



## Filing Receipt

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**APPLICATION OF CSWR-TEXAS  
UTILITY OPERATING COMPANY,  
LLC FOR AUTHORITY TO  
CHANGE RATES**

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**BEFORE THE  
PUBLIC UTILITY COMMISSION  
OF TEXAS**

**DIRECT TESTIMONY AND EXHIBITS**

**OF**

**DANE A. WATSON, PE, CDP**

**ON BEHALF OF**

**CSWR-TEXAS UTILITY OPERATING COMPANY, LLC**

**February 10, 2023**

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DANE A. WATSON, PE, CDP, WITNESS FOR  
CSWR-TEXAS UTILITY OPERATING COMPANY, LLC**

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**DIRECT TESTIMONY OF DANE A. WATSON**

**I. INTRODUCTION**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Dane A. Watson. My business address is 101 E. Park Blvd, Suite 220, Plano, Texas 75074.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

A. I am a Partner of Alliance Consulting Group. Alliance Consulting Group provides consulting and expert services to the utility industry.

**Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

A. I am filing testimony on behalf of CSWR-Texas Water Utility Operating Company, LLC ("CSWR-Texas" or the "Company").

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

**Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE.**

A. Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation, and certain accounting-related studies for clients in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for consideration, and supporting such rates before regulatory bodies.

1           My prior employment from 1985 to 2004 was with Texas Utilities Electric  
2           Company and successor companies (“TXU”). During my tenure with TXU, I was  
3           responsible for, among other things, conducting valuation and depreciation studies  
4           for the domestic TXU companies. During that time, I served as Manager of  
5           Property Accounting Services and Records Management in addition to my  
6           depreciation responsibilities.

7           I have twice been Chair of the Edison Electric Institute (“EEI”) Property  
8           Accounting and Valuation Committee and have been Chairman of EEI’s  
9           Depreciation and Economic Issues Subcommittee. I am a Registered Professional  
10          Engineer in the State of Texas and a Certified Depreciation Professional. I am a  
11          Senior Member of the Institute of Electrical and Electronics Engineers (“IEEE”)  
12          and served for several years as an officer of the Executive Board of the Dallas  
13          Section of IEEE as well as national and worldwide offices. I have served as  
14          President of the Society of Depreciation Professionals (“SDP”) twice.

15   **Q.   DO YOU HOLD ANY SPECIAL CERTIFICATION AS A DEPRECIATION**  
16   **EXPERT?**

17   A.   Yes. The SDP has established national standards for depreciation professionals.  
18          The SDP administers an examination and has certain required qualifications to  
19          become certified in this field. I met all requirements and hold a Certified  
20          Depreciation Professional certification.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITY**  
 2 **COMMISSION OF TEXAS (“COMMISSION”)?**

3 A. Yes. I have conducted depreciation studies and filed testimony or testified on  
 4 depreciation and valuation issues before the Commission in Docket Nos. 11735,  
 5 12160, 15195, 16650, 18490, 20285, 22350, 23640, 24040, 32766, 34040, 35763,  
 6 35717, 38147, 38339, 38480, 36633, 38929, 41474, 42004, 42469, 43695, 43950,  
 7 44746, 44704, 45414, 46957, 47527, 48371, 48231, 48401, 49421, 49831, 50288,  
 8 50734, 50557, and 53601. In addition, I have testified on behalf of various utilities  
 9 in more than 190 different proceedings before 35 different regulatory bodies. A list  
 10 of proceedings in which I have provided testimony is provided in Exhibit DAW-1.

11 **Q. WAS YOUR DIRECT TESTIMONY PREPARED BY YOU OR BY**  
 12 **SOMEONE UNDER YOUR DIRECT SUPERVISION OR CONTROL?**

13 A. Yes.

14 **II. PURPOSE OF DIRECT TESTIMONY**

15 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**  
 16 **PROCEEDING?**

17 A. The purpose of my testimony is to support the calculation of depreciation rates to  
 18 be used for CSWR-Texas’s assets as recorded on the Company’s books at  
 19 November 30, 2022. To that end, I discuss the recent depreciation study conducted  
 20 for CSWR-Texas water and sewer assets and support and justify the recommended  
 21 depreciation rates for the Company’s water and sewer assets based on the results of  
 22 the depreciation study. My direct testimony and the attached exhibits were  
 23 prepared by me or under my direction, supervision, or control, and are true and  
 24 correct.

1   **Q.    WHAT EXHIBITS ARE YOU SPONSORING?**

2    A.    I sponsor:

- 3           •   Exhibit DAW-1: List of Testimony Appearances; and
- 4           •   Exhibit DAW-2: CSWR-Texas Depreciation Rate Study at November 30,
- 5               2022.

6   **Q.    PLEASE DESCRIBE THE DEPRECIATION STUDY ON WHICH CSWR-**

7       **TEXAS HAS BASED ITS REQUESTED DEPRECIATION RATES IN THIS**

8       **PROCEEDING.**

9    A.    Because CSWR-Texas recently acquired its water and sewer assets and was

10       provided very limited historical asset transactional information from prior to the

11       acquisitions, the Company has limited vintage account records or historical life data

12       to support a statistical life analysis. Consequently, my study approach relies on the

13       characteristics of the various assets within each of the Company's accounts. These

14       characteristics were developed from information provided by Company subject

15       matter experts who work with similar assets and my professional judgement

16       developed over 30 years of conducting depreciation studies across the industry.

17   **Q.    WHAT PLANT ASSETS ARE INCLUDED IN THE DEPRECIATION**

18       **STUDY?**

19   A.    The depreciation study included water and sewer fixed assets as recorded on the

20       Company's books at November 30, 2022.

21   **Q.    WERE ANY ASSETS EXCLUDED FROM THE DEPRECIATION STUDY?**

22   A.    Yes. Since they are non-depreciable, property such as Land and Land Rights were

23       excluded.

1 **Q. BASED ON YOUR DEPRECIATION STUDY, WHAT IS THE RESULTING**  
 2 **DEPRECIATION EXPENSE IN THIS PROCEEDING?**

3 A. Based on the depreciation study, which analyzed the Company's water and sewer  
 4 plant in service at November 30, 2022, my recommendations result in an annualized  
 5 depreciation expense for CSWR-Texas of approximately \$711 thousand. This  
 6 represents an overall increase of approximately \$299 thousand compared to the  
 7 Company's annualized depreciation expense at existing rates. Table 1 below shows  
 8 a comparison of current versus proposed accrual amounts by utility operation.

9 **Table 1 – Comparison of Annual Depreciation Expense**

<b>Utility Operation</b>	<b>Plant Balance</b>	<b>Current Accrual</b>	<b>Proposed Accrual</b>	<b>Difference</b>
Total Water Plant	\$10,649,481	\$294,739	\$493,763	\$199,024
Total Sewer Plant	\$5,025,239	\$117,759	\$217,258	\$99,500
<b>CSWR-Texas Total</b>	<b>\$15,674,720</b>	<b>\$412,498</b>	<b>\$711,022</b>	<b>\$298,524</b>

10 My Exhibit DAW-2 at Appendix A contains a schedule that shows the  
 11 depreciation rates used to calculate depreciation expense in CSWR-Texas's  
 12 Depreciation Study. Appendix B of the same Exhibit shows a detailed comparison  
 13 of current versus proposed annual depreciation expense.

14 **III. OVERVIEW OF DEPRECIATION STUDY METHODOLOGY**

15 **Q. WHAT DEFINITION OF DEPRECIATION HAVE YOU USED FOR THE**  
 16 **PURPOSE OF CONDUCTING THE DEPRECIATION STUDY AND**  
 17 **PREPARING YOUR DIRECT TESTIMONY?**

18 A. The term "depreciation," as used herein, is considered in the accounting sense; that  
 19 is, a system of accounting that distributes the cost of assets, less net salvage (if any),  
 20 over the estimated useful life of the assets in a systematic and rational manner. It



1 is a process of allocation, not valuation. Depreciation expense is systematically  
2 allocated to accounting periods over the life of the properties. The amount allocated  
3 to any one accounting period does not necessarily represent the loss or decrease in  
4 value that will occur during that particular period. Thus, depreciation is considered  
5 an expense or cost, rather than a loss or decrease in value.

6 **Q. HOW WILL CSWR-TEXAS ACCOUNT FOR THE DEPRECIATION**  
7 **EXPENSE INCLUDED IN ITS RATES?**

8 A. CSWR-Texas will accrue depreciation based on the original cost of all property  
9 included in each depreciable plant account. On retirement, the full cost of  
10 depreciable property, less the net salvage amount, if any, will be charged to the  
11 depreciation reserve.

12 **Q. PLEASE DESCRIBE YOUR TYPICAL DEPRECIATION STUDY**  
13 **APPROACH.**

14 A. I typically conduct a depreciation study in four phases, as shown in my Exhibit  
15 DAW-2. The four phases are: Data Collection; Analysis; Evaluation; and  
16 Calculation. During the initial phase of the study, I collect the historical data, when  
17 it is available, to be used in the analysis. After assembly of the data, I perform  
18 analyses to determine the life and net salvage percentage for the different property  
19 groups being studied. The information obtained from project management  
20 personnel who oversee engineering and construction, combined with the study  
21 results, is then evaluated to determine how the results of the historical asset activity  
22 analysis, in conjunction with the Company's expected future plans, should be

1 applied. Using all of these resources, I then calculate the depreciation rate for each  
2 function.

3 **Q. WHAT IS THE DIFFERENCE BETWEEN GROUP AND ITEMIZED**  
4 **ACCOUNTING WHEN CALCULATING DEPRECIATION RATES?**

5 A. There are several differences between item and group accounting that impact  
6 depreciation expense. Group accounting assumes that the assets in a group have  
7 similar life characteristics and applies the same average service life and dispersion  
8 to all assets within a group. This assumption allows for more accurate projection  
9 of future retirements and analysis of historical retirement activity before and after  
10 the average service life. Additionally, there are no gains or losses recorded at the  
11 time of retirement in group depreciation. Group accounting assumes an asset is  
12 fully depreciated when it is retired and spreads the recovery of investment over the  
13 service lives of the group of assets.

14 Itemized accounting, on the other hand, assigns a service life to each  
15 individual asset. Gains and losses are recorded at the time of retirement and result  
16 in a deficiency in accumulated depreciation that is being charged to expense when  
17 an asset is retired early. For asset intensive companies, such as regulated utilities,  
18 group accounting makes it easier to maintain accurate, consistent, and reliable fixed  
19 asset records. For this reason, the vast majority of regulated utilities use group  
20 accounting to calculate depreciation expense.

1   **Q.    ARE YOU RECOMMENDING THAT THE COMPANY CALCULATE**  
2       **DEPRECIATION USING THE GROUP ACCOUNTING APPROACH IN**  
3       **THIS CASE?**

4    A.    Yes. This study uses the straight-line method, broad (average) life group procedure,  
5       and remaining life technique to calculate the proposed depreciation rates.

6   **Q.    DO THE COMMISSION’S RULES ADDRESS THE USE OF GROUP**  
7       **ASSET ACCOUNTING TO CALCULATE DEPRECIATION?**

8    A.    Yes. 16 TAC § 24.41(c)(2)(B)(ii) states that “[a]ssets may be booked in itemized  
9       or group accounting. . . .” Rule 24.41(b)(1)(B) states that “[f]or those utilities that  
10       elect a group accounting approach, all mortality characteristics, both life and net  
11       salvage, must be supported by an engineering or economic based depreciation study  
12       for which the test year for the depreciation is no more than five years old in  
13       comparison to the rate case test year. . . .” My depreciation study supports the  
14       application of group accounting approach to calculate depreciation expense and the  
15       available mortality characteristics of the Company’s assets.

16   **Q.    DOES USING GROUP ASSET ACCOUNTING TO CALCULATE**  
17       **DEPRECIATION EXPENSE FOR CSWR-TEXAS RESULT IN MORE**  
18       **ACCURATE RESULTS?**

19   A.    Yes. Group depreciation allows the use of retirement patterns (e.g., Iowa Curves)  
20       to reflect the fact that all assets will not retire at the average life. As a result, the  
21       calculation of depreciation for CSWR-Texas is more accurate using the group  
22       depreciation methodology because it allows for a more accurate projection of the  
23       timing of retirements and the recovery of depreciation expense in relation to the

1 average service life of the group. Using group accounting also ensures that a utility  
2 has the opportunity to recover the full cost (and only the full cost) of its assets  
3 because gains and losses outside of a test year would not occur.

4 **Q. GIVEN THAT CSWR-TEXAS DOES NOT HAVE HISTORICAL DATA TO**  
5 **ANALYZE FOR THE LIFE ANALYSIS, WHAT PROCESS HAVE YOU**  
6 **UNDERTAKEN TO VALIDATE YOUR LIFE RECOMMENDATIONS?**

7 A. In order to achieve the most appropriate recommendations in light of CSWR-  
8 Texas's unique characteristics, I evaluated the various components in each plant  
9 account. Company personnel familiar with CSWR-Texas's assets from a finance,  
10 construction, operations and maintenance perspective participated in interviews  
11 regarding the expected useful life for the assets in each plant account. Company  
12 experts provided important information regarding materials, operations and  
13 maintenance, as well as CSWR-Texas's current expectations regarding the  
14 operational life of the assets.

15 The Company's input, in conjunction with my general life expectations  
16 from studying these types of assets across the country over many years, allowed me  
17 to develop reasonable and representative expected service lives for CSWR-Texas's  
18 assets. The results of my analysis are reflected in the service life recommendations  
19 set forth in the depreciation study attached to this testimony as Exhibit DAW-2.

1   **Q.    HAVE YOU PREVIOUSLY CONDUCTED A DEPRECIATION STUDY**  
2       **FOR AN ENTITY WITH LITTLE OR NO ANALYZABLE HISTORICAL**  
3       **DATA?**

4    A.    Yes, I have presented testimony before four separate regulatory commissions for  
5           companies that faced this situation.   Before this Commission, I conducted  
6           depreciation studies for Lone Star Transmission, LLC (“Lone Star”), Cross Texas  
7           Transmission, LLC (“CTT”), and Wind Energy Transmission Texas, LLC  
8           (“WETT”), all of which were new-market entrants as Texas electric utilities, and  
9           Corix Utilities Texas (“CUTX”), which is a water and wastewater utility.<sup>1</sup> Before  
10          the Railroad Commission of Texas (“RCT”) in Gas Utility Division (“GUD”)  
11          Docket No. 10679, I conducted a depreciation study for SiEnergy, L.P.  
12          (“SiEnergy”), which also did not have historical data that could be analyzed. In  
13          Michigan Public Service Commission (“MPSC”) Case No. U-16536, I performed  
14          a depreciation study for Consumers Energy’s wind assets that were still under  
15          construction at the time of the study. Before the Regulatory Commission of Alaska,  
16          I presented depreciation studies for new generating units when new capacity was  
17          added in three separate proceedings. Matanuska Electric Coop, Alaska Electric  
18          Light and Power, and Municipal Power and Light, City of Anchorage all added new  
19          generating units in the following proceedings: Case U-14-045, U-16-067, and U-  
20          17-008, respectively.

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<sup>1</sup> PUCT Docket Nos. 40020, 40604, 40606, 42469, 43950, 44746, and 50557.

1   **Q.   WHAT DID THE REGULATORS CONCLUDE IN EACH OF THOSE**  
2       **PROCEEDINGS?**

3   A.   This Commission found my approach to be reasonable and adopted depreciation  
4       rates consistent with my recommendations in those cases. The RCT approved the  
5       proposed depreciation rates for SiEnergy. In the *Consumers Energy* case, the  
6       MPSC approved a settlement agreement that included my life recommendations.  
7       In the Alaska proceedings, my recommendations were adopted in all three cases.

8   **Q.   WOULD THE ADOPTION OF DEPRECIATION RATES IN THIS CASE**  
9       **PRECLUDE THE COMMISSION FROM ADOPTING DIFFERENT**  
10      **RATES IN THE FUTURE?**

11  A.   No. As I mentioned before, utilities are generally required to have a depreciation  
12      study conducted every five years. Therefore, as the Company begins to gather data  
13      going forward, it can include this data in future depreciation studies and the  
14      Commission can update depreciation rates as necessary.

15  **Q.   WHAT DEPRECIATION SYSTEM DID YOU USE IN THIS STUDY?**

16  A.   I utilized the straight-line, average life group (“ALG”), remaining life depreciation  
17      system to calculate annual and accrued depreciation in the study.

18  **Q.   HOW ARE THE DEPRECIATION RATES DETERMINED USING THE**  
19      **ALG PROCEDURE?**

20  A.   In this system, the annual depreciation expense for each account was computed by  
21      dividing the original cost of the asset, less actual depreciation reserve, less  
22      estimated net salvage, by its respective average life group remaining life. The  
23      resulting annual accrual amounts of all depreciable property within an account were

1 accumulated, and the total was divided by the original cost of all depreciable  
2 property within the account to determine the depreciation rate. The calculated  
3 remaining lives and annual depreciation accrual rates were based on the attained  
4 ages of the plant in service, the estimated service life, and the net salvage  
5 characteristics of each depreciable group. The calculated remaining lives and  
6 annual depreciation rates from these calculations are shown in Appendix A of my  
7 Exhibit DAW-2.

8 **Q. WAS NET SALVAGE ANALYSIS INCLUDED IN YOUR DEPRECIATION**  
9 **STUDY?**

10 A. No. The Company has not recorded removal costs associated with terminal  
11 retirements. Immaterial removal costs related to assets being replaced have been  
12 capitalized as part of the cost of the new asset being installed. Any gross salvage  
13 would be recorded to the general ledger as an accumulated provision for  
14 depreciation, but due to the nature of the assets, the Company does not expect any  
15 material gross salvage (scrap) in the future; therefore, net salvage was set to zero  
16 percent for all accounts in the study.

17 **IV. CSWR-TEXAS DEPRECIATION STUDY**

18 **Q. WHAT TYPE OF PROPERTY IS INCLUDED IN THE CSWR-TEXAS**  
19 **DEPRECIATION STUDY?**

20 A. The study includes the following functional groups of property for water and sewer  
21 operations, each of which has separate depreciation rates by plant account. The  
22 functional groups for water operations include: (1) Source of Supply, (2) Pumping  
23 Plant, (3) Water Treatment, (4) Transmission and Distribution, and (5) General  
24 property. The functional groups for sewer operations include: (1) Collection Plant,

1 (2) Pumping Plant, (3) Treatment and Disposal, and (4) General property. The  
2 investment in each account within these functions is based on the total costs as of  
3 November 30, 2022, provided to me by the Company.

4 **Q. WHAT ARE YOUR GENERAL OBSERVATIONS REGARDING THE**  
5 **LIFE PARAMETERS YOU ARE RECOMMENDING IN THE STUDY?**

6 A. The life parameters selected for each account are based on operational experience  
7 and financial information from Company subject matter experts working with the  
8 existing assets, future expectations and plans for the water and sewer assets, as well  
9 as my professional judgment in performing depreciation studies throughout my 35-  
10 year career.

11 **Q. WHAT ARE THE PROPOSED SERVICE LIVES IN YOUR STUDY?**

12 A. A detailed description and life characteristics of the assets in each account are  
13 included in the Life Analysis portion of my depreciation study attached as Exhibit  
14 DAW-2. This study proposes to increase the service life for 12 accounts, decrease  
15 the service life for 8 accounts, and retain the existing service life for 18 accounts.  
16 Appendix C of the study shows the life parameter comparison by account.

17 **Q. DO YOU BELIEVE THAT YOUR SERVICE LIFE RECOMMENDATIONS**  
18 **ARE REASONABLE?**

19 A. Yes. The goal of performing a depreciation study is to recover original investment,  
20 adjusted for any net salvage, over the useful lives of the underlying assets. The best  
21 way to ensure the proper service life is used for each account is performing  
22 depreciation studies on a routine basis and examining the life characteristics and  
23 mix of assets in each account. A detailed analysis of the assets in each account, the



1 operational experience of the Company's subject matter experts and my experience  
 2 with like assets across the country lead to reasonable life recommendations that fall  
 3 within the range of lives I would expect for the specific assets within each account.

4 **Q. WHAT ARE THE PRIMARY FORCES AFFECTING THE**  
 5 **DEPRECIATION EXPENSE AND RESULTING DEPRECIATION RATES**  
 6 **RECOMMENDED IN THIS STUDY?**

7 A. The primary forces affecting the depreciation expense for CSWR-Texas are the  
 8 effect of historical reserve positions and changes in average service lives for certain  
 9 asset groups.

10 **Q. WHEN YOU USE THE TERM "RESERVE POSITION," WHAT DO YOU**  
 11 **MEAN?**

12 A. The term "reserve position" refers to the difference between a theoretical reserve  
 13 and the existing book reserve. If the theoretical reserve is greater than the book  
 14 reserve, past depreciation has been inadequate compared to the depreciation  
 15 parameters developed in the depreciation study, and an upward adjustment to the  
 16 depreciation rate is required. If the opposite is true, a downward adjustment to the  
 17 depreciation rate is required. In the case of CSWR-Texas, nearly all the accounts  
 18 result in higher depreciation rates due to the book reserve level being significantly  
 19 lower than the theoretical reserve level. Company witness Brent Thies discusses  
 20 the current accumulated depreciation balance and accounting entries for newly  
 21 acquired assets in his testimony.

1   **Q.    WHAT ARE THE PROPOSED ANNUAL DEPRECIATION RATES?**

2    A.    Detailed calculations of the accrual rates are shown in Appendix A of the  
3       depreciation study attached to my testimony as Exhibit DAW-2.

4                           **V.    SUMMARY AND CONCLUSION**

5   **Q.    DO YOU HAVE ANY CONCLUDING REMARKS?**

6    A.    Yes. The depreciation study and analysis fully support setting depreciation rates at  
7       the levels I have indicated in my direct testimony. The depreciation study for  
8       CSWR-Texas's depreciable property describes the detailed calculations performed  
9       and the resulting rates that are appropriate for Company property. The Company's  
10       depreciation rates should be set at my recommended levels in order to allow  
11       CSWR-Texas to recover the remaining investment in property over the average  
12       remaining life of the assets.

13   **Q.    DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

14   A.    Yes, it does.

## Exhibit DAW-1

## Dane A. Watson, Testimony Appearances

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Florida	Florida Public Service Commission	20220219	People Gas System	2022	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-21329	Michigan Gas Utilities Corporation	2022	Gas Depreciation Study
Dominica	Independent Regulatory Commission		Dominica Electricity Services LTD	2022	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	22-00270-UT	Public Service of New Mexico	2022	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	22-00286-UT	Southwestern Public Service Company	2022	Electric Technical Update
Minnesota	Minnesota Public Utilities Commission	22-299	Northern States Power-Minnesota	2022	Electric Gas and Common Depreciation Study
California	California Public Utilities Commission	A.22-08-010	Bear Valley Electric	2022	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-21294	SEMCO Gas	2022	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	22-064-U	Liberty Pine Bluff Water	2022	Water Depreciation Study
Colorado	Colorado Public Utilities Commission	22AL-0348G	Atmos Energy	2022	<b>Gas Depreciation Study</b>
New York	FERC	ER22-2581-000	New York Power Authority	2022	Transmission and General Depreciation Study
South Carolina	South Carolina Public Service Commission	2022-89-G	Piedmont Natural Gas	2022	Natural Gas Depreciation Study
California	California Public Utilities Commission	A.22-007-001	California American Water	2022	Water and Waste Water Depreciation Study
Alaska	Regulatory Commission of Alaska	U-22-034	Chugach Electric Association	2022	Electric Depreciation Study
Georgia	Georgia Public Service Commission	44280	Georgia Power Company	2022	Electric Depreciation Study
California	California Public Utilities Commission	22-005-xxx	San Diego Gas and Electric	2022	Electric Gas and Common Depreciation Study
California	California Public Utilities Commission	22-005-xxx	Southern California Gas	2022	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	22AL-0046G	Public Service of Colorado	2022	Gas Depreciation given potential for climate change
Texas	Public Utility Commission of Texas	53601	Oncor Electric Delivery	2022	Electric Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR2222040253	South Jersey Gas	2022	Gas Depreciation Study
Oklahoma	Corporation Commission of Oklahoma	PUD 202100163	Empire District Electric Company	2022	Electric Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Michigan	Michigan Public Service Commission	U-21176	Consumers Gas	2021	Gas Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR21121254	Elizabethtown Natural Gas	2021	Gas Depreciation Study
Ontario Canada	Ontario Energy Board	EB-2021-0110	Hydro One	2021	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	TA116-118, TA115-97, TA160-37 and TA110-290	Fairbanks Water and Wastewater	2021	Water and Waste Water Depreciation Study
Colorado	Public Utilities Commission of Colorado	21AL-0317E	Public Service of Colorado	2021	Electric and Common Depreciation Study
Alaska	Regulatory Commission of Alaska	U-21-025	Golden Valley Electric Association	2021	Electric Depreciation Study
Wisconsin	Public Service Commission of Wisconsin	5-DU-103	WE Energies	2021	Electric and Gas Depreciation Study
Kentucky	Public Service Commission of Kentucky	2021-00214	Atmos Kentucky	2021	Gas Depreciation Study
Missouri	Missouri Public Service Commission	ER-2021-0312	Empire District Electric Company	2021	Electric Depreciation Study
Wisconsin	Public Service Commission of Wisconsin	4220-DU-111	Northern States Power Wisconsin	2021	Transmission, Distribution General and Common Depreciation Study
Louisiana	Louisiana Public Service Commission	U-35951	Atmos Energy	2021	Statewide Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E015-D-21-229	Allete Minnesota Power	2021	Intangible, Transmission, Distribution, and General Depreciation Study
Michigan	Michigan Public Service Commission	U-20849	Consumers Energy	2021	Electric and Common Depreciation Study
Texas	Texas Public Utility Commission	51802	Southwestern Public Service Company	2021	Electric Technical Update
MultiState	FERC	RP21-441-000	Florida Gas Transmission	2021	Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	20-00238-UT	Southwestern Public Service Company	2021	Electric Technical Update
Yukon Territory Canada	Yukon Energy Board	2021 General Rate Application	Yukon Energy	2020	Electric Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
MultiState	FERC	ER21-709-000	American Transmission Company	2020	Electric Depreciation Study
Texas	Texas Public Utility Commission	51611	Sharyland Utilities	2020	Electric Depreciation Study
Texas	Texas Public Utility Commission	51536	Brownsville Public Utilities Board	2020	Electric Depreciation Study
New Jersey	New Jersey Board of Public Utilities	WR20110729	Suez Water New Jersey	2020	Water and Waste Water Depreciation Study
Idaho	Idaho Public Service Commission	SUZ-W-20-02	Suez Water Idaho	2020	Water Depreciation Study
Texas	Texas Public Utility Commission	50944	Monarch Utilities	2020	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-20844	Consumers Energy/DTE Electric	2020	Ludington Pumped Storage Depreciation Study
Mexico	Comision Reguladora de Energia	G/352/TRA/2015 UH-250/125738/2019	Arguelles Depreciation Study	2020	Gas Depreciation Study
Tennessee	Tennessee Public Utility Commission	2000086	Piedmont Natural Gas	2020	Gas Depreciation Study
Texas	Railroad Commission of Texas	OS-00005136	CoServ Gas	2020	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10988	EPCOR Gas Texas	2020	Gas Depreciation Study
Florida	Florida Public Service Commission	20200166-GU	People Gas System	2020	Gas Depreciation Study
Mississippi	Federal Energy Regulatory Commission	ER20-1660-000	Mississippi Power Company	2020	Electric Depreciation Study
Texas	Public Utility Commission of Texas	50557	Corix Utilities	2020	Water and Waste Water Depreciation Study
Georgia	Georgia Public Service Commission	42959	Liberty Utilities Peach State Natural Gas	2020	Gas Depreciation Study
Texas	Public Utility Commission of Texas	50734	Oncor Electric Delivery	2020	Life of Intangible Plant
New Jersey	New Jersey Board of Public Utilities	GR20030243	South Jersey Gas	2020	Gas Depreciation Study
Kentucky	Kentucky Public Service Commission	2020-00064	Big Rivers	2020	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	20AL-0049G	Public Service of Colorado	2020	Gas Depreciation Study
New York	Federal Energy Regulatory Commission	ER20-716-000	LS Power Grid New York, Corp.	2019	Electric Transmission Depreciation Study
Mississippi	Mississippi Public Service Commission	2019-UN-219	Mississippi Power Company	2019	Electric Depreciation Study

## Exhibit DAW-1

## Dane A. Watson, Testimony Appearances

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Texas	Public Utility Commission of Texas	50288	Kerrville Public Utility District	2019	Electric Depreciation Study
Texas	Railroad Commission of Texas	GUD 10920	CenterPoint Gas	2019	Gas Depreciation Study and Propane Air Study
Texas, New Mexico	Federal Energy Regulatory Commission	ER20-277-000	Southwestern Public Service Company	2019	Electric Production and General Plant Depreciation Study
New Mexico	New Mexico Public Regulation Commission		New Mexico Gas	2019	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-19-086	Alaska Electric Light and Power	2019	Electric Depreciation Study
Texas	Railroad Commission of Texas	GUD 10900	Atmos Energy West Texas Division - Triangle	2019	Depreciation Rates for Natural Gas Property
Delaware	Delaware Public Service Commission	19-0615	Suez Water Delaware	2019	Water Depreciation Study
California	California Public Utilities Commission	A.19-08-015	Southwest Gas Northern California	2019	Gas Depreciation Study
California	California Public Utilities Commission	A.19-08-015	Southwest Gas Southern California	2019	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10895	CenterPoint Propane Air	2019	Depreciation Rates for Propane Air Assets
Texas	Public Utility Commission of Texas	49831	Southwestern Public Service Company	2019	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	19-00170-UT	Southwestern Public Service Company	2019	Electric Depreciation Study
Georgia	Georgia Public Service Commission	42516	Georgia Power Company	2019	Electric Depreciation Study
Georgia	Georgia Public Service Commission	42315	Atlanta Gas Light	2019	Gas Depreciation Study
Arizona	Arizona Corporation Commission	G-01551A-19-0055	Southwest Gas Corporation	2019	Gas Removal Cost Study
New Hampshire	New Hampshire Public Service Commission	DE 19-064	Liberty Utilities	2019	Electric Distribution and General
New Jersey	New Jersey Board of Public Utilities	GR19040486	Elizabethtown Natural Gas	2019	Gas Depreciation Study
Texas	Public Utility Commission of Texas	49421	CenterPoint Houston Electric LLC	2019	Electric Depreciation Study
North Carolina	North Carolina Utilities Commission	Docket No. G-9, Sub 743	Piedmont Natural Gas	2019	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E-015/D-18-226	Allete Minnesota Power	2018	Electric Compliance Filing
Colorado	Colorado Public Utilities Commission	19AL-0063ST	Public Service of Colorado	2019	Steam Depreciation Study

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## Dane A. Watson, Testimony Appearances

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Alaska	Regulatory Commission of Alaska	U-18-121	Municipal Power and Light City of Anchorage	2018	Electric Depreciation Study
Various	FERC	RP19-352-000	Sea Robin	2018	Gas Depreciation Study
Texas New Mexico	Federal Energy Regulatory Commission	ER19-404-000	Southwestern Public Service Company	2018	Electric Transmission Depreciation Study
California	Federal Energy Regulatory Commission	ER19-221-000	San Diego Gas and Electric	2018	Electric Transmission Depreciation Study
Kentucky	Kentucky Public Service Commission	2018-00281	Atmos Kentucky	2018	Gas Depreciation Study
Texas	Public Utility Commission of Texas	48500	Golden Spread Electric Coop	2018	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-18-054	Matanuska Electric Coop	2018	Electric Generation Depreciation Study
California	California Public Utilities Commission	A17-10-007	San Diego Gas and Electric	2018	Electric and Gas Depreciation Study
Texas	Public Utility Commission of Texas	48401	Texas New Mexico Power	2018	Electric Depreciation Study
Nevada	Public Utility Commission of Nevada	18-05031	Southwest Gas	2018	Gas Depreciation Study
Texas	Public Utility Commission of Texas	48231	Oncor Electric Delivery	2018	Depreciation Rates
Texas	Public Utility Commission of Texas	48371	Entergy Texas	2018	Electric Depreciation Study
Kansas	Kansas Corporation Commission	18-KCPE-480-RTS	Kansas City Power and Light	2018	Electric Depreciation Study
Louisiana	Louisiana Public Service Commission	U-34803	Atmos LGS	2018	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	18-027-U	Liberty Pine Bluff Water	2018	Water Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E-015/D-18-226	Allete Minnesota Power	2018	Electric Depreciation Rate
Kentucky	Kentucky Public Service Commission	2017-00349	Atmos KY	2018	Gas Depreciation Rates
Tennessee	Tennessee Public Utility Commission	18-00017	Chattanooga Gas	2018	Gas Depreciation Study
Texas	Railroad Commission of Texas	10679	Si Energy	2018	Gas Depreciation Study
Texas	City of Dallas Statement of Intent	NA	Atmos Mid-Tex	2017-2018	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-104	Anchorage Water and Wastewater	2017	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-18488	Michigan Gas Utilities Corporation	2017	Gas Depreciation Study

**Exhibit DAW-1  
Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
New Mexico	FERC	ER18-228-000	Southwestern Public Service Company	2017	Electric Production Depreciation Study
Texas	Railroad Commission of Texas	10669	CenterPoint South Texas	2017	Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	17-00255-UT	Southwestern Public Service Company	2017	Electric Production Depreciation Study
Arkansas	Arkansas Public Service Commission	17-061-U	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Kansas	Kansas Corporation Commission	18-EPDE-184-PRE	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Oklahoma	Oklahoma Corporation Commission	PUD 201700471	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Missouri	Missouri Public Service Commission	EO-2018-0092	Empire District Electric Company	2017	Depreciation Rates for New Wind Generation
Michigan	Michigan Public Service Commission	U-18457	Upper Peninsula Power Company	2017	Electric Depreciation Study
Florida	Florida Public Service Commission	20170179-GU	Florida City Gas	2017	Gas Depreciation Study
Michigan	FERC	ER18-56-000	Consumers Energy	2017	Electric Depreciation Study
Missouri	Missouri Public Service Commission	GR-2018-0013	Liberty Utilities	2017	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-18452	SEMCO	2017	Gas Depreciation Study
Texas	Public Utility Commission of Texas	47527	Southwestern Public Service Company	2017	Electric Production Depreciation Study
Minnesota	Minnesota Public Utilities Commission	17-581	Minnesota Northern States Power	2017	Electric, Gas and Common Transmission, Distribution and General
Colorado	Colorado Public Utilities Commission	17AL-0363G	Public Service of Colorado-Gas	2017	Gas Depreciation Study
MultiState	FERC	ER17-1664	American Transmission Company	2017	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-17-008	Municipal Power and Light City of Anchorage	2017	Generating Unit Depreciation Study
Louisiana	Louisiana Public Service Commission	U-34343	Atmos Trans Louisiana	2017	Gas Depreciation Study
Mississippi	Mississippi Public Service Commission	2017-UN-041	Atmos Energy	2017	Gas Depreciation Study
New York	FERC	ER17-1010-000	New York Power Authority	2017	Electric Depreciation Study



## Exhibit DAW-1

## Dane A. Watson, Testimony Appearances

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
Oklahoma	Oklahoma Corporation Commission	PUD 201700078	CenterPoint Oklahoma	2017	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10580	Atmos Pipeline Texas	2017	Gas Depreciation Study
Texas	Public Utility Commission of Texas	46957	Oncor Electric Delivery	2017	Electric Depreciation Study
Alabama	FERC	ER16-2312-000	Alabama Power Company	2016	Electric Depreciation Study
Alabama	FERC	ER16-2313-000	SESCO	2016	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-16-067	Alaska Electric Light and Power	2016	Generating Unit Depreciation Study
Arizona	Arizona Corporation Commission	G-01551A-16-0107	Southwest Gas	2016	Gas Depreciation Study
California	California Public Utilities Commission	A 16-07-002	California American Water	2016	Water and Waste Water Depreciation Study
Colorado	Colorado Public Utilities Commission	16A-0231E	Public Service Company of Colorado	2016	Electric Depreciation Study
Mississippi	Mississippi Public Service Commission	2016 UN 267	Willmut Gas	2016	Gas Depreciation Study
Florida	Florida Public Service Commission	160170-EI	Gulf Power	2016	Electric Depreciation Study
Georgia	N/A	N/A	Dalton Utilities	2016	Electric, Gas, Water, Wastewater & Fiber Depreciation Study
Illinois	Illinois Commerce Commission	GRM #16-208	Liberty-Illinois	2016	Natural Gas Depreciation Study
Iowa	Iowa Utilities Board	RPU-2016-0003	Liberty-Iowa	2016	Natural Gas Depreciation Study
Kentucky	FERC	RP16-097-000	KOT	2016	Natural Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-18195	Consumers Energy/DTE Electric	2016	Ludington Pumped Storage Depreciation Study
Michigan	Michigan Public Service Commission	U-18127	Consumers Energy	2016	Natural Gas Depreciation Study
MultiState	FERC	ER17-191-000	American Transmission Company	2016	Electric Depreciation Study
New Jersey	New Jersey Board of Public Utilities	GR16090826	Elizabethtown Natural Gas	2016	Gas Depreciation Study
New York	NA		New York Power Authority	2016	Electric Transmission and General Study
North Carolina	North Carolina Utilities Commission	Docket G-9 Sub 77H	Piedmont Natural Gas	2016	Gas Depreciation Study
Texas	Railroad Commission of Texas	GUD 10567	CenterPoint Texas	2016	Gas Depreciation Study
Texas	Public Utility Commission of Texas	45414	Sharyland	2016	Electric Depreciation Study

**Exhibit DAW-1  
Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Alaska	Regulatory Commission of Alaska	U-15-089	Fairbanks Water and Wastewater	2015	Water and Waste Water Depreciation Study
Arkansas	Arkansas Public Service Commission	15-098-U	CenterPoint Arkansas	2015	Gas Depreciation Study and Cost of Removal Study
Arkansas	Arkansas Public Service Commission	15-031-U	Source Gas Arkansas	2015	Underground Storage Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	15-011-U	Source Gas Arkansas	2015	Gas Depreciation Study
Atmos Energy Corporation	Tennessee Regulatory Authority	14-00146	Atmos Tennessee	2015	Natural Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	15-AL-0299G	Atmos Colorado	2015	Gas Depreciation Study
Kansas	Kansas Corporation Commission	16-ATMG-079-RTS	Atmos Kansas	2015	Gas Depreciation Study
Kansas	Kansas Corporation Commission	15-KCPE-116-RTS	Kansas City Power and Light	2015	Electric Depreciation Study
Multi-State NE US	FERC	16-453-000	Northeast Transmission Development, LLC	2015	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00261-UT	Public Service Company of New Mexico	2015	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00296-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
New Mexico	New Mexico Public Regulation Commission	15-00139-UT	Southwestern Public Service Company	2015	Electric Depreciation Study
Texas	Railroad Commission of Texas	GUD 10432	CenterPoint- Texas Coast Division	2015	Gas Depreciation Study
Texas	Public Utility Commission of Texas	44704	Entergy Texas	2015	Electric Depreciation Study
Texas	Public Utility Commission of Texas	44746	Wind Energy Transmission Texas	2015	Electric Depreciation Study
Texas, New Mexico	FERC	ER15-949-000	Southwestern Public Service Company	2015	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-120	Alaska Electric Light and Power	2014-2015	Electric Depreciation Study
Alabama	State of Alabama Public Service Commission	U-5115	Mobile Gas	2014	Gas Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-045	Matanuska Electric Coop	2014	Electric Generation Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-054	Sand Point Generating LLC	2014	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-14-055	TDX North Slope Generating	2014	Electric Depreciation Study

## Exhibit DAW-1

## Dane A. Watson, Testimony Appearances

Asset Location	Commission	Docket (If Applicable)	Company	Year	Description
California	California Public Utilities Commission	A.14-07-006	Golden State Water	2014	Water and Waste Water Depreciation Study
Colorado	Public Utilities Commission of Colorado	14AL-0660E	Public Service Company of Colorado	2014	Electric Depreciation Study
Louisiana	Louisiana Public Service Commission	U-28814	Atmos Energy Corporation	2014	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-17653	Consumers Energy Company	2014	Electric and Common Depreciation Study
Multi State – SE US	FERC	RP15-101	Florida Gas Transmission	2014	Gas Transmission Depreciation Study
Nebraska	Nebraska Public Service Commission	NG-0079	Source Gas Nebraska	2014	Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	14-00332-UT	Public Service of New Mexico	2014	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43950	Cross Texas Transmission	2014	Electric Depreciation Study
Texas	Public Utility Commission of Texas	42469	Lone Star Transmission	2014	Electric Depreciation Study
Texas	Public Utility Commission of Texas	43695	Southwestern Public Service Company	2014	Electric Depreciation Study
Wisconsin	Wisconsin	05-DU-102	WE Energies	2014	Electric, Gas, Steam and Common Depreciation Studies
Texas, New Mexico	Public Utility Commission of Texas	42004	Southwestern Public Service Company	2013-2014	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Virginia	Virginia Corporation Commission	PUE-2013-00124	Atmos Energy Corporation	2013-2014	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-078-U	Arkansas Oklahoma Gas	2013	Gas Depreciation Study
Arkansas	Arkansas Public Service Commission	13-079-U	Source Gas Arkansas	2013	Gas Depreciation Study
California	California Public Utilities Commission	Proceeding No.: A.13-11-003	Southern California Edison	2013	Electric Depreciation Study
Kentucky	Kentucky Public Service Commission	2013-00148	Atmos Energy Corporation	2013	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	13-252	Allete Minnesota Power	2013	Electric Depreciation Study
New Hampshire	New Hampshire Public Service Commission	DE 13-063	Liberty Utilities	2013	Electric Distribution and General
New Jersey	New Jersey Board of Public Utilities	GR13111137	South Jersey Gas	2013	Gas Depreciation Study
North Carolina/South Carolina	FERC	ER13-1313	Progress Energy Carolina	2013	Electric Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Texas	Public Utility Commission of Texas	41474	Sharyland	2013	Electric Depreciation Study
Texas	Railroad Commission of Texas	10235	West Texas Gas	2013	Gas Depreciation Study
Various	FERC	RP14-247-000	Sea Robin	2013	Gas Depreciation Study
Wisconsin	Public Service Commission of Wisconsin	4220-DU-108	Northern States Power Company - Wisconsin	2013	Electric, Gas and Common Transmission, Distribution and General
Alaska	Regulatory Commission of Alaska	U-12-154	Alaska Telephone Company	2012	Telecommunications Utility
Alaska	Regulatory Commission of Alaska	U-12-141	Interior Telephone Company	2012	Telecommunications Utility
Alaska	Regulatory Commission of Alaska	U-12-149	Municipal Power and Light City of Anchorage	2012	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1269ST	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Colorado	Colorado Public Utilities Commission	12AL-1268G	Public Service Company of Colorado	2012	Gas and Steam Depreciation Study
Kansas	Kansas Corporation Commission	12-ATMG-564-RTS	Atmos Kansas	2012	Gas Depreciation Study
Kansas	Kansas Corporation Commission	12-KCPE-764-RTS	Kansas City Power and Light	2012	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-17104	Michigan Gas Utilities Corporation	2012	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	12-858	Northern States Power Company - Minnesota	2012	Electric, Gas and Common Transmission, Distribution and General
Nevada	Public Utility Commission of Nevada	12-04005	Southwest Gas	2012	Gas Depreciation Study
New Mexico	New Mexico Public Regulation Commission	12-00350-UT	Southwestern Public Service Company	2012	Electric Depreciation Study
North Carolina	North Carolina Utilities Commission	E-2 Sub 1025	Progress Energy Carolina	2012	Electric Depreciation Study
North Dakota	North Dakota Public Service Commission	PU-12-0813	Northern States Power	2012	Electric, Gas and Common Transmission, Distribution and General
South Carolina	Public Service Commission of South Carolina	Docket 2012-384-E	Progress Energy Carolina	2012	Electric Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Texas	Railroad Commission of Texas	10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10147, 10170	Atmos Mid-Tex	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10174	Atmos West Texas	2012	Gas Depreciation Study
Texas	Railroad Commission of Texas	10182	CenterPoint Beaumont/ East Texas	2012	Gas Depreciation Study
Texas	Texas Public Utility Commission	40604	Cross Texas Transmission	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40020	Lone Star Transmission	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40606	Wind Energy Transmission Texas	2012	Electric Depreciation Study
Texas	Texas Public Utility Commission	40824	Xcel Energy	2012	Electric Depreciation Study
California	California Public Utilities Commission	A1011015	Southern California Edison	2011	Electric Depreciation Study
Colorado	Public Utilities Commission of Colorado	11AL-947E	Public Service Company of Colorado	2011	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16938	Consumers Energy Company	2011	Gas Depreciation Study
Michigan	Michigan Public Service Commission	U-16536	Consumers Energy Company	2011	Wind Depreciation Rate Study
Mississippi	Mississippi Public Service Commission	2011-UN-184	Atmos Energy	2011	Gas Depreciation Study
MultiState	FERC	ER12-212	American Transmission Company	2011	Electric Depreciation Study
MultiState			Atmos Energy	2011	Shared Services Depreciation Study
Pennsylvania	NA	NA	Safe Harbor	2011	Hydro Depreciation Study
Texas	Texas Public Utility Commission	39896	Entergy Texas	2011	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38929	Oncor	2011	Electric Depreciation Study
Texas	Texas Commission on Environmental Quality	Matter 37050-R	Southwest Water Company	2011	Waste Water Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-070	Inside Passage Electric Cooperative	2010	Electric Depreciation Study
Georgia	Georgia Public Service Commission	31647	Atlanta Gas Light	2010	Gas Depreciation Study
Maine/ New Hampshire	FERC	10-896	Granite State Gas Transmission	2010	Gas Depreciation Study
Multi State – SE US	FERC	RP10-21-000	Florida Gas Transmission	2010	Gas Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Multistate	NA	NA	Constellation Energy Nuclear	2010	Nuclear Generation Depreciation Study
Texas	Texas Railroad Commission	10041	Atmos Amarillo	2010	Gas Depreciation Study
Texas	Texas Railroad Commission	10000	Atmos Pipeline Texas	2010	Gas Depreciation Study
Texas	Public Utility Commission of Texas	36633	City Public Service of San Antonio	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38339	CenterPoint Electric	2010	Electric Depreciation Study
Texas	Public Utility Commission of Texas	38147	Southwestern Public Service Company	2010	Electric Technical Update
Texas	Public Utility Commission of Texas	38480	Texas New Mexico Power	2010	Electric Depreciation Study
Alaska	Regulatory Commission of Alaska	U-10-043	Utility Services of Alaska	2009-2010	Water Depreciation Study
California	California Public Utility Commission	A10071007	California American Water	2009-2010	Water and Waste Water Depreciation Study
Michigan	Michigan Public Service Commission	U-16054	Consumers Energy	2009-2010	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-16055	Consumers Energy/DTE Energy	2009-2010	Ludington Pumped Storage Depreciation Study
Wyoming	Wyoming Public Service Commission	30022-148-GR10	Source Gas	2009-2010	Gas Depreciation Study
Colorado	Colorado Public Utilities Commission	09AL-299E	Public Service of Colorado	2009	Electric Depreciation Study
Iowa	NA		Cedar Falls Utility	2009	Telecommunications, Water, and Cable Utility
Michigan	Michigan Public Service Commission	U-15989	Upper Peninsula Power Company	2009	Electric Depreciation Study
Michigan	Michigan Public Service Commission	In Progress	Edison Sault	2009	Electric Depreciation Study
Mississippi	Mississippi Public Service Commission	09-UN-334	CenterPoint Energy Mississippi	2009	Gas Depreciation Study
New York	New York Public Service Commission		Key Span	2009	Generation Depreciation Study
North Carolina	North Carolina Utilities Commission		Piedmont Natural Gas	2009	Gas Depreciation Study
South Carolina	Public Service Commission of South Carolina		Piedmont Natural Gas	2009	Gas Depreciation Study
Tennessee	Tennessee Regulatory Authority	09-000183	AGL – Chattanooga Gas	2009	Gas Depreciation Study
Tennessee	Tennessee Regulatory Authority	11-00144	Piedmont Natural Gas	2009	Gas Depreciation Study
Texas	Railroad Commission of Texas	9869	Atmos Energy	2009	Shared Services Depreciation Study

**Exhibit DAW-1**  
**Dane A. Watson, Testimony Appearances**

<b>Asset Location</b>	<b>Commission</b>	<b>Docket (If Applicable)</b>	<b>Company</b>	<b>Year</b>	<b>Description</b>
Louisiana	Louisiana Public Service Commission	U-30689	Cleco	2008	Electric Depreciation Study
Multiple States	NA	NA	Constellation Energy	2008	Generation Depreciation Study
New Mexico	New Mexico Public Regulation Commission	07-00319-UT	Southwestern Public Service Company	2008	Testimony – Depreciation
North Dakota	North Dakota Public Service Commission	PU-07-776	Northern States Power Company - Minnesota	2008	Net Salvage
Texas	Public Utility Commission of Texas	35763	Southwestern Public Service Company	2008	Electric Production, Transmission, Distribution and General Plant Depreciation Study
Colorado	Colorado Public Utilities Commission	Filed – no docket to date	Public Service Company of Colorado	2007-2008	Electric Depreciation Study
Colorado	Colorado Public Utilities Commission	10AL-963G	Public Service Company of Colorado	2007-2008	Gas Depreciation Study
Minnesota	Minnesota Public Utilities Commission	E015/D-08-422	Minnesota Power	2007-2008	Electric Depreciation Study
Michigan	Michigan Public Service Commission	U-15629	Consumers Energy	2006-2009	Gas Depreciation Study
Multiple States	NA	NA	Constellation Energy	2007	Generation Depreciation Study
Texas	Public Utility Commission of Texas	34040	Oncor	2007	Electric Depreciation Study
Multiple States	Multiple	NA	CenterPoint Energy	2006	Shared Services Depreciation Study

**CSWR-TEXAS UTILITY OPERATING COMPANY,  
LLC  
FOR ITS  
WATER AND SEWER ASSETS  
DEPRECIATION RATE STUDY  
AT NOVEMBER 30, 2022**



<http://www.utilityalliance.com>



**CSWR-TEXAS UTILITY OPERATING COMPANY, LLC  
WATER AND SEWER PLANT  
DEPRECIATION RATE STUDY**

**EXECUTIVE SUMMARY**

CSWR-Texas Utility Operating Company, LLC ("CSWR-Texas" or the "Company") engaged Alliance Consulting Group to conduct a depreciation study of the Company's Water and Sewer depreciable assets as of November 30, 2022. The scope of the analysis included establishing proposed depreciation rates that form the basis for the Company's requested depreciation expense in the current rate case.

Overall, this study recommends an increase of \$299 thousand in annual depreciation expense when compared to the depreciation rates currently in effect. The increase is comprised of an approximately \$199 thousand increase in annual depreciation expense for Water and approximately \$100 thousand increase for Sewer. I conducted this study using a traditional depreciation study approach for life analysis, adjusted to take into account the newness of CSWR-Texas' investment. Since most of its investment was recently acquired and historical transactional data is limited, detailed statistical analysis was not possible. I used the straight line, broad (average) life group, remaining life depreciation system.

**CSWR-TEXAS UTILITY OPERATING COMPANY, LLC  
WATER AND SEWER PLANT  
DEPRECIATION RATE STUDY  
AT NOVEMBER 30, 2022**

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**ATTACHMENTS**

**Appendix A: Computation of Depreciation Accrual Rates**  
**Appendix B: Comparison of Depreciation Rates**  
**Appendix C: Proposed Depreciation Parameters**

## **PURPOSE**

The purpose of this study is to develop depreciation rates for the water and sewer depreciable property as recorded on CSWR-Texas books at November 30, 2022. The account based depreciation rates were designed to recover the total plant investment, adjusted for net salvage, over the average service life of the property on a straight-line basis. Non-depreciable property, such as land, was excluded from this study.

CSWR-Texas is a subsidiary of CSWR, LLC ("CSWR"). CSWR is transforming how water utilities work by using technology and innovation to quickly assess and invest in reliable infrastructure that meets or exceeds stringent state and federal safety standards, ensuring all communities across the U.S. have access to safe, clean and reliable water resources while protecting the aquifers, lakes, rivers and streams that are essential to our world.

Since 2020, CSWR-Texas has acquired 62 water systems and 12 sewer systems in Texas and serves 7,000 water connections and 2,700 sewer connections in Texas. In total, CSWR-Texas owns and operates approximately 207 miles of water mains and 30 miles of sewer mains. CSWR-Texas serves 7,000 water connections and 2,700 sewer connections in Texas.

The Company's prior lives were a compilation of lives used by the previous owners of the systems and lives developed to recover the costs of newly acquired assets in newly created fixed asset accounts incorporating the guidance provided in the PUCT system of accounts.

**STUDY RESULTS**

Overall depreciation rates for the specific depreciable property analyzed and included in this study, are shown in Appendix A. For the Company's combined water and sewer operations, the proposed depreciation rates result in an annual depreciation expense of \$711 thousand based on depreciable investment at November 30, 2022. The annual equivalent depreciation expense calculated by the same method using the existing rates was \$412 thousand. A summary of results is shown in the table below.

Utility Operation	Existing Accrual Amount (\$)	Proposed Accrual Amount (\$)	Difference Accrual (\$)
Total Water	294,739	493,763	199,024
Total Sewer	117,759	217,258	99,500
CSWR-Texas Total	412,498	711,022	298,524

Appendix A shows the computation of the annual depreciation rates and accruals by account. Appendix B presents a comparison of existing rates and accrual amounts versus proposed rates and accrual amounts by account. Appendix C presents a comparison of life parameters by account.

## **GENERAL DISCUSSION**

### **Definition**

The term "depreciation" as used in this study is considered in the accounting sense, that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the life of the properties. The amount allocated to any one accounting period does not necessarily represent the loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. On retirement the full cost of depreciable property, less any net salvage value, is charged to the depreciation reserve.

### **Basis of Depreciation Estimates**

The straight-line, broad (average) life group, remaining-life depreciation system was employed to calculate annual and accrued depreciation in this study. In this system, the annual depreciation expense for each group is computed by dividing the original cost of the asset less allocated depreciation reserve less estimated net salvage by its respective average life group remaining life. The resulting annual accrual amounts of all depreciable property within a function were accumulated, and the total was divided by the original cost of all functional depreciable property to determine the depreciation rate. The calculated remaining lives and annual depreciation accrual rates were based on attained ages of plant in service and the estimated service life and salvage characteristics of each depreciable group. The computations of the annual functional depreciation rates are shown in Appendix A.

### **Actuarial Analysis**

Actuarial analysis (retirement rate method) was not available to be used due to the lack of historical transactional information for the majority of CSWR'-Texas' water and sewer assets. Many of the assets have been recently acquired and CSWR-Texas does not have the historical retirement information prior to the acquisitions. Average service lives for each type of asset were estimated based on operational information provided by Company subject matter experts in working with similar assets and my professional judgement obtained through conducting depreciation studies across the industry for more than 30 years. The summary of proposed life parameters by account is shown in Appendix C.

### **Judgment**

Any depreciation study requires informed judgment by the analyst conducting the study. A knowledge of the property being studied, the subject utility's policies and procedures, general trends in technology and industry practice, and a sound basis of understanding depreciation theory are needed to apply this informed judgment. Judgment was used in areas such as survivor curve modeling and selection, depreciation method selection, and life analysis.

Judgment is not defined as being used in cases where there are specific, significant pieces of information that influence the choice of a life or curve. Those cases would simply be a reflection of specific facts into the analysis. Where there are multiple factors, activities, actions, property characteristics, statistical inconsistencies, implications of applying certain curves, property mix in accounts or a multitude of other considerations that impact the analysis (potentially in various directions), judgment is used to take all of these factors and synthesize them into a general direction or understanding of the characteristics of the property. Individually, no one factor in these cases may have a substantial impact on the analysis, but overall, may shed light on the utilization and characteristics of assets. Judgment may also be defined as deduction, inference, wisdom, common

sense, or the ability to make sensible decisions. There is no single correct result from statistical analysis; hence, there is no answer absent judgment. At the very least for example, any analysis requires choosing which bands to place more emphasis.

The establishment of appropriate average service lives for the Source of Supply, Pumping, Water Treatment, Collection, Treatment and Disposal, Transmission and Distribution, and General accounts requires judgment to incorporate the understanding of the operation of the system with the available accounting information analyzed during life analysis.

## DETAILED DISCUSSION

### **Depreciation Study Process**

This depreciation study encompassed four distinct phases. The first phase involved data collection and field interviews. The second phase was where the initial data analysis occurred. The third phase was where the information and analysis was evaluated. After the first three stages were complete, the fourth phase began. This phase involved the calculation of depreciation and amortization rates and documenting the corresponding recommendations.

During the Phase I data collection process, historical data was compiled from continuing property records and general ledger systems. Data was validated for accuracy by extracting it and comparing to multiple financial system sources: Fixed Asset System (continuing property ledger), General Ledger, and interfaces from other operating systems. This data was validated against historical data from prior periods, historical general ledger sources, and through field personnel discussions. This data was reviewed extensively so that it could be put in the proper format for a depreciation study. A number of discussions were conducted with Company personnel to obtain information that would be helpful in formulating life and salvage recommendations in this study. One of the most important elements in performing a proper depreciation study is to understand how CSWR-Texas utilizes assets and the environment of those assets. Interviews with those knowledgeable about the systems are important data-gathering operations that allow the analyst to obtain information that is helpful when evaluating the output from the life and net salvage programs in relation to the Company's actual asset utilization and environment. Information regarding these discussions is found in both the Detailed Discussion portions of the Life Analysis and also in workpapers. In addition, Alliance personnel possess a significant understanding of the property and its forces of retirement due to years of day-to-day exposure to property and operations of water and wastewater utility property.



Phase 2 is typically where the SPR and actuarial analysis were performed. However, in the case of CSWR-Texas, since many of their assets were recently acquired without transferring historical asset transactional records, there is insufficient historical data for statistical life analysis. Phase 2 and Phase 3 (to be discussed in the next paragraph) overlap to a significant degree. Net Salvage Analysis was not performed for this study since the Company capitalizes gross removal costs with the replacement assets and there is very limited gross salvage.

Phase 3 is the evaluation process, which synthesized analysis, interviews, and operational characteristics into a final selection of asset lives. The preliminary results were then reviewed and discussed with accounting and operations personnel.

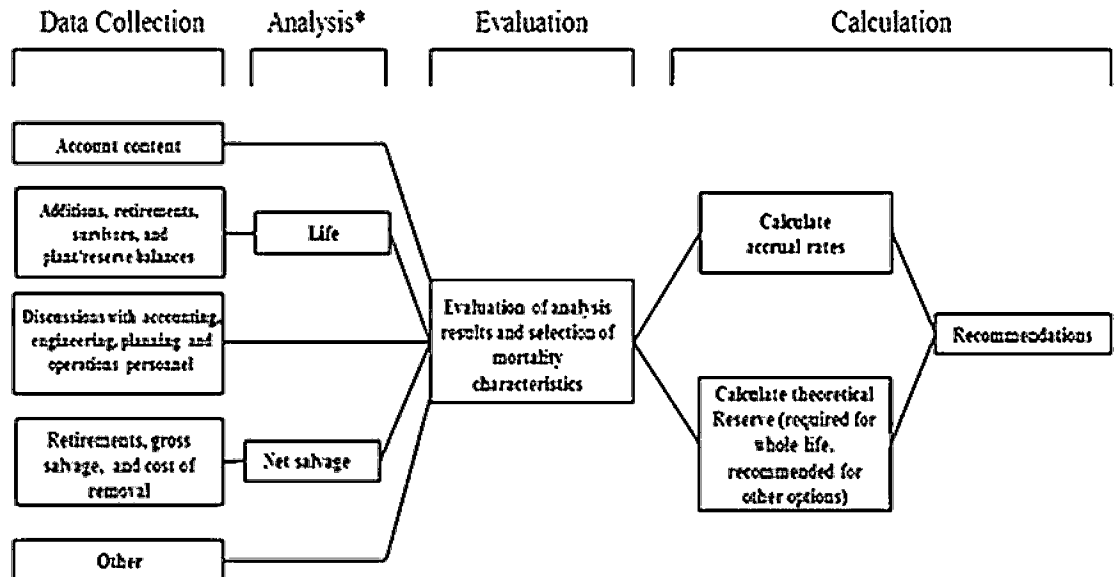
Finally, Phase 4 involves calculating accrual rates, making recommendations and documenting the conclusions in a final report. The calculation of accrual rates is found in Appendix A. Recommendations for the various accounts are contained within the Detailed Discussion of this report. The depreciation study flow diagram shown as Figure 11 documents the steps used in conducting this study. *Depreciation Systems*<sup>2</sup>, a well respected scholarly treatise on the topic of depreciation, documents the same basic processes in performing a depreciation study, namely: statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document recommendations.

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<sup>1</sup> American Gas Association and Edison Electric Institute, *Introduction to Depreciation for Public Utilities and Other Industries* (2013).

<sup>2</sup> W.C. Fitch and F.K. Wolf, *Depreciation Systems* 289 (Iowa State Press 1994).

## Book Depreciation Study Flow Diagram



Source: Introduction to Depreciation for Public Utilities and Other Industries, AGA EEL, 2013.

\*Although not specifically noted, the mathematical analysis may need some level of input from other sources (for example, to determine analysis bands for life and adjustments to data used in all analysis)

## CSWR-TEXAS WATER AND SEWER DEPRECIATION STUDY PROCESS

### Depreciation Calculation Process

Annual depreciation expense amounts for all accounts were calculated by the straight line, average life group, and remaining life procedure.

In a whole life representation, the annual accrual rate is computed by the following equation,

$$\text{Annual Accrual Rate} = \frac{(100\% - \text{Net Salvage Percent})}{\text{Average Service Life}}$$

Use of the remaining life depreciation system adds a self-correcting mechanism, which accounts for any differences between theoretical and book depreciation reserve over the remaining life of the group. With the straight line, remaining life, average life group system using Iowa Curves, composite remaining lives were calculated according to standard broad group expectancy techniques, noted in the formula below:

$$\text{Composite Remaining Life} = \frac{\sum \text{Original Cost} - \text{Theoretical Reserve}}{\sum \text{Whole Life Annual Accrual}}$$

For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the allocated book depreciation reserve, was divided by the composite remaining life to yield the annual depreciation expense as noted in this equation.

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve} - (\text{Original Cost}) * (1 - \text{Net Salvage}\%)}{\text{Composite Remaining Life}}$$

where the Net Salvage% represents future net salvage.

Within a group, the sum of the group annual depreciation expense amounts, as a percentage of the depreciable original cost investment summed, gives the annual depreciation rate as shown below:

$$\text{Annual Depreciation Rate} = \frac{\sum \text{Annual Depreciation Expense}}{\sum \text{Original Cost}}$$

These calculations are shown in Appendix A. The calculations of the theoretical depreciation reserve values and the corresponding remaining life calculations are shown in workpapers. The composite remaining life was computed on a direct weighted basis using vintage investment and the proposed life for each property group.

## **LIFE ANALYSIS**

### **Water Utility Assets**

#### **Source of Supply and Pumping Plant**

##### **Account 304.000 Masonry or Metal Structures (40 years)**

This account consists of mason or metal structures associated with water operations. The account balance is \$299.0 thousand for this account. The existing life for this account is 30 years. About half of the current investment in this account relates to concrete foundations and steel structures, which typically have a fairly long operating life around 40 years or longer. Other assets in this account include electrical wiring, roofing, and lighting, which have a shorter operating life around 30 years, but account for a small portion of investment. Utility subject matter experts stated they maintain the assets consistently and that the life of masonry and metal structures is the same for both water and sewer operations. Operational personnel expect the masonry and metal structures to have an overall operating life around 40 years. Based on the information from subject matter experts and the mix of assets in this account, this depreciation study recommends increasing to a 40 year life and an R2 dispersion curve for this account.

##### **Account 305.000 Wood Structures (20 years)**

This account consists of wood structures associated with water operations. The account balance is \$29.7 thousand for this account. The existing life for this account is 20 years. Operational subject matter experts stated the wood structures don't last as long as metal and masonry structures. They estimate a shorter operating life around 20 years for wood structures. Utility subject matter experts stated they maintain the assets consistently and that the life of wood structures is the same for both water and sewer operations. Based on the information from subject matter experts and professional judgement, this depreciation study recommends retaining the existing 20 year life and an R2 dispersion curve for this

account.

**Account 307.000 Wells (40 years)**

This account consists of groundwater wells and appurtenances used in water operations. The account balance is \$202.4 thousand. The existing life for this account is 30 years. The majority of current investment relates to the cost of drilling the well itself and concrete, which would have a life of at least 40 years. Well improvements and refurbishments, such as lighting, piping, valves, and controls have a much shorter life. Based on information from utility subject matter experts and the mix of assets in this account, the depreciation study recommends increasing to a 40 year life and an R1 dispersion curve for this account.

**Account 308.000 Well Access Roads (50 years)**

This account consists of concrete and rock access roads and associated site work to the wells used for water operations. The account balance is \$5.9 thousand for this account. The existing life for this account is 50 years. Utility subject matter experts believe that operationally, the access roads will be in place for up to 50 years and as long as they need access to the wells. Based on judgment and information from utility subject matter experts, the depreciation study retaining the existing 50 year life and a SQ dispersion curve for this account.

**Account 309.000 Well Pumps < 5HP (5 years)**

This account consists of small well pumps less than 5 horsepower, motors, and other related equipment used in water operations. The account balance is \$23.9 thousand for this account. The existing life for this account is 5 years. Pumping equipment has a similar life across the water and wastewater utility functions for CSWR-Texas. Utility subject matter experts state smaller pumps will wear out more quickly than large pumps and are typically replaced, rather than repaired leading to a shorter operational life than larger well pumps. Many of the

existing small well pumps are being replaced between 3 and 5 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 5 year life and an R2 dispersion curve for this account.

**Account 310.000 Well Pumps > 5HP (10 years)**

This account consists of large well pumps greater than 5 horsepower, motors, and other related equipment used in water operations. The account balance is \$90.1 thousand for this account. The existing life for this account is 10 years. Pumping equipment has a similar life across the water and wastewater utility functions for CSWR-Texas. Utility subject matter experts state larger horsepower pumps will last longer than small pumps and are typically repaired, rather than replaced leading to a longer operational life than smaller well pumps. The existing larger pumps are commercial grade and are estimated to have an operating life around 10 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 10 year life and an R2 dispersion curve for this account.

**Account 313.000 Booster Pumps < 5HP (10 years)**

This account consists of small booster pumps less than 5 horsepower, motors, and other related equipment used in water operations. The account balance is \$19.9 thousand for this account. The existing life for this account is 10 years. Utility subject matter experts state smaller booster pumps will wear out more quickly than large pumps and are typically replaced, rather than repaired leading to a shorter operational life than larger booster pumps. The booster pumps are above ground assets and typically last longer than similar well pumps that are submerged. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 10 year life and an R2 dispersion curve for this account.

**Account 314.000 Booster Pumps > 5HP (25 years)**

This account consists of large booster pumps greater than 5 horsepower, motors, and other related equipment used in water operations. The account balance is \$35.5 thousand for this account. The existing life for this account is 30 years. Utility subject matter experts state larger horsepower pumps will last longer than small pumps and are typically repaired, rather than replaced leading to a longer operational life than smaller booster pumps. Operationally, subject matter experts do not anticipate the existing booster pumps will last 30 years. Recently, they have had to replace some of the existing booster pumps due to a less than reliable brand being used and to address single phase versus 3 phase functionality. Based on judgment and information from utility subject matter experts, the depreciation study recommends decreasing to a 25 year life and an R2 dispersion curve for this account.

**Water Treatment Plant**

**Account 315.000 Hypochlorinators (4 years)**

This account consists of chemical feed systems, pumps, and chemical systems for water treatment equipment used in the water treatment plant. The account balance is \$20.8 thousand for this account. The existing life for this account is 5 years. Operations personnel stated they are seeing a 3 to 5 year lifecycle for the assets in this account. The existing assets are wearing out quickly due to the harsh and caustic operating environment. Based on information from utility subject matter experts and judgment the depreciation study recommends incrementally decreasing to a 4 year life and an R5 dispersion curve for this account.

**Account 316.000 Gas Chlorinators (10 years)**

There is currently zero investment in this account, but CSWR-Texas

anticipates using gas chlorinators in the future. The gas chlorinators are estimated to last longer than the hypochlorinators the Company is currently using for water treatment. Operational subject matter experts anticipate gas chlorinators to have an operational life of 10 years. Based on information from utility subject matter experts and judgment the depreciation study recommends using a 10 year life and an R2 dispersion curve future investment added in this account.

**Account 318.00 Other Chemical Feeding Equipment (5 years)**

This account consists of a disinfection system, a metering system, and other chemical feeding equipment used in the water treatment plant. The account balance is \$20.4 thousand for this account. The existing life for this account is 20 years. Operational personnel stated the assets in this account will not last 20 years. The pump tubing may last 1 or 2 years, the injector may last slightly longer, and the chlorine metering system may last up to 10 years. Feedback from operational experts would suggest the overall life of the assets in this account to be around 5 years. Based on information from utility subject matter experts, judgment, and the mix of assets in the account, the depreciation study recommends decreasing to a 5 year life and an R1 dispersion curve for this account.

**Transmission and Distribution Plant**

**Account 320.00 Pressure Tanks (30 years)**

This account includes pressure tanks used to support transmission and distribution water operations. The account balance is \$730.4 thousand for this account. The existing life for this account is 30 years. Operational personnel have recently replaced several pressure tanks, and they estimate the new tanks will have an operating life around 30 years. Based on judgement and the estimated operating lives for the assets in this account, this depreciation study recommends retaining the existing 30 year life and an R4 dispersion curve for this account.



**Account 321.00 Elevated Storage Tanks (75 years)**

This account consists of elevated storage tanks used to support transmission and distribution water operations. The account balance is \$14.5 thousand for this account. The existing life for this account is 50 years. The Company currently only has one elevated storage tank in the system and it is 60 years old. Operational personnel plan to repaint and refurbish the existing tank and expect it to last another 10 to 15 years. Based on judgement and information from operational personnel, this depreciation study recommends increasing to a 75 year life and an R5 dispersion curve for this account.

**Account 322.000 Ground Storage Tanks (50 years)**

This account consists of elevated storage tanks used to support transmission and distribution water operations. The account balance is \$881.2 thousand for this account. The existing life for this account is 50 years. The majority of the investment consists of steel tanks and concrete foundations, which have an estimated operating life of 50 years. Operational personnel have no material issues and have consistent maintenance plans to repaint and refurbish these assets. Based on judgement and information from operational personnel, this depreciation study retaining the existing 50 year life and an R3 dispersion curve for this account.

**Account 325.000 Distribution System (40 years)**

This account consists of various size mains, valves, valve assemblies, and water lines used in transmission and distribution operations. The account balance is \$7.3 million for this account. The existing life for this account is 50 years. Utility subject matter experts stated there are some systems with a shorter expected life than others and expect the existing distribution system to have a significantly shorter overall operating life between 35 and 40 years. There are several types of polymer installed across the systems CSWR-Texas has acquired and many are in

poor condition. Some areas of the system are experiencing constant main breaks. Some of the smaller sized pipe is estimated to last up to 40 years, while some of the older systems are not robust and are much less reliable. CSWR-Texas estimates having to replace a significant portion of the existing distribution system to meet internal construction standards and regulatory standards. The conditions in which mains were installed was not to up to current Company construction standards. As CSWR-Texas replaces material portions of the systems and implements current maintenance programs, they would expect the life to start increasing in the future. Based on the mix of assets in this account, judgment, and input from subject matter experts, this depreciation study recommends decreasing to a 40 year life and an R4 dispersion curve for this account.

**Account 327.000 Service Lines and Taps (20 years)**

This account consists of service pipes and accessories leading from the main to the customers' premises. The account balance is \$496.3 thousand for this account. The existing life for this account is 20 years. Utility subject matter experts stated there is a different construction standard used for installing services than mains. Service lines have a thinner wall and are buried closer to the surface making them more susceptible to dig-ins and other disruptions. This would lead to a shorter life for services than for mains. There are a variety of materials installed for service lines across the system. CSWR-Texas will generally replace the service line once before the main is replaced. Based on judgement and information from subject matter experts, the depreciation study recommends retaining the existing 20 year life and an R2 dispersion curve for this account.

**Account 328.000 Meters (15 years)**

This account consists of meters, devices and other appurtenances used for measuring the quantity of water delivered to customers. The account balance is \$174.7 thousand for this account. The existing life for this account is 10 years.

The majority of the existing meters are more than 10 years old and need to be replaced. Operational subject matter experts would be uncomfortable extending the life beyond 15 years until the Company determines what style of meters they will be using throughout the system and the operational cycles associated with those meters. Based on the age of the existing assets, judgement, and information from subject matter experts, this depreciation study recommends increasing to a 15 year life and an R4 dispersion curve for this account.

**Account 333.000 Fire Hydrants (50 years)**

This account consists of hydrants in service and owned by the utility. The account balance is \$93 for this account. The existing life for this account is 50 years. CSWR-Texas currently operates a few hydrants and flush valves across the system. The hydrants in the system are only used for flushing the system. The Company does not currently provide fire protection services. Utility personnel feel that retaining the existing 50 year life for hydrants is reasonable based on their operational experience. Based on information from utility personnel and judgment, the depreciation study recommends retaining the existing 50 year life and an R4 dispersion curve for this account.

**General Plant**

**Account 334.000 Fences (20 years)**

This account consists of fences and gates related to general plant. The account balance is \$16.3 thousand for this account. The existing life for this account is 15 years. The majority of current investment in this account consists of chain link fences located at the lift stations and other operational areas, which typically have a longer life of 20 years. Based on judgement and the estimated operational life of the assets in this account, this depreciation study recommends increasing to a 20 year life and an R4 dispersion curve for this account.

**Account 342.000 Shop Tools (8 years)**

This account consists of tools and other related equipment such as air compressors. The account balance is \$2.8 thousand for this account. The existing life for this account is 5 years. The lives for the various tools and equipment in this account range between 5 and 10 years. Based on information from utility personnel, judgement and the mix of assets in this account, this study recommends retention of the existing 10 year life for this account.

**Account 344.00 Heavy Equipment (25 years)**

This account consists of various power operated equipment used in water utility operations. The account balance is \$50.8 thousand for this account. The existing life for this account is 10 years. Based on judgement and information from utility subject matter experts, this depreciation study recommends increasing to a 20 year life for this account.

**Account 349.000 Miscellaneous Equipment (25 years)**

This account consists of miscellaneous general property such as small generators, air compressors, wiring, and control equipment. The account balance is \$73.3 thousand for this account. The existing life for this account is 10 years. The investment in this account relates to general plant operations and is estimated to have a life similar to other general plant assets. The lives of general plant assets range between 8 and 25 years. Utility subject matter experts stated they maintain equipment well and that the life of general plant equipment is the same for both water and sewer operations. Based on judgement and the lives of other general plant assets, this study recommends increasing to a 25 year life and an R2 dispersion curve for this account.

### **Account 349.100 Communication Equipment (10 years)**

This account consists of communication equipment such as remote monitoring and control equipment. The account balance is \$140.1 thousand for this account. The existing life for this account is 15 years. The control board, remote communication and monitoring equipment have fairly short lives between 6 and 7 years. The structures holding the equipment would have a longer life. Advancements in technology are leading to early replacement of the communication equipment. The lives of the assets in this account range from 5 to 15 years. Utility subject matter experts stated the life of communication equipment is the same for both water and sewer operations. Based on information from utility personnel and judgement, this study recommends decreasing to a 10 year life and an R1 dispersion curve for this account.

## **Sewer Utility Assets**

### **Collection and Pumping Plant**

#### **Account 354.000 Masonry or Metal Structures (40 years)**

This account consists of masonry or metal structures associated with sewer plant operations. The account balance is \$133.2 thousand for this account. The existing life for this account is 30 years. About half of the current investment in this account relates to concrete foundations and steel structures, which typically have a fairly long operating life around 40 years. Other assets in this account include electrical wiring, roofing, and lighting, which have a shorter operating life around 30 years, but account for a small portion of investment. Utility subject matter experts stated they maintain the assets consistently and that the life of masonry and metal structures is the same for both water and sewer operations. Operational personnel expect the masonry and metal structures to have an overall operating life around 40 years. Based on the information from subject matter experts and

the mix of assets in this account, this depreciation study recommends increasing to a 40 year life and an R2 dispersion curve for this account.

**Account 355.000 Wood Structures (20 years)**

This account consists of wood structures associated with sewer plant operations. The account balance is \$460 for this account. The existing life for this account is 20 years. Operational subject matter experts stated the wood structures don't last as long as metal and mason structures. The estimate a shorter operating life around 20 years for wood structures. Utility subject matter experts stated they maintain the assets consistently and that the life of wood structures is the same for both water and sewer operations. Based on the information from subject matter experts and professional judgement, this depreciation study recommends retaining the existing 20 year life and an R2 dispersion curve for this account.

**Account 357.000 Plant Access Roads (50 years)**

This account consists of concrete, asphalt, and rock access roads to the plants used for sewer plant operations. The account balance is \$5.6 thousand for this account. The existing life for this account is 50 years. Utility subject matter experts believe that operationally, the access roads will be in place for up to 50 years and as long as they need access to the facilities. Based on judgment and information from utility subject matter experts, the depreciation study retaining the existing 50 year life and a SQ dispersion curve for this account.

**Account 360.000 Collection Sewer - Force Main (50 years)**

This account consists of sewer force mains and other related equipment associated with the collection plant. The account balance is \$849.7 thousand for this account. The existing life for this account was 50 years. More than half of the current investment in this account consists of small diameter plastic piping, which can have a life of 50 years. However, utility subject matter experts report some

areas of the system have shorter expected lives than others due to less than optimal construction practices when originally installed. In general, Company personnel believe that operationally the life of the equipment in this account should parallel that of the assets in Account 361.000 – Sewer Gravity Main. Based on judgement, the mix of assets in this account, and information provided by Company subject matter experts, this depreciation study recommends retaining the existing 50 year life and an R4 dispersion curve for this account.

**Account 361.000 Collection Sewer - Gravity Main (50 years)**

This account consists of sewer gravity mains and other related equipment associated with the collection plant. The account balance is \$3.02 million for this account. The existing life for this account is 50 years. Approximately 90 percent of the existing investment in this account is related to piping of various sizes estimated to have an operating life around 50 years. Some areas of the system have shorter expected lives than others due to less than optimal construction practices when originally installed. The remaining investment in this account relates to concrete sewer, lift station equipment, and concrete wetwells, which have a similar operating life to the main itself. Based on judgement, the mix of assets in this account, and information provided by Company subject matter experts, this depreciation study recommends retaining the existing 50 year life and an R4 dispersion curve for this account.

**Account 364.000 Receiving Wells/Manholes (40 years)**

This account consists of receiving wells, lift stations, and other related equipment associated with the collection plant. The account balance is \$557.2 thousand for this account. The existing life for this account is 25 years. Utility personnel feel the 25 year life is short for the assets in this account. The majority of the existing investment consists of manholes, which are primarily made of concrete and have an estimated operating life between 40 and 50 years. The

existing manholes have an average age of 27 years. The modern pre-fab manholes, installed in the last 10 to 15 years, can last up to 50 years. However, utility subject matter experts stated the corrosive environment will eventually cause the wells to fail and the bottom to deteriorate. The Company has also been replacing lift station equipment that has been poorly maintained. Based on the estimated operating lives of the existing assets and information provided by Utility personnel, this depreciation study recommends increasing to a 40 year life and an R2 dispersion curve for this account.

### **Pumping Plant**

#### **Account 365.000 Lift Station Pumps < 5 HP (5 years)**

This account consists of lift station pumps, motors, piping and other related equipment used in pumping plant. The account balance is \$3.2 thousand for this account. The existing life for this account is 5 years. Pumping equipment has a similar life across the water and sewer utility functions for CSWR-Texas, with smaller pumps lasting around 5 years and larger pumps lasting longer. The small 2 HP pumps have a much shorter life than larger lift station pumps, but CSWR-Texas has found with consistent routine maintenance the small pumps can last 4 to 5 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 5 year life and an R2 dispersion curve for this account.

#### **Account 366.000 Lift Station Pumps > 5 HP (10 years)**

This account consists of electric lift station pumps, motors, piping, and other related equipment used in pumping plant. The account balance is \$2.0 thousand for this account. The existing life for this account is 10 years. Pumping equipment has a similar life across the water and wastewater utility functions for CSWR-Texas. Utility subject matter experts state larger horsepower pumps will last longer than small pumps and are typically repaired, rather than replaced leading to a



longer operational life than smaller pumps. The existing larger pumps are commercial grade and are estimated to have an operating life around 10 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 10 year life and an R2 dispersion curve for this account.

### **Treatment and Disposal Plant**

#### **Account 368.000 Treatment Process Pumps > 5 HP (10 years)**

This account consists of electric pumps, motors, piping, circulating, and other related equipment used in the wastewater treatment plant. The account balance is \$7.8 thousand for this account. The existing life for this account is 10 years. Pumping equipment has a similar life across the water and wastewater utility functions for CSWR-Texas. Utility subject matter experts state larger horsepower pumps will last longer than small pumps and are typically repaired, rather than replaced leading to a longer operational life than smaller pumps. The existing larger pumps are commercial grade and are estimated to have an operating life around 10 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends retaining the existing 10 year life and an R2 dispersion curve for this account.

#### **Account 371.000 Treatment & Disposal Equipment (30 years)**

This account consists of aeration basins, clarifiers, and other related equipment used in treatment and disposal plant. The account balance is \$71.3 thousand for this account. The existing life for this account is 25 years. Utility subject matter experts estimate the assets in this account to have a longer overall operating life around 30 years. More than half of the current investment consists of a new mechanical clarifier that should last 25 to 35 years. The aeration basins have a similar operating life to that of the clarifier. Other assets, such as tanks, grinders, and piping have a shorter operating life, but are a small portion of the

investment in this account. Based on judgment and information from utility subject matter experts, the depreciation study recommends increasing to a 30 year life and an R2 dispersion curve for this account.

**Account 372.000 Chlorination/Dechlorination/Ammonia Equipment (10 years)**

This account consists of chlorination equipment, metering equipment, and other related chemical systems used in treatment and disposal plant. The account balance is \$5.0 thousand for this account. The existing life for this account is 20 years. The current chlorination and metering equipment is outdated and CSWR-Texas has started replacing the assets across the system. The Company plans to add new metering and chlorination systems that rely on new technology and are estimated to have an operating life between 8 and 12 years. Based on judgment and information from utility subject matter experts, the depreciation study recommends decreasing to a 10 year life and an R2 dispersion curve for this account.

**Account 380.000 Outfall Sewer Lines (50 years)**

This account consists of outfall sewer lines used to support treatment and disposal plant. The account balance is \$11.1 thousand for this account. The existing life for this account is 50 years. The investment in this account consists of outfall piping and an effluent reuse system. Utility subject matter experts estimate the assets in this account to have the same 50-year operating life as the gravity sewers in Account 361.000. These assets consist of the same material and experience a similar lifecycle. Based on judgment and information from utility subject matter experts, the depreciation study recommends retention of the existing 50 year life and an R4 dispersion curve for this account.

**Account 389.000 Plant Sewers (50 R3)**

This account consists of plant sewers used to support treatment and

disposal plant. The account balance is \$341.8 thousand for this account. The existing life for this account is 50 years. Utility subject matter experts estimate the assets in this account to have the same 50-year operating life as the gravity sewers in Account 361.000. These assets consist of the same material and experience a similar lifecycle. Based on judgment and information from utility subject matter experts, the depreciation study recommends retention of the existing 50 year life and an R4 dispersion curve for this account.

### **General Plant**

#### **Account 399.000 Miscellaneous Equipment (25 years)**

This account consists of miscellaneous general property such as small generators, air compressors, wiring, and control equipment. The account balance is \$15.5 thousand for this account. The existing life for this account is 10 years. The investment in this account relates to general plant operations and is estimated to have a life similar to other general plant assets. The lives of general plant assets range between 8 and 25 years. Utility subject matter experts stated they maintain equipment well and that the life of general plant equipment is the same for both water and sewer operations. Based on judgement and the lives of other general plant assets, this study recommends increasing to a 25 year life and an R4 dispersion curve for this account.

#### **Account 399.100 Communication Equipment (10 years)**

This account consists of communication equipment such as remote monitoring and control equipment. The account balance is \$3 thousand for this account. The existing life for this account is 15 years. The control board, remote communication and monitoring equipment have fairly short lives between 6 and 7 years. The structures holding the equipment would have a longer life. Advancements in technology are leading to early replacement of the communication equipment. The lives of the assets in this account range from 5 to

15 years. Utility subject matter experts stated the life of communication equipment is the same for both water and sewer operations. Based on information from utility personnel and judgement, this study recommends decreasing to a 10 year life and an R1 dispersion curve for this account.

## **SALVAGE ANALYSIS**

### **Salvage Analysis – Water and Sewer Utility Plant**

When a capital asset is retired, physically removed from service, and finally disposed of, terminal retirement is said to have occurred. The residual value of a terminal retirement is called gross salvage. Net salvage is the difference between the gross salvage (what the asset was sold for) and the removal cost (cost to remove and dispose of the asset).

The Company has not recorded removal costs associated with terminal retirements. Immaterial removal costs related to assets being replaced have been capitalized as part of the cost of the new asset being installed. Gross salvage is recorded to the general ledger in the accumulated provision for depreciation at the time retirements occur within the system. Limited historical data is available due to the majority of assets being recently acquired. Salvage analysis was not possible with the limited historical data available. Little, if any, scrap is expected from utility assets. All accounts currently use zero percent net salvage and this study proposes to retain zero percent net salvage for all accounts.

**APPENDIX A**  
**COMPUTATION OF DEPRECIATION ACCRUAL RATES**  
**WATER PLANT**

Central States Water Resources - Texas  
Computation of Annual Accrual Rate and Amounts  
At November 30, 2022

Description	Allocated Book			Net Salvage %	Net Salvage Amount	Unrecovered Amount	RL	Annual Accrual	Annual Accrual
	Plant Balance	Reserve	Theo Reserve					Amount	Rate
304.000 Water- Masonry or Metal Structures	298,690.34	19,559.67	76,024.27	0%	-	279,130.67	29.82	9,360.84	3.13%
305.000 Water-Wood Structures	29,692.40	1,042.71	4,052.81	0%	-	28,649.69	17.27	1,658.91	5.59%
307.000 Water- Wells	202,369.61	13,154.25	51,127.78	0%	-	189,215.36	29.89	6,329.51	3.13%
308.000 Water- Well Access Roads	5,924.78	304.28	1,182.69	0%	-	5,620.50	40.02	140.45	2.37%
309.000 Water-Well Pumps < SHP	23,875.23	3,314.41	12,882.40	0%	-	20,560.82	2.30	8,931.17	37.41% Note 1
310.000 Water-Well pumps > SHP	90,149.14	14,275.99	55,487.74	0%	-	75,873.15	3.84	19,733.47	21.89% Note 1
313.000 Water-Booster Pumps < SHP	19,890.95	2,737.60	10,640.47	0%	-	17,153.35	4.65	3,688.42	18.54% Note 1
314.000 Water-Booster Pumps > SHP	35,470.07	4,788.43	18,611.60	0%	-	30,681.64	11.88	2,582.16	7.28% Note 1
315.000 Water- Hypochlorinators	20,797.08	2,385.77	9,273.00	0%	-	18,411.31	2.22	8,306.55	39.94% Note 1
316.000 Water-Gas Chlorinators	-	-	-	0%	-	-	-	-	10.00% Note 2
318.000 Water-Other Chemical Feeding Equipment	20,417.22	3,825.95	14,870.65	0%	-	16,591.27	1.36	12,214.67	59.83% Note 1
320.000 Water-Pressure Tanks	730,420.73	25,724.90	99,987.21	0%	-	704,695.83	25.89	27,215.37	3.73%
321.000 Water-Elevated Storage Tanks	14,525.37	2,952.58	11,476.06	0%	-	11,572.79	15.74	735.03	5.06% Note 1
322.000 Water-Ground Storage Tanks	881,243.36	85,365.51	331,797.53	0%	-	795,877.85	31.17	25,529.80	2.90%
325.000 Water Distribution System	7,322,069.19	822,444.54	3,196,666.55	0%	-	6,499,624.65	22.54	288,400.34	3.94%
327.000 Water-Service Lines and Taps	496,296.50	34,238.36	133,077.20	0%	-	462,058.14	14.64	31,567.41	6.36%
328.000 Water- Meters	174,737.36	16,767.00	65,169.74	0%	-	157,970.36	9.41	16,795.31	9.61%
333.000 Water-Fire Hydrants	93.95	0.24	0.94	0%	-	93.71	49.50	1.89	2.01%
334.000 Water-Fences	16,315.07	2,440.48	9,485.64	0%	-	13,874.59	8.37	1,657.27	10.16% Note 1
342.000 Water-Shop Tools	2,284.22	545.39	2,119.82	0%	-	1,738.83	0.58	3,020.02	132.21% Note 1
344.000 Water-Heavy Equipment	50,827.66	6,761.28	26,279.67	0%	-	44,066.38	12.07	3,649.65	7.18%
349.000 Water- Misc Equipment	73,338.78	12,645.04	49,148.56	0%	-	60,693.74	8.25	7,360.34	10.04% Note 1
349.100 Water-Communication Equipment	140,052.29	2,808.93	10,917.71	0%	-	137,243.36	9.22	14,884.66	10.63%
<b>Total Water</b>	<b>10,649,481.30</b>	<b>1,078,083.34</b>	<b>4,190,280.04</b>		<b>-</b>	<b>9,571,397.96</b>		<b>493,763.23</b>	<b>4.64%</b>
Excluded Land	825,812.26								
Excluded Acquisition Amount	3,530,697.00	41,799.65							

Note 1 Historical reserve position resulting in an unreasonably high accrual rate. Recommend using a whole life rate for new investment

309	20.00% (1/5)	318	20.00% (1/5)
310	10.00% (1/10)	321	1.33% (1/75)
313	10.00% (1/10)	334	5.00% (1/20)
314	4.00% (1/25)	342	12.50% (1/8)
315	25.00% (1/4)	349	4.00% (1/25)

Note 2 Zero current investment, but the Company anticipates installing gas chlorinators. Recommend using a 10 year life and 10.00% rate for future investment

**APPENDIX A-1**  
**COMPUTATION OF DEPRECIATION ACCRUAL RATES**  
**SEWER PLANT**



Central States Water Resources - Texas  
Computation of Annual Accrual Rate and Amounts  
At November 30, 2022

Account Description	Plant Balance	Allocated Book		Net Salvage %	Net Salvage Amount	Unrecovered Amount	RL	Annual Accrual	
		Reserve	Theo Reserve					Amount	Accrual Rate
354.000 Sewer-Masonry or Metal Structures	133,205.98	1,664.76	61,491.80	0%	-	131,541.22	21.53	6,108.30	4.59%
355.000 Sewer-Wood Structures	460.06	0.28	10.39	0%	-	459.78	19.55	23.52	5.11%
357.000 Sewer- Plant Access Road	5,622.55	71.88	2,655.11	0%	-	5,550.67	26.39	210.34	3.74%
360.000 Sewer-Collection Sewer-Force	849,757.33	10,985.82	405,786.30	0%	-	838,771.51	26.12	32,108.05	3.78%
361.000 Sewer-Collection Sewer-Gravity	3,018,295.88	46,516.44	1,718,190.15	0%	-	2,971,779.44	21.54	137,984.31	4.57%
364.000 Sewer-Receiving Wells/Manholes	557,154.29	7,303.42	269,768.40	0%	-	549,850.87	20.63	26,649.86	4.78%
365.000 Sewer-Lift Station Pumps < 5HP	3,208.97	22.51	831.32	0%	-	3,186.46	3.70	860.12	26.80%
366.000 Sewer-Lift Station Pumps > 5HP	2,038.24	2,038.24	2,038.24	0%	-	-	0.00	-	0.00% Note 1
368.000 Sewer-Treatment Process Pumps > 5HP	7,787.44	7,787.44	7,787.44	0%	-	-	0.00	-	0.00% Note 1
371.000 Sewer Treatment & Disposal Equipment	71,256.21	138.27	5,107.50	0%	-	71,117.94	27.85	2,553.64	3.58%
372.000 Sewer-Chlorination/Dechlorination/Ammonia Equip	5,000.17	21.64	799.22	0%	-	4,978.53	8.40	592.57	11.85%
380.000 Sewer-Outfall Sewer Lines	11,130.62	30.79	1,137.40	0%	-	11,099.83	44.89	247.26	2.22%
389.000 Sewer-Plant Sewers	341,804.65	2,145.39	79,244.80	0%	-	339,659.26	38.41	8,843.48	2.59%
399.000 Sewer-Misc Equipment	15,537.22	70.61	2,608.27	0%	-	15,466.61	20.80	743.47	4.79%
399.100 Sewer-Communication Equipment	2,979.09	8.79	324.68	0%	-	2,970.30	8.91	333.36	11.19%
<b>Total Sewer Plant</b>	<b>5,025,238.70</b>	<b>78,806.30</b>	<b>2,557,781.03</b>		<b>-</b>	<b>4,946,432.40</b>		<b>217,258.29</b>	<b>4.32%</b>

Note 1 Existing Investment is fully depreciated. New investment should use a whole life rate of 10.00%

366.00 10.00% (1/10)  
368.00 10.00% (1/10)

**APPENDIX B**  
**COMPARISON OF PROPOSED VERSUS EXISTING ACCRUAL RATES**  
**WATER PLANT**

**Central States Water Resources - Texas**  
**Comparison of Actuals versus Proposed Annual Accrual Rates and Amounts**  
**Water Plant at November 30, 2022**

Description	Plant Balance	Existing Accrual Rate	Existing Accrual Amount	Proposed Accrual Rate	Proposed Accrual Amount	Difference
304.000 Water- Masonry or Metal Structures	298,690.34	3.33%	9,956.34	3.13%	9,360.84	(595.51)
305.000 Water-Wood Structures	29,692.40	5.00%	1,484.62	5.59%	1,658.91	174.29
307.000 Water- Wells	202,369.61	3.33%	6,745.65	3.13%	6,329.51	(416.15)
308.000 Water- Well Access Roads	5,924.78	2.00%	118.50	2.37%	140.45	21.95
309.000 Water-Well Pumps < 5HP	23,875.23	20.00%	4,775.05	37.41%	8,931.17	4,156.13
310.000 Water-Well pumps > 5HP	90,149.14	10.00%	9,014.91	21.89%	19,733.47	10,718.56
313.000 Water-Booster Pumps < 5HP	19,890.95	10.00%	1,989.10	18.54%	3,688.42	1,699.32
314.000 Water-Booster Pumps > 5HP	35,470.07	3.33%	1,182.34	7.28%	2,582.16	1,399.82
315.000 Water- Hypochlorinators	20,797.08	20.00%	4,159.42	39.94%	8,306.55	4,147.13
318.000 Water-Other Chemical Feeding Equipment	20,417.22	5.00%	1,020.86	59.83%	12,214.67	11,193.81
320.000 Water-Pressure Tanks	730,420.73	3.33%	24,347.36	3.73%	27,215.37	2,868.01
321.000 Water-Elevated Storage Tanks	14,525.37	2.00%	290.51	5.06%	735.03	444.52
322.000 Water-Ground Storage Tanks	881,243.36	2.00%	17,624.87	2.90%	25,529.80	7,904.93
325.000 Water Distribution System	7,322,069.19	2.00%	146,441.38	3.94%	288,400.34	141,958.96
327.000 Water-Service Lines and Taps	496,296.50	5.00%	24,814.83	6.36%	31,567.41	6,752.58
328.000 Water- Meters	174,737.36	10.00%	17,473.74	9.61%	16,795.31	(678.43)
333.000 Water-Fire Hydrants	93.95	2.00%	1.88	2.01%	1.89	0.01
334.000 Water-Fences	16,315.07	6.67%	1,087.67	10.16%	1,657.27	569.60
342.000 Water-Shop Tools	2,284.22	20.00%	456.84	132.21%	3,020.02	2,563.18
344.000 Water-Heavy Equipment	50,827.66	10.00%	5,082.77	7.18%	3,649.65	(1,433.11)
349.000 Water- Misc Equipment	73,338.78	10.00%	7,333.88	10.04%	7,360.34	26.46
349.100 Water-Communication Equipment	140,052.29	6.67%	9,336.82	10.63%	14,884.66	5,547.84
<b>Total Water Plant</b>	<b>10,649,481.30</b>		<b>294,739.32</b>		<b>493,763.23</b>	<b>199,023.92</b>

**APPENDIX B-1**  
**COMPARISON OF PROPOSED VERSUS EXISTING ACCRUAL RATES**  
**SEWER PLANT**

**Central States Water Resources - Texas**  
**Comparison of Actuals versus Proposed Annual Accrual Rates and Amounts**  
**Sewer Plant at November 30, 2022**

Description	Plant Balance	Existing Accrual Rate	Existing Accrual Amount	Proposed Accrual Rate	Proposed Accrual Amount	Difference	
354.000 Sewer-Masonry or Metal Structures	133,205.98	3.33%	4,440.20	4.59%	6,108.30	1,668.10	
355.000 Sewer-Wood Structures	460.06	5.00%	23.00	5.11%	23.52	0.52	
357.000 Sewer- Plant Access Road	5,622.55	2.00%	112.45	3.74%	210.34	97.89	
360.000 Sewer-Collection Sewer-Force	849,757.33	2.00%	16,995.15	3.78%	32,108.05	15,112.90	
361.000 Sewer-Collection Sewer-Gravity	3,018,295.88	2.00%	60,365.92	4.57%	137,984.31	77,618.39	
364.000 Sewer-Receiving Wells/Manholes	557,154.29	4.00%	22,286.17	4.78%	26,649.86	4,363.69	
365.000 Sewer-Lift Station Pumps < 5HP	3,208.97	20.00%	641.79	26.80%	860.12	218.32	
366.000 Sewer-Lift Station Pumps > 5HP	2,038.24	10.00%	203.82	0.00%	-	-	Note 1
368.000 Sewer-Treatment Process Pumps > 5HP	7,787.44	10.00%	778.74	0.00%	-	-	Note 1
371.000 Sewer Treatment & Disposal Equipment	71,256.21	4.00%	2,850.25	3.58%	2,553.64	(296.61)	
372.000 Sewer-Chlorination/Dechlorination/Ammonia Equip	5,000.17	5.00%	250.01	11.85%	592.57	342.56	
380.000 Sewer-Outfall Sewer Lines	11,130.62	2.00%	222.61	2.22%	247.26	24.65	
389.000 Sewer-Plant Sewers	341,804.65	2.00%	6,836.09	2.59%	8,843.48	2,007.39	
399.000 Sewer-Misc Equipment	15,537.22	10.00%	1,553.72	4.79%	743.47	(810.25)	
399.100 Sewer-Communication Equipment	2,979.09	6.67%	198.61	11.19%	333.36	134.76	
<b>Total Sewer Plant</b>	<b>5,025,238.70</b>		<b>117,758.54</b>		<b>217,258.29</b>	<b>99,499.75</b>	

Note 1 Existing investment is fully depreciated. For comparison purposes, the difference is shown as zero.  
New investment should use a whole life rate of 10.00% (1/10)

**APPENDIX C**  
**PROPOSED DEPRECIATION PARAMETERS**  
**WATER AND SEWER PLANT**

**Central States Water Resources Texas  
Comparison of Life Parameters**

Account	Description	Existing
<b>Water Utility</b>		<b>Life</b>
303	Land and Land Rights	
304	Masonry/Metal Structures	30
305	Wood Structures	20
307	Wells and Springs	30
308	Well Access Roads	50
309	Well Pumps <=5 hp	5
310	Well Pumps >=5 hp	10
313	Booster Pumps <=5 hp	10
314	Booster Pumps Greater than 5 hp	30
315	Hypochlorinators	5
316	Gas Chlorinators	20
318	Other Chemical Feeding Equip	20
320	Pressure Tanks	30
321	Elevated Storage Tanks	50
322	Ground Storage Tanks	50
325	Distribution System	50
327	Service Lines and Taps	20
328	Master Meter	10
333	Fire Hydrants	50
334	Fences	15
342	Shop Tools	5
344	Heavy Equipment	10
349	Miscellaneous Equipment	10
349.1	Communication Equip	15
<b>Sewer Utility</b>		
353	Land & Land Rights	
354	Masonry/Metal Structures	30
355	Wood Structures	20
357	Plant Access Road	50
360	Collection Sewers - Force	50
361	Collection Sewers - Gravity	50
364	Receiving Wells/Manholes	25
365	Lift Station Pumps <=5 hp	5
366	Lift Station Pumps >=5 hp	10
368	Treatment Process Pumps >=5 hp	10
371	Treatment & Disposal Equipment	25
372	Chlorination/Dechlor/Ammonia Equip	20
380	Outfall Sewer Lines	50
389	Plant Sewers	50
399	Miscellaneous Equipment	10
399.1	Communication Equip	15

<b>Proposed</b>	
Life	Curve
Non Depreciable	
40	R2
20	R2
40	R1
50	SQ
5	R2
10	R2
10	R2
25	R2
4	R5
10	R2
5	R1
30	R4
75	R5
50	R3
40	R4
20	R2
15	R4
50	R4
20	R4
8	R4
25	R4
25	R2
10	R1
Non Depreciable	
40	R2
20	R2
50	SQ
50	R4
50	R4
40	R2
5	R2
10	R2
10	R2
30	R2
10	R2
50	R4
50	R4
25	R4
10	R1

STATE OF TEXAS

§  
§  
§

COUNTY OF COLLIN

**AFFIDAVIT OF DANE A. WATSON**

BEFORE ME, the undersigned authority, on this day personally appeared Dane A. Watson,  
who having been placed under oath by me did depose as follows:

1. "My name is Dane A. Watson. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based on my personal knowledge. My current position is Managing Partner of Alliance Consulting Group.
2. I have prepared the foregoing direct testimony and the information contained in this document is true and correct to the best of my knowledge."

Further affiant sayeth not.

Dane A. Watson

Dane A. Watson

3<sup>rd</sup> SUBSCRIBED AND SWORN TO BEFORE ME by the said Dane A. Watson on this  
day of February, 2023.

Heather McKenzie  
Notary Public, State of Texas

My commission expires: May 04, 2024

