raised short term interest rates by 200 basis points. However, during this same period, 30-year Treasury bond yields[7] have risen by just 20 basis points. When rates at the short end of the yield curve rise materially more than rates at the long end of the curve, it is known as a "flattening" of the yield curve. This means investors are receiving less relative compensation for taking on the risk of investing in longer term securities. This creates a potential problem for CWA because CWA sells bonds with a 30-year level debt service amortization schedule.[8] A 30-year level debt service amortization schedule is important for CWA's customers because it allows for

[7] Treasury bond yields serve as the reference point for pricing all bonds.
[8] A 30-year level debt service amortization schedule is very similar to a 30-year home mortgage.

lower annual debt service and therefore more gradual rate increases than would be the case if CWA issued bonds with a shorter level debt service amortization schedule.[9] The specific problem the flattening yield curve presents to CWA is that it reduces the number of investors willing to invest in longer dated bond maturities. For many such investors, the lower relative compensation from investing in longer term securities compared to shorter term securities does not justify the increased risk of investing for a longer term. In a 30-year level debt service amortization schedule, nearly 67% of the total debt principal amortizes in years 16 through 30. Consequently, the flattening of the yield curve means it is becoming more challenging to issue bonds in the year 16 through 30 time periods because fewer investors are seeking to invest in bonds for this time period than existed when the yield curve was steeper.

Moreover, the recent reduction in the corporate federal income tax rate has reduced the demand for investing in tax-exempt bonds by certain corporate investors such as some insurance companies and banks. Unfortunately, such corporate investors typically invest at the longer end of the yield curve.

Consequently, CWA may experience relatively less access to debt capital in the critically important longer-term time periods, which could cause its debt costs to increase.

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[9] This is essentially the same dynamic as an individual faces when choosing between, for example, a 30 year and 15 year home mortgage.

Q29. DO THE RATING AGENCIES MAKE AN ASSESSMENT OF CWA'S MANAGEMENT AS PART OF THE CREDIT RATING PROCESS?

A29. Yes. The rating agencies generally speak quite favorably of the Citizens/CWA management team in their reports. For example, in its most recent credit rating report on CWA, Standard and Poor's ("S&P") states:

> Because of what we characterize as strong management that aligns operational needs and financial requirements, we do not currently see any downward pressure on the rating or outlook barring significant or unexpected deterioration in the [system's] financial performance.

In addition, in its most recent credit rating report on CWA, Moody's states:

> The Citizens Wastewater Authority (CWA Authority) credit profile incorporates the utility's ability to soundly manage the significant capital improvement program which is a response to a federal consent decree. The wastewater capital program is ahead of schedule and under budget.

Q30. DOES CWA'S REQUIREMENT TO RECEIVE COMMISSION APPROVAL TO ADJUST RATES AND CHARGES AFFECT THE RATING AGENCIES' PERCEIVED RISK OF CWA AS AN INVESTMENT?

A30. Yes. The rating agencies[10] view the fact that CWA's rates are regulated by a state commission to be highly unusual based on their experience of rating wastewater utility systems. Most large wastewater utility systems have the ability to increase

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[10] Citizens'/CWA's ratings are determined by the Public Finance group within the rating agencies; whereas investor-owned utilities' ratings are typically determined by the Corporate Finance group within the rating agencies.

rates without the requirement of obtaining any state regulatory approvals. Therefore, all other things being equal, the rating agencies perceive greater inherent financial risk for CWA.

Q31. PLEASE ELABORATE ON THE RATING AGENCIES' PERSPECTIVE THAT CWA'S RATES BEING REGULATED BY A STATE COMMISSION IS UNUSUAL.

A31. The fact that CWA's rates for providing wastewater service are regulated by a state regulatory commission is highly unusual compared to nearly every other wastewater utility with which the rating agency analysts who review CWA's credit are familiar. Consequently, rating agencies consider the CWA requirement to follow a state commission regulatory process to change rates for service to be a greater financial risk than the process for changing rates for service faced by the other wastewater utilities whose credit they review.

For example, in a report on the municipal water and wastewater utility industry Moody's states[11]:

> Municipal water and sewer utilities generally have unilateral rate-setting authority, a distinct credit strength. Utilities demonstrated willingness to raise rates will continue to support sound debt service coverage and liquidity while addressing capital needs.

Fitch has expressed its view that state commission regulation over rates is unusual for municipal utilities in a report it produced on the public power industry[12]:

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[11] Moody's *US Water and Sewer Utilities 2016 Outlook* report.

> Fitch views the flexibility most municipal systems and electric cooperatives have to independently adjust rates as a positive credit factor and distinguishing characteristic from comparable investor-owned utilities. Most public power systems are not subject to regulation by state public service commissions. Instead, public power systems typically maintain local authority to adjust rates as needed, which contributes to the timely recovery of costs. This provides management with the ability to raise rates to maintain financial stability, build liquidity, or pay for portions of a capital improvement plan. Conversely, rate regulation [by a state public service commission] generally limits financial flexibility and may delay the timing or amount of necessary rate increases.

With respect to CWA specifically, Moody's adversely highlighted that CWA is not regulated like most municipal wastewater utilities in its most recent CWA credit rating report under the subtitle "Credit Challenges":

> CWA is regulated by the state and is subject to regulatory risk unlike other municipal wastewater systems.

While advancing other public policy imperatives in the context of CWA's acquisition, the fact that CWA's rates are regulated so differently from what is overwhelmingly the practice in the wastewater utility industry is a distinguishing factor and potential credit market disadvantage because it can limit the number of investors who consider investing in CWA long-term bonds. By far the largest group of investors in CWA bonds is institutional investors such as municipal bond mutual funds that pool the investment dollars of many small individual investors so those dollars can be managed by investment professionals. Because of the large universe of potential municipal bond issuers in which to invest, those investment professionals have practical limits on the amount of time they can

[12] Fitch *US Public Power Rating Criteria* report May 18, 2015.

spend analyzing any single individual issuer. Since CWA has the fairly unique characteristic for the wastewater utility industry of being rate-regulated by a state commission, the number of institutional investors willing to invest the additional time required to assess this unique risk can be limited, which ultimately could limit investment dollars available to be invested in CWA bonds and increase the cost of CWA bonds compared to other wastewater utility issuers. Of course, it is axiomatic that investors cannot be compelled to invest in CWA bonds.

Q32. DO UTILITY INDUSTRY REPORTS EXIST THAT INDICATE THE INDIANA COMMISSION IS SEEN BY RATING AGENCIES AND OTHERS AS SUPPORTIVE OF UTILITIES' NEEDS FOR FINANCIAL INTEGRITY?

A32. Yes. Those industry reports invariably are assessing the investor-owned utility universe. I believe that illustrates the powerful influence of up-front expectations on perceptions. Taxable bond investors and the Corporate Finance group within the rating agencies expect investor-owned utilities to have rates and charges regulated by a state commission. When they have that up-front expectation in the context of assessing the various state commissions in the U.S., they have historically concluded the Indiana commission is supportive of the needs of utilities under their jurisdiction for financial integrity. By contrast, investors and the Public Finance group within the rating agencies do not expect utilities that predominantly issue municipal debt to have rates and charges regulated by a state commission. Given that up-front expectation, they typically conclude that CWA has greater regulatory risk than other wastewater utilities.

Q33. HAVE INDIANA COMMISSION ORDERS IN CASES IN WHICH CITIZENS ENERGY GROUP OR CWA WAS NOT A PARTY ADVERSELY IMPACTED RATING AGENCIES' PERCEPTIONS OF THE REGULATORY ENVIRONMENT WITH RESPECT TO CEG AND CWA?

A33. Yes. For example, following the Commission's order in the DOW emergency rate case that I described earlier in my testimony, on July 10, 2009 Moody's cut the credit rating on the DOW bonds from A1 to A3 with a negative future credit rating outlook and stated the following in its report:

> The multi notch downgrade of the utility debt reflects the significant deterioration in debt service coverage recorded in 2008 and continuing into 2009 to levels which violate covenanted thresholds, a regulatory environment, which in Moody's view, cannot confidently assure timely rate increases, and when rate orders are granted, less than certain to be sized to allow for debt coverage figures to be in compliance with stated department goals, or to rebuild even a modest unrestricted [cash] position.

On July 14, 2009, Fitch cut the credit rating on the DOW bonds from A+ to A- with a negative future credit rating outlook and stated the following in its report:

> The downgrade to A- from A+ reflects the system's severely weakened financial capacity; inability to achieve timely and necessary rate hikes in a strained regulatory environment; and actions taken by the Indianapolis (sic) Utility Regulatory Commission (IURC) to suspend contractual obligations with the system's operator, Veolia Water Indianapolis, LLC (Veolia).

Based on my discussions with the rating agencies at the time, it was clear to me when Citizens acquired the water utility and CWA acquired the wastewater utility on August 26, 2011 that the perceptions of these rating agencies articulated in the excerpts from their 2009 reports regarding the Indiana regulatory environment lingered.

Q34. CAN RATING AGENCY PERCEPTIONS REGARDING THE RELATIVE REGULATORY RISK OF CWA BE MITIGATED OVER TIME?

A34. Yes, such perceptions can be mitigated and they have been mitigated over time. Such a change is possible if two conditions are present. First and foremost, the rating agencies must see actual results from the regulatory process that they conclude are supportive of CWA's financial integrity requirements. In addition, the CWA management team must have the credibility, experience, knowledge and communication skills to be able to explain the regulatory process to the rating agencies. An example of a changed rating agency perception is the most recent CWA credit rating from Moody's which resulted in an upgrade in CWA's first lien bonds credit rating from A2 to A1 and in its second lien bonds credit rating from A3 to A2. In the report Moody's made the following comment:

> The wastewater utility is managed by Citizens Energy Group (CEG) through a charitable trust structure, and serves Indianapolis – Marion County, IN (general obligation bonds rated Aaa). Rates are regulated by the Indiana Utility Regulatory Commission (IURC), which is unusual for municipal utilities. The [CWA] utility board has shown a willingness to establish rates required to fund the increasing capital and operating costs. **Also, the IURC**

> **has taken credit supportive actions concerning their rate requests**. [emphasis added]

The last sentence in the above quote is new. The other three sentences were essentially in the previous Moody's credit report. This demonstrates the favorable change in rating agency perception regarding regulatory risk that is possible in light of actual results and management's ability to credibly explain the regulatory process to the rating agencies.

Q35. WHAT ROLE DOES CONFIDENCE IN THE REGULATORY PROCESS PLAY IN CWA'S ABILITY TO ACCESS THE CAPITAL MARKETS?

A35. With respect to securing needed capital funding on reasonable terms, I cannot overstate the importance of providers of capital funding having confidence in the regulatory process. A measure of assurance that well-supported rate increase requests will result in the approval of reasonable and just rates and charges that cover the wastewater utility's financial requirements is paramount.

Providers of capital funding include banks and bond investors. The majority of CWA's publicly issued long-term bonds are purchased by bond mutual funds which pool the investment dollars of many small individual investors into large funds. The investment professionals that manage these mutual funds take credit ratings from rating agencies into consideration as a significant factor when making their investment decisions. In addition, since they are investing on behalf of many small investors, mutual fund managers are also ultimately obligated to render their own independent credit decisions. It is essential that all providers of debt funding to CWA, including banks providing short-term interim funding, bond investors providing long-term funding, and rating agencies establishing credit ratings, have confidence in both the regulatory process and CWA's managerial expertise to execute under strict program delivery requirements. Each of these groups of credit market actors must conclude that CWA's professional management and Indiana's regulatory process, in combination, will adequately address CWA's financial realities and requirements because regulatory decisions will have a profound impact on CWA's financial integrity. Such confidence among capital market participants is essential for CWA to raise necessary funds on reasonable terms in the face of the inherent uncertainty of the future.

Therefore, it is important to understand that capital market confidence in CWA's demonstrated managerial capability and the regulatory process are critical assets that must be cultivated and preserved. These assets will help assure banks, bond investors and rating agencies that the ratemaking process will result in the approval of reasonable and just rates and charges that will allow CWA to meet the necessary financial requirements of the wastewater utility, which includes sufficient protection against downside risks. It is also important to appreciate the potential damage that can be done to CWA's ability to access the capital markets on reasonable terms, or at all, if capital market confidence in the regulatory process erodes.

Fortunately, the rating agencies view CWA's management as strong, experienced and stable with a good track record of managing the utility, including the regulatory process. The rating agencies view the Commission as generally supportive and they recognize the favorable structural changes to the Indiana regulatory process that have occurred through Senate Enrolled Act 383 and Senate Enrolled Act 560.

Q36. MR. BREHM, IS THE MASSIVE LEVERAGE OF CWA PERMANENTLY SUSTAINABLE?

A36. No. Financing the Consent Decree largely with debt was the biggest lever available for CWA to make necessary rate increases more gradual and therefore more affordable for customers. CWA's financial strategy is an attempt to "thread a needle" by strategically using debt to achieve the competing goals of making necessary rate increases more gradual and affordable, while also attempting to preserve sufficient financial flexibility for CWA. CWA has issued and will continue to issue substantial debt while simultaneously trying to preserve its ability to issue that debt at reasonable cost in any market condition that could occur over the span of the Consent Decree projects and for unforeseen requirements for years beyond completion of the Consent Decree projects.

An additional critical element of "threading the needle" is that it would be difficult to successfully fulfill this strategy absent establishing and making public to rating agencies and debt investors a date certain when CWA plans to stop adding debt and commences funding its entire annual E&R requirement through revenues. This milestone signals to the credit community that CWA has a plan to slowly reduce its massive leverage.

CWA's long-term financial sustainability strategy is to fund annual E&R entirely through revenues by the time the Consent Decree is completed, enabling it to eventually have its leverage and coverage ratios align with industry benchmarks. When the Consent Decree projects are completed, CWA expects the total annual E&R requirement will decline substantially, which will make it practical for the entire annual E&R amount to be revenue funded.

Q37. WHY IS ESTABLISHING A DATE CERTAIN WHEN CWA WILL STOP ISSUING DEBT ADVISABLE FOR CWA TO BE ABLE TO ATTRACT NECESSARY DEBT CAPITAL?

A37. The date certain is important so bond investors will have confidence a day is coming when the annual issuance of new debt by CWA will cease. Debt service is a massive and inflexible fixed cost for CWA. Table 1 above shows that annual debt service amounts to nearly half of CWA's revenues. Since CWA is already highly leveraged, each time it issues new debt the risk to debt investors that debt principal and interest may not be paid on time or at all increases. Consequently, it is important to CWA's ability to issue new debt at reasonable cost throughout the Consent Decree construction period for potential bond investors to know when annual issuances of new debt and the related annual increases in total debt service is planned to end.

From a risk management perspective, regulated utilities face a number of risks which must be considered in determining debt levels. Separate risks to be considered include financial risk, business risk, and regulatory risk. Financial risk is attached to the variability of cash flow available to the utility as a result of employing debt financing. As I explained above, CWA's fixed debt service cost must be paid irrespective of downward fluctuations that may occur in the utility's sales and revenues or upward fluctuations that may occur in its operating costs. Business risk is created by the supply and demand uncertainties affecting revenue, and the variabilities of expense patterns, of a utility. An aspect of business risk assessment, particularly over long time periods such as the 30-year term of debt, is that it cannot be assumed the structure or key drivers of an industry, including the utility industry will remain perpetually the same. Regulatory risk is a special component of business risk that arises from environmental, price, service, revenue requirement, or other regulations that affect the utility's cash flow potential. A risk management response to these numerous risk considerations is to limit the use of debt because the fixed cost nature of debt service means it will not flex downward in response to fundamental increases in risk. This risk management consideration helps explain why the median debt to net plant ratio for large systems in the Water and Sewer industry is 47%, as illustrated earlier in my testimony in Table 1. By comparison, CWA's debt to net plant ratio is 100%. This comparison helps illuminate why CWA must have a long-term financial goal to bring its leverage ratios in line with industry benchmarks.

Moreover, it is crucial to understand that although CWA plans to stop issuing new debt to fund any portion of its annual E&R requirement by the time the current Consent Decree projects end in 2025, CWA will not experience any relief from the annual debt service amount that has built up by that time until the end of fiscal year 2041. This is because of the nature of issuing debt with a 30-year level debt service schedule. A 30-year level debt service amortization schedule means for each series of debt that is issued, the required debt payment amount in year 30 is the same as the required payment amount in year one, like a conventional home mortgage. Since the first two series of CWA debt were issued in 2011 (the Series 2011A and Series 2011B bonds, respectively), CWA will not experience a meaningful decrease in annual debt service until the last payment is made on those two series at the end of fiscal year 2041. Therefore, it is not until the beginning of fiscal year 2042, *which is twenty-three years from today* that CWA will experience any meaningful relief from the debt burden that has already accumulated on the system and will continue to increase on the system through fiscal year 2025.

Consequently, the only means available to CWA to rectify its very high leverage is to establish a date certain to revenue fund all of its E&R and to cease issuing new debt for the foreseeable future from that point. The extraordinarily long time span required for rectifying CWA's very high leverage and the myriad risks that impose adverse consequences during this long time span is why the massive leverage of CWA is not permanently sustainable.

<u>REVENUE FUNDED EXTENSIONS AND REPLACEMENTS</u>

Q38. PLEASE EXPLAIN THE PRO FORMA AMOUNT OF REVENUE FUNDED EXTENSIONS AND REPLACEMENTS.

A38. Mr. Jacob explains in his testimony the total E&R spending requirements of CWA for the wastewater system during the time the rates established in this case are presumed to be in effect, which is the three-year period of August 1, 2019 through July 31, 2022. The total amount of E&R spending anticipated during that time period is $589.4 million.

For this rate case, CWA has included $72.0 million for the step one rates, $76 million for the step two rates and $80.0 million for the step three rates of its total pro forma annual amount of E&R in revenue requirements. This means 38.7% of the wastewater system's total amount of E&R during the expected life of these rates will be "revenue funded"[13] and the remainder of the wastewater system's annual E&R spending requirements will be funded with new issuances of debt.

Q39. IS THERE A RELATIONSHIP BETWEEN THE REVENUE FUNDED AMOUNT OF E&R, THE AMOUNT OF DEBT SERVICE AND THE DEBT SERVICE COVERAGE RATIO?

A39. Yes. Mathematically, each additional increment of debt service requires an increase in the revenue funded portion of E&R to sustain the same level of debt

[13] $72 million plus $76 million plus $80.0 million equals $228 million divided by $589.4 million equals 38.7%.

service coverage. This mathematical reality was illustrated earlier in my testimony in the explanation of Table 2 – Computation of Debt Service Coverage Ratios.

However, there is more than a mathematical reality at stake. The math merely illuminates the broader and more fundamental financial reality. Debt service is a fixed cost and increasing the amount of debt service increases risk. The debt service coverage ratio essentially is a measure of a firm's downside protection to absorb business risks and still be able to cover its debt service obligations.

Q40. IF THE AMOUNT OF PRO FORMA E&R IS REDUCED FOR ANY REASON, SHOULD THE AMOUNT OF REVENUE FUNDED E&R YOU ARE INCLUDING IN THE PRO FORMA REVENUE REQUIREMENT LIKEWISE BE REDUCED?

A40. No. CWA's downside protection to absorb business risks is well below industry benchmarks and will remain that way until the year 2042 or later as I have explained. I believe a report from Moody's on the municipal water and sewer utility industry provides some perspective. Moody's has a stable credit outlook for the industry based on the expectation that the industry median debt service coverage ratio will remain in the range of 1.9x to 2.1x:[14]

> Coverage will remain in line with the 2016 median of 2.1 times for combined systems and 1.9 times for single service systems.

[14] Moody's *US Water and Sewer Utilities 2018 Outlook* report.

However, Moody's goes on to state in the report that a decline in the industry debt service coverage ratio to 1.7x could trigger a negative credit outlook for the industry:

> Any of the following trends could lead to a negative outlook: median coverage levels falling [to] less than 1.7 times, significant declines in liquidity, or deterioration in the median asset condition to below 25 years of useful life.

Moody's is saying if the industry average debt service coverage ratio moved down to less than 1.7 times, the credit outlook for the industry could change from stable to negative. To put this in perspective, a coverage ratio of 1.7 times is meaningfully above the 1.51x – 1.52x pro forma debt service coverage ratio of CWA. To add further perspective, CWA would need to request revenue funded E&R of $96 million for step one, $101 million for step two and $105 million for step three in order to achieve a debt service coverage ratio of 1.7 times in this case. Consequently, I believe it is reasonable for CWA to target the 1.51x – 1.52x pro forma debt service coverage ratio as a floor, particularly since it will take 23 years or longer for CWA to experience a meaningful move upward from 1.51x toward the industry median coverage ratio.

ADDITIONAL CREDIT MATTERS

Q41. WHICH CREDIT RATING AGENCIES ISSUE CREDIT REPORTS ON CWA?

A41. S&P, Moody's and Fitch issue credit reports on CWA. Each agency rates CWA debt as a sound investment grade credit. S&P rates CWA's first lien bonds as AA and its second lien bonds as AA-. Moody's rates CWA's first lien bonds as A1 and its second lien bonds as A2. Fitch rates both CWA's first and second lien bonds as A.

Q42. WHAT IS THE DEBT SERVICE COVERAGE RATIO CWA SHOULD TARGET IN YOUR OPINION?

A42. The Fitch Ratings *2018 Water and Sewer Medians* report shows the median all-in annual debt service coverage ratio for large municipal utilities is 1.9x and for all municipal utilities is 2.1x. As I indicated in my explanation of Table 3 above, I believe it is reasonable for CWA to target total debt service coverage in the industry median range of 1.9x to 2.1x. I emphasize that such a target is merely the *median* for the industry. Also, in light of the fact I explained earlier in my testimony that it is not until the beginning of fiscal year 2042 that CWA will experience any meaningful relief from the debt burden that has already accumulated on the system and will continue to increase on the system through fiscal year 2025, it will be a very long time before CWA will have a total debt service coverage ratio that approaches the median for the industry.

Q43. PLEASE EXPLAIN THE IMPLICATIONS OF CWA'S PRO FORMA TOTAL DEBT SERVICE COVERAGE RATIO AT PROPOSED RATES.

A43. As I explained in the discussion of Table 3 above, CWA's proposed rates in this case result in a pro forma total debt service coverage ratio of 1.51x – 1.52x, which means CWA will fall farther behind the industry benchmark for large systems, as compared to the result of the last CWA rate case. Consequently, CWA will have less protection to absorb downside business risks than the industry benchmark.

From both an operational and a credit rating perspective, it is essential to sustain debt service coverage levels, not at the minimum levels required by the respective indentures and credit agreements, but at levels significantly above minimum levels. This is because both the principle of prudent financial flexibility and the rating agencies require a margin of safety above the bare minimum debt service coverage requirements of the indentures and credit agreements to provide the wastewater system a hedge against business risks as well as to provide bondholders comfort that the utility is not continually operating on the edge of an event that would cause a covenant violation.

Q44. HAVE YOU INCLUDED IN YOUR FILED WORKPAPERS A COMPUTATION OF THE DEBT SERVICE COVERAGE RATIOS THAT RESULT FROM EACH STEP OF THE PROPOSED RATES AND CHARGES FOR WASTEWATER SERVICE REQUESTED IN THIS CASE.

A44. Yes.

Q45. WHAT IS THE PURPOSE OF PETITIONER'S ATTACHMENTS JRB-1 AND JRB-2?

A45. Petitioner's Attachments JRB-1 and JRB-2 explain CWA's test year debt outstanding and debt service, as well as the annual financing requirements and resulting pro forma debt service costs of CWA through the twelve months ended July 31, 2022 for the purpose of establishing its debt service revenue requirement for each of the three steps proposed in this case.

Q46. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A46. Yes, at this time.

VERIFICATION

The undersigned affirms under the penalties for perjury that the foregoing testimony is true to the best of his knowledge, information and belief.

John R. Brehm

<u>Explanation of Attachment JRB-1 Test Year and Pro Forma Debt Outstanding and Debt Service</u>

1. Description of the debt outstanding of CWA at May 31, 2018 as presented on the balance sheet in Petitioner's Attachment SEK-1 and on Petitioner's Attachment JRB-1, column A, lines 1-9.

The total principal amount of the long-term debt outstanding of CWA at May 31, 2018 was $1,829,276,839. As described in the testimony of Petitioner's witness Sabine E. Karner, that amount was made up of long-term debt in the amount of $1,791,812,389 and current maturities of long-term debt in the amount of $37,464,450.

All debt financing of CWA is encompassed in a lien structure that is secured by only the net revenues of the wastewater system. First lien debt has a first priority claim on the net revenues and second lien debt has a subordinate claim to the first lien debt on the net revenues of the wastewater system.

As an integral element of having a portfolio of revenue bonds outstanding, CWA must maintain bond and debt service reserve funds and special deposits for interest and principal. With respect to the bond and debt service reserve funds, the terms of its bonds require CWA to maintain these **restricted** accounts in the amounts designated as security for the bonds. These funds are actually held in the custody of the first and second lien bond trustees. In fact, if these funds are ever utilized because the financial situation of CWA has become so precarious that it cannot otherwise meet its debt service obligations from net revenue, the terms of its bonds require CWA to replenish the reserve funds by any amount so utilized. Therefore, these funds are not available for another use.

With respect to the special deposits for interest and principal, these funds are designated as **restricted** because, by the terms of its bond indentures, CWA is required to make monthly payments into these deposit accounts from its general fund to accumulate cash over a six-month period with respect to interest and a twelve-month period with respect to principal to be subsequently paid to the bond trustee for debt service payments to the bondholders. Therefore, these funds are not available for another use.

2. CWA actual debt service amount during the test year.

Petitioner's Attachment JRB-1, columns B through D present actual test year debt service for CWA bonds, the obligation to reimburse the City for debt service on Sanitary District general obligation bonds, the construction line of credit and interest on customer deposits. Petitioner's Attachment JRB-1, column D, line 16 shows the total test year debt service for CWA was $132,557,017.

3. Overview of pro forma debt service.

The pro forma amount of debt service CWA is proposing for determining the revenue requirement for step one of the proposed rates is the pro forma debt service for the twelve months ended July 31, 2020, which is $139,508,616, as shown on Petitioner's Attachment JRB-1, column L, line 16. The pro forma amount of debt service CWA is proposing for determining the revenue requirement for step two of the proposed rates is the pro forma debt service for the twelve months ended July 31, 2021, which is $148,578,144, as shown on Petitioner's Attachment JRB-1, column P, line 16. The pro forma amount of debt service CWA is proposing for determining the revenue requirement for step three of the proposed rates is the pro forma debt service for the twelve months ended July 31, 2022, which is $155,210,405, as shown on Petitioner's Attachment JRB-1, column T, line 16.

In my opinion, the resulting amounts are appropriate for determining the debt service component of the revenue requirement for Petitioner's proposed rates because they are representative of the minimum amount of annualized debt service CWA will be incurring during step one, step two and step three, respectively, while the proposed rates are assumed to be in place. Further, this method is consistent with the approach for determining the debt service component of the revenue requirement in Cause No. 44305 and Cause No 44685, except those cases covered increases in two steps and this case proposes increases in three steps.

4. Explanation of the pro forma debt outstanding and debt service amounts on Petitioner's Attachment JRB-1.

CWA has assumed, given the date of filing the case-in-chief in this Cause and the provisions of IC 8-1-2-42.7, the rate order establishing new rates and charges in this Cause will be approved by the Commission in time for such new rates and charges to be implemented by the end of July, 2019. Consequently, the pro forma amount of debt service CWA is proposing for determining the revenue requirement for each respective step of the proposed rates is the pro forma debt service for the twelve months ended July 31, 2020, July 31, 2021 and July 31, 2022, respectively. Petitioner's Attachment JRB-1, columns I through T present pro forma debt service for CWA bonds, the construction line of credit and interest on customer deposits. The debt service in this section of Petitioner's Attachment JRB-1 for the Series 2011A bonds (line 1), the Series 2012A bonds (line 2), the Series 2014A bonds (line 3), the Series 2015A bonds (line 4), the Series 2016A bonds (line 5), the Series 2016C SRF bonds including required debt service reserve funding (line 6), the Series 2017A SRF bonds (line 7), the Series 2011B bonds (line 8), the Series 2016B bonds (line 9), and interest on customer deposits (line 15) (collectively, "Existing Debt") reflect the actual twelve months ended July 31 debt service obligations that are in place for such debt for each respective twelve month period. The Commission used debt service on all series of bonds included in the Existing Debt in determining the pro forma revenue requirement of CWA for debt service in Cause No. 44685. Line 11 reflects the pro forma principal amount and annual debt service on Series 2019A bonds that are expected to be issued upon receipt of an order in this case to finance the extensions and replacements funding shortfall that is expected to accumulate in the form of short-term debt up to the time new rates and charges for wastewater service are approved in this case and to finance a portion of the twelve months ended July 31, 2020 E&R expenditures. Line 12 reflects the pro forma principal amount and annual debt service on Series 2020A bonds that are expected to be issued at the beginning of the twelve months ended July 31, 2021 to finance a portion of twelve months ended July 31, 2021 E&R expenditures. Line 13 reflects the pro forma principal amount and annual debt service on Series 2021A bonds that are expected to be issued at the beginning of the twelve months ended July 31, 2022 to finance a portion of twelve months ended July 31, 2022 E&R expenditures. The computation of the pro forma required principal amount and annual debt service on the Series 2019A, Series 2020A and Series 2021A bonds is presented on Petitioner's Attachment JRB-2 and is explained in more detail below. Pro forma debt service on the construction line of credit (line 14) is zero because the line of credit is paid down to zero with a portion of the proceeds of the Series 2019A bonds, as explained more completely below. Pro forma interest on customer deposits (line 15) is the product of multiplying the pro forma amount of customer deposit balances outstanding times the current customer deposit interest rate of 1.5% published by the Commission. Petitioner's Attachment JRB-1, column L, line 16 shows the total twelve months ended July 31, 2020 pro forma debt service for CWA with respect to the wastewater system is $139,508,616. This is the amount of debt service used in determining step one of the proposed rates for wastewater service. Petitioner's Attachment JRB-1, column P, line 16 shows the total twelve months ended July 31, 2021 pro forma debt service for CWA with respect to the wastewater system is $148,578,144. This is the amount of debt service used in determining step two of the proposed rates for wastewater service. Petitioner's Attachment JRB-1, column T, line 16 shows the total twelve months ended July 31, 2022 pro forma debt service for CWA with respect to the wastewater system is $155,210,405. This is the amount of debt service used in determining step three of the proposed rates for wastewater service.

CWA Authority
Schedule of Test Year and Pro Forma Debt Service
(In Dollars)

		Test Year Debt Service					12 Months Ended 7/31/2019 Pro Forma Debt Service					12 Months Ended 7/31/2020 Pro Forma Debt Service				
Line No.		Principal Outstanding at 5/31/2018	Notes	Required Principal Payment	Interest	Total	Principal Outstanding 7/31/2018	Notes	Required Principal Payment	Interest	Total	Principal Outstanding 7/31/2019	Notes	Required Principal Payment	Interest	Total
		(A)		(B)	(C)	(D)	(E)		(F)	(G)	(H)	(I)		(J)	(K)	(L)
1	CWA Authority First Lien Bonds, Series 2011A	614,370,000		13,395,000	31,880,546	45,275,546	614,370,000	(3)	14,068,333	31,210,796	45,279,129	600,760,000	(3)	14,747,500	30,530,063	45,277,563
2	CWA Authority First Lien Bonds, Series 2012A	178,345,000		3,773,333	8,338,933	12,112,266	178,345,000	(3)	3,993,333	8,118,308	12,111,641	174,510,000	(3)	4,191,667	7,918,642	12,110,309
3	CWA Authority First Lien Bonds, Series 2014A	225,595,000		4,068,333	11,157,833	15,226,166	225,595,000	(3)	4,305,833	10,919,958	15,225,791	221,460,000	(3)	4,519,167	10,704,667	15,223,834
4	CWA Authority First Lien Bonds, Series 2015A	153,740,000		2,641,667	7,554,633	10,196,300	153,740,000	(3)	2,793,333	7,400,175	10,193,508	151,055,000	(3)	2,935,833	7,260,508	10,196,341
5	CWA Authority First Lien Bonds, Series 2016A	190,320,000		2,990,000	9,407,867	12,397,867	190,320,000	(3)	3,110,000	9,287,867	12,397,867	187,310,000	(3)	3,234,167	9,163,467	12,397,634
6	CWA Authority First Lien Bonds, Series 2016C (SRF)	12,105,000		684,662	31,716	716,378	11,575,000	(4)	695,773	230,600	926,373	11,035,000	(4)	706,190	219,783	925,973
7	CWA Authority First Lien Bonds, Series 2017A (SRF)	163,526,839		3,040,409	4,970,762	8,011,171	160,182,389	(4)	3,265,244	5,644,861	8,910,105	156,926,739	(4)	3,380,707	5,529,598	8,910,305
8	CWA Authority Second Lien Bonds, Series 2011B	248,520,000		5,411,667	12,693,538	18,105,205	248,520,000	(3)	5,729,167	12,377,121	18,106,288	243,020,000	(3)	6,012,500	12,090,663	18,103,163
9	CWA Authority Second Lien Bonds, Series 2016B	42,755,000		806,667	1,546,500	2,353,167	42,755,000	(3)	835,833	1,518,225	2,354,058	41,940,000	(3)	869,167	1,486,150	2,355,317
10	Obligation to reimburse City for debt service on Sanitary District General Obligation Bonds	-	(1)	7,483,000	377,146	7,860,146	-		-	-	-	-		-	-	-
11	CWA Authority First Lien Bonds, Series 2019A Pro Forma											218,923,828		3,409,945	10,508,344	13,918,289
12	CWA Authority First Lien Bonds, Series 2020A Pro Forma															
13	CWA Authority First Lien Bonds, Series 2021A Pro Forma															
14	Line of Credit	20,000,000		-	237,256	237,256	20,000,000		-	1,364,623	1,364,623	72,048,798	(5)	-	-	-
15	Customer Deposits	6,191,762		-	-	65,549	5,992,540	(2)	-	89,888	89,888	5,992,540		-	89,888	89,888
16	Total Debt Service			44,294,738	88,196,730	132,557,017			38,796,849	88,162,423	126,959,272			44,006,843	95,501,773	139,508,616

		12 Months Ended 7/31/2021 Pro Forma Debt Service					12 Months Ended 7/31/2022 Pro Forma Debt Service				
Line No.		Principal Outstanding 7/31/2020	Notes	Required Principal Payment	Interest	Total	Principal Outstanding 7/31/2021	Notes	Required Principal Payment	Interest	Total
		(M)		(N)	(O)	(P)	(Q)		(R)	(S)	(T)
1	CWA Authority First Lien Bonds, Series 2011A	586,600,000	(3)	15,481,667	29,792,688	45,274,355	571,915,000	(3)	16,259,167	29,018,604	45,277,771
2	CWA Authority First Lien Bonds, Series 2012A	170,485,000	(3)	4,404,167	7,709,058	12,113,225	166,260,000	(3)	4,540,000	7,572,100	12,112,100
3	CWA Authority First Lien Bonds, Series 2014A	217,120,000	(3)	4,746,667	10,478,708	15,225,375	212,565,000	(3)	4,985,000	10,241,375	15,226,375
4	CWA Authority First Lien Bonds, Series 2015A	148,240,000	(3)	3,080,833	7,113,717	10,194,550	145,280,000	(3)	3,234,167	6,959,675	10,193,842
5	CWA Authority First Lien Bonds, Series 2016A	184,180,000	(3)	3,363,333	9,034,100	12,397,433	180,925,000		3,497,500	8,899,567	12,397,067
6	CWA Authority First Lien Bonds, Series 2016C (SRF)	10,485,000	(4)	720,773	208,758	929,531	9,920,000		601,656	197,442	799,098
7	CWA Authority First Lien Bonds, Series 2017A (SRF)	153,555,964	(4)	3,500,247	5,410,259	8,910,506	150,066,000		3,624,006	5,286,701	8,910,707
8	CWA Authority Second Lien Bonds, Series 2011B	237,245,000	(3)	6,314,167	11,790,038	18,104,205	231,185,000	(3)	6,631,667	11,474,329	18,105,996
9	CWA Authority Second Lien Bonds, Series 2016B	41,100,000	(3)	895,833	1,458,675	2,354,508	40,225,000	(4)	929,167	1,424,300	2,353,467
10	Obligation to reimburse City for debt service on Sanitary District General Obligation Bonds	-		-	-	-	-	(1)	-	-	-
11	CWA Authority First Lien Bonds, Series 2019A Pro Forma	215,513,884		3,573,622	10,344,666	13,918,289	211,940,261		3,745,156	10,173,133	13,918,289
12	CWA Authority First Lien Bonds, Series 2020A Pro Forma	142,605,502		2,221,215	6,845,064	9,066,279	140,384,287		2,327,833	6,738,446	9,066,279
13	CWA Authority First Lien Bonds, Series 2021A Pro Forma						106,322,076		1,656,067	5,103,460	6,759,526
14	Line of Credit	-		-	-	-	-		-	-	-
15	Customer Deposits	5,992,540		-	89,888	89,888	5,992,540		-	89,888	89,888
16	Total Debt Service			48,302,524	100,275,620	148,578,144			52,031,386	103,179,019	155,210,405

Note 1: This obligation was paid off December 31, 2017.

Note 2: Pro forma interest is IURC published customer deposit rate of 1.5% multiplied by the pro forma amount of customer deposits outstanding.

Note 3: Principal is paid to Trustee each month. Trustee remits to Bondholders each October 1.

Note 4: Principal is paid to Trustee each month. Trustee remits to Bondholders each July 1.

Note 5: Will be immediately paid off with a portion of the proceeds from the Series 2019A bonds.

EXPLANATION OF ATTACHMENT JRB-2 PRO FORMA DEBT SERVICE

1. **Explanation of Petitioner's Attachment JRB-2.**

The computations of the pro forma debt financing requirements of CWA are made on Petitioner's Attachment JRB-2, which contains pro forma amounts for the four-year period ending July 31, 2022. The analysis to determine the pro forma amount of net proceeds from bonds that are required to be issued, and resulting pro forma debt service on those bonds during the time the rates approved in this rate case are assumed to be in effect, must also include the time this case is pending prior to implementation of the new rates. This must be done to determine on a pro forma basis the financing requirements of CWA while this case is pending up to the assumed date of implementation of the new rates. Consequently, CWA has used the twelve months ended July 31, 2019 to represent the time this case is pending prior to implementation of the new rates.

The pro forma amount of revenues at present rates and operating costs determined on the basis of the test year ended May 31, 2018, adjusted for fixed, known and measurable changes is representative of the going-level revenues and operating costs of CWA for the twelve months ended July 31, 2019 that appear in Column A of Petitioner's Attachment JRB-2. The pro forma amount of revenues at proposed rates and operating costs determined on the basis of the test year ended May 31, 2018, adjusted for fixed, known and measurable changes is representative of the going-level revenues and operating costs of CWA for the twelve months ended July 31, 2020, July 31, 2021 and July 31, 2022 appearing in Columns B through D of Petitioner's Attachment JRB-2, respectively, assuming the rates and charges proposed by Petitioner are approved. The pro forma amounts of operating costs and Payment in Lieu of Taxes (PILOT) is covered in the testimony of Petitioner's witness Sabine E. Karner.

The total E&R spending requirements of CWA for the wastewater system are covered in the testimony of Petitioner's witness Mark C. Jacob. The pro forma amount of revenue funded E&R is $72.0 million for the step one rates, $76 million for the step two rates and $80.0 million for the step three rates as explained in my testimony under the sub-heading "Revenue Funded Extensions and Replacements."

2. Appropriateness and precedent for using projected debt service costs to establish the debt service revenue requirement.

Debt service is not an operating expense subject to the accounting adjustment period for a historical test year. CWA and Citizens Energy Group have previously used projected debt service costs to establish the debt service component of the pro forma revenue requirement. Projected debt service costs were used to establish the rates of the wastewater utility in Cause Nos. 44305 and 44685. Projected debt service costs also were used to establish the rates of Citizens Water in Cause Nos. 44306 and 44644 and the Citizens Thermal steam utility in Cause No. 44349.

Use of projected debt service to establish the pro forma debt service component of revenue requirements is especially important for CWA because it must issue new debt annually to finance the majority of its large E&R spending requirements. Petitioner's Attachment JRB-2, line 25 shows that in addition to the $218.9 million of new debt required to be issued after receiving an Order in this case to refund the short-term debt that will accumulate while this case is pending plus finance a portion of the E&R

spending requirements of CWA for the twelve months ended July 31, 2020, an additional $142.6 million of new debt is required for the twelve months ended July 31, 2021 and an additional $106.3 million of new debt is required for the twelve months ended July 31, 2022 to finance a portion of the E&R spending requirements of CWA. Consequently, if projected debt service is not used to establish the pro forma debt service component of the revenue requirement under these circumstances, the rates and charges established in this rate case would be based on a debt service amount that is less than the annualized debt service amount CWA actually would be incurring when the rates and charges proposed for approval in this case are in effect.

3. Description of the computation of the pro forma principal amount and debt service on the Series 2019A bonds.

The computation is made on Petitioner's Attachment JRB-2, columns A and B, which contains pro forma amounts for the twelve months ended July 31, 2019 and 2020, respectively. August 1, 2018 is the appropriate starting point for this analysis because the analysis to determine the pro forma amount of new long-term debt that will be required to be issued by CWA must include not only the time period that covers the three-year period being assumed for which step one, step two and step three of the proposed rates are in effect; it must also include the time period during which this case is pending prior to the implementation of new rates. It is assumed the 2019A bonds will be issued upon receipt of the rate order in this case which, as I explained above, is presumed to be in July 2019.

The pro forma revenue of the wastewater system for the twelve months ended July 31, 2019 on line 5 is the pro forma revenue at present rates (line 1).[1] Petitioner's Attachment JRB-2, column A shows that after taking into account pro forma revenue, connection fees, other income,[2] operation and maintenance expenses, taxes and twelve months ended July 31, 2019 debt service on Existing Debt including the construction line of credit, the net revenue available to fund E&R is $47.9 million (line 16). Total pro forma E&R for the twelve months ended July 31, 2019 on line 17 is $211.1 million as explained by Mr. Jacob. The pro forma system integrity adjustment for eligible infrastructure improvements on line 18 is $22.3 million as explained by Mr. Kilpatrick. The sum of lines 16 through 18 shows an E&R revenue funding shortfall of $141.0 million for the twelve months ended July 31, 2019 (line 19). A portion of that shortfall can be covered by depleting the unexpended proceeds remaining at July 31, 2018 from the Series 2016C and 2017A SRF bonds ($88.9 million shown on line 20). This leaves a pro forma net E&R funding shortfall of $52.1 million (line 21) that is assumed will be covered by drawing upon the construction line of credit until the receipt of a rate order in this case. The construction line of credit balance will be paid down to zero upon issuance of the Series 2019A bonds.

The computation of the pro forma amount of debt funding required for the twelve months ended July 31, 2020 is made on Petitioner's Attachment JRB-2, column B. The pro forma revenue of the wastewater system for twelve months ended July 31, 2020 on line 5 is the pro forma revenue at step one of the proposed rates (line 2). Petitioner's

[1] The pro forma revenue at present rates (line 1) is from Petitioner's Attachment KLK-1. The pro forma revenue at step one (line 2), step two (line 3) and step 3 (line 4) of proposed rates are from Petitioner's Attachment KLK-1.
[2] The pro forma connection fees and other income are from Petitioner's Attachment KLK-1.

Attachment JRB-2, column B shows that after taking into account pro forma revenue, connection fees, other income, operation and maintenance expenses, taxes, twelve months ended July 31, 2020 debt service on Existing Debt, and pro forma debt service on the Series 2019A bonds, the net revenue available to fund E&R is $72.0 million (line 16). The revenue requirements for developing step one of the proposed rates include a revenue funded amount of E&R of $72.0 million as explained in my testimony under the sub-heading "Revenue Funded Extensions and Replacements." Total pro forma E&R for twelve months ended July 31, 2020 on line 17 is $202.8 million, as explained by Mr. Jacob. Subtracting total E&R from the revenue funded amount of E&R shows an E&R revenue funding shortfall of $130.8 million for the twelve months ended July 31, 2020 (line 19) which must be covered by the issuance of new debt. This amount must be added to the $72.0 million balance of the construction line of credit outstanding at July 31, 2019 (Petitioner's Attachment JRB-1, column I, line 14) to determine the total pro forma net proceeds of $202.8 million required by the Series 2019A bonds (Column B, line 22). After taking into consideration the requirement to fund a debt service reserve as well as the estimated costs of issuing the debt, the total pro forma principal amount of the Series 2019A bonds is $218.9 million (line 25). The annual debt service on the Series 2019A bonds (line 12) assumes a level debt service structure for a term of 30 years at an interest rate of 4.80%.

4. Description of the computation of the pro forma principal amount and debt service on the Series 2020A and Series 2021A bonds.

A. Those computations are made on Petitioner's Attachment JRB-2, columns C and D, which contains pro forma amounts for the twelve months ended July 31, 2021 and 2022, respectively. The pro forma revenue of the wastewater system for the twelve months ended July 31, 2021 and 2022 on line 5 is the pro forma revenue at step two and step three of the proposed rates (lines 3 and 4, respectively). This assumes steps two and three of the new rates proposed in this case go into effect in July, 2020 and 2021, respectively as CWA has proposed. Petitioner's Attachment JRB-2, columns C and D show that after taking into account pro forma revenue, connection fees, other income, operation and maintenance expenses, taxes, the twelve months ended July 31 debt service on Existing Debt, and pro forma debt service on the Series 2019A, 2020A and Series 2021A bonds, the net revenue available to fund E&R is $76 million for step two and $80.0 million for step 3 (line 16). The revenue funded amount of E&R is explained in my testimony under the sub-heading "Revenue Funded Extensions and Replacements." Total pro forma E&R for the twelve months ended July 31, 2021 and 2022 on line 17 is $208.1 million and $178.5 million, respectively as explained by Mr. Jacob. Subtracting total E&R from the revenue funded amount of E&R shows an E&R revenue funding shortfall of $132.1 million for the twelve months ended July 31, 2021 and $98.5 million for the twelve months ended July 31, 2022 (line 19) which must be covered by the issuance of new debt. After taking into consideration the requirement to fund a debt service reserve as well as the estimated costs of issuing the debt, the total pro forma principal amount of the Series 2020A bonds is $142.6 million and of the Series 2021A bonds is $106.3 (line 25). The annual debt service on the Series 2020A and Series 2021A bonds (line 13, column C and line 14, column D, respectively) assumes a level debt service structure for a term of 30 years at an interest rate of 4.80%.

CWA Authority
Computations of Pro Forma Principal Amount and Debt Service on New Debt
Required To Finance Extensions and Replacements Funding Shortfall
(In Thousands)

Line No.						
1	Pro Forma Revenue at Present Rates	268,338,030				
2	Pro Forma Revenue at Step One of Proposed Rates	307,880,061				
3	Pro Forma Revenue at Step Two of Proposed Rates	322,594,189				
4	Pro Forma Revenue at Step Three of Proposed Rates	333,924,355				
		Pro Forma 12 Months Ended 7/31/2019		Pro Forma 12 Months Ended 7/31/2020	Pro Forma 12 Months Ended 7/31/2021	Pro Forma 12 Months Ended 7/31/2022
		(A)		(B)	(C)	(D)
5	Pro Forma Revenue	268,338,030		307,880,061	322,594,189	333,924,355
6	Connection Fees	8,121,088		8,121,088	8,121,088	8,121,088
7	Other Income	2,180,250		2,180,250	2,180,250	2,180,250
8	Sub-Total	278,639,368		318,181,399	332,895,527	344,225,693
	Less:					
9	Pro Forma Operation and Maintenance Expense	79,630,139	(1)	79,895,071	79,993,655	80,069,567
10	Pro Forma Payment in Lieu of Taxes (PILOT)	24,188,231		26,777,713	28,323,728	28,945,721
11	Pro Forma Debt Service on Existing Debt	126,959,272		125,590,327	125,593,576	125,466,311
12	Pro Forma Debt Service on Series 2019A Bonds	-		13,918,289	13,918,289	13,918,289
13	Pro Forma Debt Service on Series 2020A Bonds	-		-	9,066,279	9,066,279
14	Pro Forma Debt Service on Series 2021A Bonds	-		-	-	6,759,526
15	Sub-Total	230,777,642		246,181,399	256,895,527	264,225,693
16	Revenue Funded Extensions and Replacements	47,861,726		72,000,000	76,000,000	80,000,000
17	Total Extensions and Replacements	(211,102,310)		(202,767,504)	(208,113,168)	(178,499,329)
18	System Integrity Adjustment for Eligible Infrastructure Improvements	22,263,316		-	-	-
19	Extensions and Replacements Revenue Funding Shortfall	(140,977,268)		(130,767,504)	(132,113,168)	(98,499,329)
20	Balance in Construction Fund at 7/31/2018	88,928,470		-	-	-
21	Pro Forma Extensions and Replacements Funding Shortfall - Net	(52,048,798)		(130,767,504)	(132,113,168)	(98,499,329)
22	Net New Debt Proceeds Required		(2)	202,816,302	132,113,168	98,499,329
23	Debt Service Reserve Fund Requirement			13,918,289	9,066,279	6,759,526
24	Cost of Issuance			2,189,238	1,426,055	1,063,221
25	Total Principal Amount of New Debt Required			218,923,828	142,605,502	106,322,076

Note 1: Line 9 includes pro forma Operation and Maintenance Expense and Taxes other than PILOT
Note 2: The Column B amount is the sum of line of credit outstanding at 7/31/2019 from JRB-1 and line 21 of Column B