Exhibit No.: _____
Issue: Depreciation Study
Witness: Dane A. Watson
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Sponsoring Party: Liberty Utilities (Missouri Water) LLC d/b/a Liberty
Case No.: WR-2024-0104
Date Testimony Prepared: September 2024

Before the Public Service Commission of the State of Missouri

Rebuttal Testimony

of

Dane A. Watson

on behalf of

Liberty Utilities (Missouri Water) LLC d/b/a Liberty

September 27, 2024

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LIBERTY UTILITIES (MISSOURI WATER) LLC D/B/A LIBERTY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. WR-2024-0104

SUBJECT **PAGE**

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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. Are you the same Dane A. Watson who provided direct testimony in this matter on behalf of Liberty Utilities (Missouri Water) LLC ("Liberty" or the "Company")?

A. Yes.

Q. What is the purpose of your rebuttal testimony in this proceeding before the Missouri Public Service Commission ("Commission")?

A. I will be addressing certain recommendations found in the direct testimonies of Missouri Public Service Commission Staff ("Staff") witness Amanda Coffer and Holiday Inn Vacation Club, Inc. ("HIVC") witness William Stannard.

Q. Are you sponsoring any schedules with your rebuttal testimony?

A. Yes. I am sponsoring the following schedules with my rebuttal testimony:

- **Rebuttal Schedule DAW-1:** Response to Staff Request 196
- **Rebuttal Schedule DAW-2:** List of Alliance Consulting Engagements since 2019 identifying Studies without Life Analysis

Q. What are the Staff and HIVC recommendations?

A. Both of these parties ignore the Company's depreciation study and recommend that whole life rates be adopted in some of the Company's prior depreciation studies. Mr. Stannard is particularly concerned about negative net salvage for Liberty's assets.

Q. How does your depreciation study differ?

A. My depreciation study examines every district within Liberty's ownership and determines specific depreciation rates by district and account to compute the proposed depreciation rates. Staff's proposed rates are not based on Company specific operations and neglect incorporating reserve position differences that may exist between accounts. I feel that my approach is a better approach than the universal rates for each district that Staff recommends.

II. DEPRECIATION STUDY PROCESS

Q. Staff witness Coffer states that "Depreciation rates are determined by performing a depreciation study to determine the average service life of assets in plant accounts." (Dir., p. 3). Did Staff perform a depreciation study?

A. No, they did not.

Q. Did you perform a depreciation study on behalf of Liberty?

A. Yes. My depreciation study provided the basis for the depreciation rates recommended by the Company.

Q. Please describe your depreciation study approach.

A. The purpose of a depreciation study is to determine the life and net salvage characteristics associated with assets currently in service. In my decades of experience, I have found that the necessary activities can be categorized into four phases. The four phases, as stated in my direct testimony are: Data Collection, Analysis, Evaluation, and

Calculation.[1] I began each of the studies by collecting the historical data to be used in the analysis. After the data had been assembled, I performed analyses to determine the life and net salvage percentage for the different property groups being studied. There was insufficient actuarial data to perform actuarial life analysis. However, it is still important to update depreciation studies for differences that occur in the intervening years between depreciation studies to reflect changing life characteristics using all available information. As part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and salvage of the assets. The information obtained from field personnel, engineers, and managerial personnel, combined with the analytical results, was then evaluated to determine how the results of the historical asset activity analysis, in conjunction with Liberty's operational experience, should be applied. In addition, I brought to the results my nearly 40 years of experience as an engineer and depreciation analyst in selecting rational lives and net salvage for utility assets. Using all these resources, I determined the most appropriate lives and net salvage factors, and then calculated the depreciation rate for each plant account. The depreciation study process I used is shown in Direct Schedule DAW-2, page 23 of 229.

Q. Please explain the importance of reflecting the input from subject matter experts in the results and observing activities in the field.

A. As stated above, as part of the depreciation study process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, removal, and

[1] Direct Testimony of Dane A. Watson at pg. 4.

salvage of the assets. The information obtained from field personnel, engineers, and managerial personnel, combined with the study results, is then evaluated to determine how the results of the historical asset activity analysis, in conjunction with Liberty's current and future expectations for the operation of the assets, should be applied. The determination of the life and net salvage parameters of assets is not simply done by a simplistic evaluation of history. Characteristics may change over time, recent history may not be fully reflected in the statistics, and the past may not always be the same as the future. The goal of determining the life and net salvage for an account is to project as accurately as possible the future life and net salvage (i.e. the life and net salvage characteristics the assets will exhibit over their remaining lives), not simply the historical activity. With that said, care must be given to ensure that the projection of recent and future changes does not cross the line into speculation. In my depreciation study, I only used known activities and facts to guide my recommendations, and I did not speculate on improbable future outcomes to set depreciation rates.

Understanding how the system is operated, and the characteristics of the specific assets is important for an analyst to get a better understanding of the assets that are being studied and an understanding of the actual drivers "behind" the accounting information being analyzed. Key information from subject matter experts ("SMEs") or recent and future changes in operations can be pivotal for a depreciation analyst. My study has reflected those changing characteristics.

In its 1996 edition of the publication *Public Utility Depreciation Practices*, the National Association of Regulatory Utility Commissioners ("NARUC") advises against strict reliance on historical data and fitting, stating:

> Depreciation analysts should avoid becoming ensnared in the historical life study and relying solely on mathematical solutions. The reason for making an historic life analysis is to develop a sufficient understanding of history in order to evaluate whether it is a reasonable predictor of the future. The importance of being aware of circumstances having direct bearing on the reason for making an historical life analysis cannot be understated. The analyst should become familiar with the physical plant under study and its operating environment, including talking with the field people who use the equipment being studied.[2]

Q. Did Staff witness, Amanda Coffer, or HICV witness William Stannard, incorporate information from Company SMEs in forming their life recommendations?

A. No. I find nothing to suggest either Coffer or Stannard incorporated this vital depreciation study input. In fact, neither witness presents any detail or workpapers that support their proposed recommendations.

III. REMAINING LIFE DEPRECIATION SYSTEM

Q. Did Staff state what method they use to determine depreciation rates?

A. Yes, Staff witness Coffer indicated that "Staff performs depreciation studies using the straight-line method, broad group, average life procedure and whole life technique..." (Coffer Dir., p. 3).

Q. What method did you use to perform your depreciation study?

A. I used the remaining life depreciation system, which the Commission has adopted in recent cases that I specify below. For each plant account, the difference between the surviving investment, adjusted for estimated net salvage, and the book depreciation reserve, were divided by the average remaining life to yield the annual depreciation expense. Remaining life rates contain a self-correcting mechanism to ensure that no over-collection occurs.

[2] NARUC, *Public Utility Depreciation Practices*, at 126 (1996).

Q. What is the difference between the whole life depreciation system and the remaining life depreciation system?

A. The whole life deprecation system allocates the original cost of the assets less the estimated net salvage over the total estimated life of the assets. The whole life formula for the accrual rate is as follows:

$$\text{Proposed Annual Depreciation Rate} = \frac{\text{1-Net Salvage Rate)}}{\text{Average Service Life}}$$

For example, if a capital asset has an average service life of 10 years and a net salvage rate of 20 percent, the whole life accrual rate would be calculated as follows:

$$\text{Proposed Annual Depreciation Rate} = \frac{(1-.0.2)}{10} = 8\% \text{ annual accrual rate}$$

This accrual rate would result in collecting 80% of the original asset value over the 10-year depreciable life of the asset with the remaining 20% of the asset's original cost realized through its salvage value.

Using the same example, if after five years of the asset's life the accumulated depreciation was $60, then applying a 10% whole life depreciation rate for each of the remaining five years of the asset's life would result in a total recovery through depreciation of $110 (the $60 in accumulated depreciation plus $10 per year for five years). As a result, the whole life system would, without an adjustment, result in the recovery of the incorrect amount of depreciation expense. Such situations can, and do, arise regularly because depreciation is, by nature, a forecast of the future for thousands of individual assets.

The remaining life system addresses the issue described in the previous paragraph by taking a prospective approach of allocating unrecovered costs over

the expected time the related assets will remain in service. Rather than calculating depreciation based on the whole service life, the remaining life system allocates the amount remaining to be recovered (which is the original cost for a depreciable group less net salvage less accumulated depreciation) over its estimated remaining life. As a result, the remaining life system ensures that the full service value (original cost less net salvage) will be recovered through depreciation expense – no more or no less. In part for this reason, the remaining life system is used in the vast majority of U.S. regulatory jurisdictions and for most depreciation studies. Its use is recommended in my depreciation study.

The remaining life system takes a different approach. It recovers the undepreciated original cost less the net salvage over the remaining life of the asset. That is, the original less current book depreciation is used as the depreciable cost and the average remaining life is used in the denominator to calculate the annual depreciation accrual rate. The formulas for both the remaining life depreciation amount and the corresponding rate are shown as follows[3]:

$$\text{Annual Depreciation Expense} = \frac{\text{Original Cost} - \text{Book Reserve-Future Net Salvage}}{\text{Composite Remaining Life}}$$

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

Q. Why is the remaining life system superior to the whole life system?

A. A simple example will explain why the remaining life methodology system is superior. Assume that there is a single asset with a cost of $100, an estimated service life of 10 years and no net salvage. The depreciation rate would be 10% and the annual depreciation expense would be $10. After five years, a new depreciation study is

[3] *Public Utility Depreciation Practices*, p. 64.

performed, and the service life is determined to be 15 years. Using the whole life system, the depreciation rate would be changed to 6.67% and the annual depreciation expense would be $6.67. If the whole life system were used, then over the full 15-year service life, a total of $116.70 would be recovered through depreciation expense ($10 per year for the first five years and $6.67 per year for the final ten years). However, this means that too much depreciation expense is recovered over the service life, as more than the $100 cost of the asset is recovered through depreciation expense.

When using the remaining life system, the depreciation expense would be the same $10 per year for the first five years. However, when the updated depreciation study is performed after year five and the 15-year life is determined, the depreciation rate is calculated to incorporate the amount of depreciation recovered to date. That is, the remaining life system recognizes that $50 of the $100 has been recovered allocates the remaining $50 (i.e., $100 - $50) in future depreciation expense over the 10-year remaining life, for a depreciation rate of 5% and an annual depreciation expense of $5. Over the 15-year service life of the asset, $100 is recovered through depreciation expense ($10 per year for the first five years and $5 per year for the last ten years). Thus, the remaining life system corrects the issue that arises from the use of the whole life system, for which too much depreciation expense would be recovered.

Q. What has been approved by the Commission in recent proceedings?

A. In recent proceedings, the remaining life depreciation system has been adopted by the Commission (Case No. ER-2022-0337 (Ameren Electric), Case No. ER-2021-0312 (Empire Electric), and Case Nos. WR-2020-0344 and WR-2022-0303 (Missouri-

American Water Company)).[4] I am unaware of a reason that the Commission should shift from the remaining life depreciation system back to whole life depreciation system in this proceeding.

Q. Have any other witnesses in this case previously discussed the remaining life depreciation system?

A. Yes. In another proceeding before this Commission, Case No. GR-2024-0106, OPC witness Robinett discusses remaining life depreciation rates. Mr. Robinett, who has provided testimony in numerous cases before this Commission, states "The Company's recommended use of remaining life rates should correct any perceived imbalances by adjusting the depreciation rate to collect all of plant in service plus cost of removal less salvage over the expected remaining life of the assets in the account. So, theoretically, if an account was over-accrued, the utility would collect less for that asset over the remaining life than with other methods. However, if an account was under-accrued, the remaining life rates would increase the depreciation expense for an account over the remaining life to catch the account back up."[5]

I interpret Mr. Robinett's remarks to mean the remaining life depreciation system has features that are not present with the whole life system, which may provide an advantage, given the self-correcting nature of the remaining life depreciation system.

Q. Is it difficult to compute the composite remaining life used in the remaining life depreciation system?

A. No.

[4] The Missouri American Water cases were approved in a stipulation agreement.
[5] Rebuttal Testimony of John Robinett, Case No. GR-2024-0106, p. 5, Lines 13-19.

IV. LIFE ESTIMATION

Q. Staff witness Coffer indicates that you "did not perform a statistical life analysis in this depreciation study because the data did not provide statistically significant results." Is that accurate?

A. Yes. As she indicated, I stated that in response to Staff Data Request 0196, which is provided as **Rebuttal Schedule DAW-1**. Staff witness Ms. Coffer also did not perform a statistical life analysis.[6]

Q. Is it possible to perform a depreciation study without such statistical life analysis?

A. Yes. It is possible to perform life estimation without historical data. As I discussed in the depreciation study process section, interviews with Company SMEs are a crucial component in performing any depreciation study.

Q. What are the depreciation rates that Staff is recommending?

A. Staff witness Coffer states:

> Staff is recommending the continued use of depreciation rates previously ordered by the Commission, however the previously ordered rates were separated into individual depreciation rate schedules for each system. Staff is recommending a single depreciation rate schedule to be used by all the systems.

Q. Are those various existing rates based on a depreciation study or studies?

A. No. Most of the rates for Liberty were set in Case No. WR-2018-0170 in the partial disposition agreement, which was approved in May 2018.[7] The approved rates were not based on a depreciation study with Company specific information, rather the approved rates were based on generic lives and net salvage rates used by the Commission in other cases.

[6] Direct Testimony of Amanda Coffer, p. 3, Lines 11-13.
[7] *Partial Disposition Agreement and Request for Evidentiary Hearing*, Case No. WR-2018-0170 (filed May 24, 2018).

Q. How have conditions changed for Liberty since the depreciation rates were last ordered?

A. Assets for Liberty have increased greatly since 2017 as different systems have been added to plant.[8] The 2017 year is used as a reference point as the most recent calendar year end before the Partial Disposition agreement referenced above.

When those systems were acquired, they were put on the Company's accounting books with the year of acquisition for the in service date and do not necessarily reflect the true age of the assets.

Staff witness Daronn A. Williams notes several system upgrades that have occurred and will continue in future periods**:** various sewer systems, tanks, meters, leaks in water lines, wells.[9] Mr. Williams recommends that "Liberty Water adjust its actual spending, and future CIPs, to aggressively address water and sewer systems in dire need of upgrades."[10]

If this practice is going to continue, updating the current depreciation rates is important given the capital spending which is needed to replace the aging infrastructure rather than retaining the less accurate existing depreciation accrual rates.

Q. Is it unusual to rely solely on SME's input?

A. It is not typical, but at times it is the only viable solution to estimating service life. I have done so in numerous proceedings. Over the past five years, I have performed several studies where there was no life analysis data available. Please see **Rebuttal Schedule DAW-2** for a list of proceedings that meet that criterion. State commissions in the United States and international proceedings have accepted this approach. In fact,

[8] Direct Testimony of Dane Watson, Direct Schedule DAW-2, pp 5-7 of 229.
[9] Direct Testimony of Darron Williams, pp. 3-11.
[10] Id, 11:22-12:1.

out of the listing in **Rebuttal Schedule DAW-2**, 29 studies out of 127 listed did not have any life analysis component. These are approximately 23% of Alliance's engagements since 2019.

Q. What did Staff rely on to make life estimates for Liberty?

A. As stated above, Staff recommends continued use of the existing depreciation rates, lives and net salvage parameters.[11] None of those have seemingly been reviewed by others to understand if they are appropriate for Liberty's current assets and operations.

Q. Are there any Commission rules that might suggest the current life parameters are no longer appropriate for Liberty?

A. Yes. Accounts 3460 and 3461 are impacted by Commission rules. Company SMEs report that given the cost of refurbishing old meters, their policy is to replace those assets. Commission Rule 20 CSR 4240-10.030(38) requires testing of each water service meter of varying sizes between 4 years and 10 years.[12] Given the Company's meter inventory at year end 2022 and the sizes of its meters, it is estimated that those accounts will have a life of 8 years. Ms. Coffer's proposed lives for these accounts are 20 years and 10 years respectively.[13] Using generic lives without any discussion with Company experts does not model current operating conditions and requirements to replace assets at designated intervals. The generic rates Ms. Coffer proposes do not model the Company's current circumstances.

[11] Direct Testimony of Amanda Coffer, p. 3, Lines 15-23 and Schedule AC-d2.
[12] Commission Meter rules.
[13] Direct Testimony of Amanda Coffer, Schedule AC-d2.

V. CHANGE IN DEPRECIATION EXPENSE

Q. HICV witness Stannard is concerned about the "increased depreciation expense from prior cases…" (Dir., p. 4). Specifically, he focuses on the increase in the Company's depreciation expense from 2018 levels (Dir., p. 5). Is this increase primarily due to the proposed depreciation rates?

A. No. In Case No. WR-2018-0170, Staff WP-7-1[14] shows plant in service of $10,855,963 after including Noel and KMB plant. The test year ending plant balance at December 31, 2022, is $64,679,464. That means plant increased by **496**% between the Company's last case, WR-2018-0170, and year-end 2022. The reason for the increase in depreciation expense is increased plant, not the depreciation rates. Mr. Stannard references depreciation expense from Case No. WR-2018-0170 but does not provide a plant in service number. The increase in plant is the primary cause of the increase in depreciation expense, not the Company's proposed depreciation rates.

VI. NET SALVAGE

Q. Mr. Stannard states that he "challenge[s] the proposed changes to the salvage value of Liberty's various categories of assets" and suggests that in "all cases addressed in the study the proposed modifications either reduced the salvage value or increased the estimated cost of disposal of the asset at the end of its useful life, which are reflected as negative salvage value percentages." (Dir., p. 5). Is Liberty proposing negative net salvage for its plant assets?

A. For some of them, yes. However, Mr. Stannard overstated the situation. The depreciation study that I prepared, particularly the section on net salvage and Appendix D, which has account specific data for Liberty's water and wastewater experience,

[14] Case No. WR-2018-0170, Staff WP- 7-1. (Include as WP).

demonstrates that a number of accounts reflect a zero net salvage value. Further, in a recent depreciation study that was resolved by stipulation in Case Nos. WR-2020-0344 and WR-2022-0303, Missouri-American Water Company was granted approval for negative net salvage in several accounts. The tables below provide details of water accounts where Liberty proposes negative net salvage.

Table 1 -Water Accounts Where Negative Net Salvage is Proposed

ACCOUNT	Description	Company Proposed Net Salvage	Staff Proposed Net Salvage	Missouri American Water WR 2022-0303
3140	Supply - Wells and Springs	-15%	-8%	-5%
3160	Supply - Mains	-5%	0%	-25%
3420	T & D - Distribution Reservoirs and Standpipes	-5%	-5%	-25%
3430	T & D - Transmission and Distribution Mains	-5%	0%	-30%
3450	T & D - Services	-5%	0%	-100%
3460	T & D - Meters	-7.5%	0%	-10%
3461	Plastic Meters	-7.5%	0%	-10%
3470	T & D - Meter Installations	-7.5%	0%	-10%
3480	T & D - Hydrants	-5%	0%	-30%

Q. What does Liberty's recent experience for water accounts show?

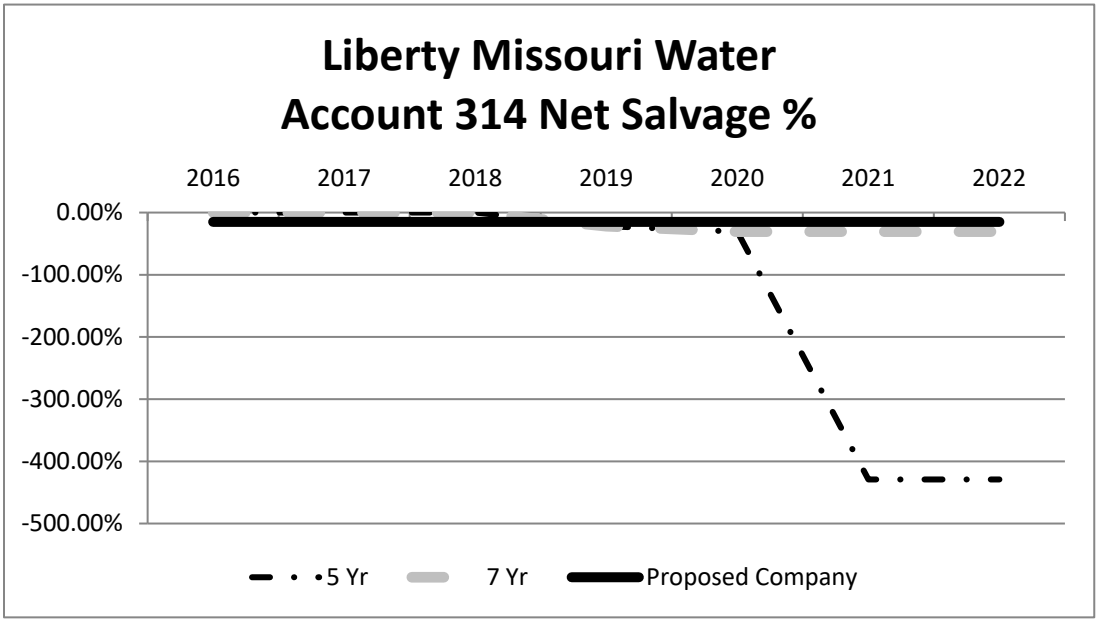
A. In many cases, there is a trend to increasing negative net salvage. Despite Mr. Stannard's opinion, removal cost is driven by increases in labor and materials costs. Actual experience for each account is shown in Direct Schedule DAW-2, Appendix D in tabular form. I have taken that data and put it in chart form for various accounts to show how Company experience compares to the Company's proposed net salvage. The solid black line is my proposal. The other various dark dotted lines show the recent 5

and 7 year averages. In some cases, there is insufficient retirement data to present in chart form. I will make mention of those below.

Q. Please demonstrate with accounts where there is sufficient data.

A. The first account I will show is Account 314, Supply Wells and Springs. I propose negative 15% and Staff proposes negative 8%.

Account 314 Net Salvage Experience

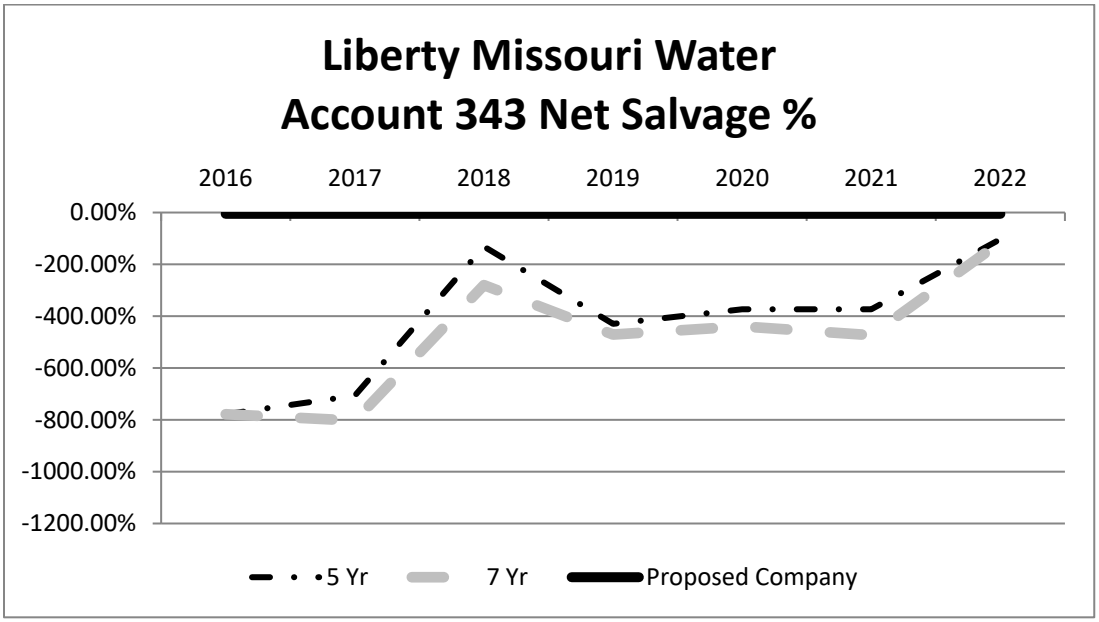


As can be seen, recent experience exceeds the Staff proposal.

There is no net salvage over the available history to produce a chart for Account 316. Supply Mains. The types of assets in this account are very similar to Account 343, Transmission and Distribution Mains, where there is sufficient data for analysis. Account 343 will be shown below. The Company proposes negative 5 percent net salvage, and Staff proposes 0 percent net salvage.

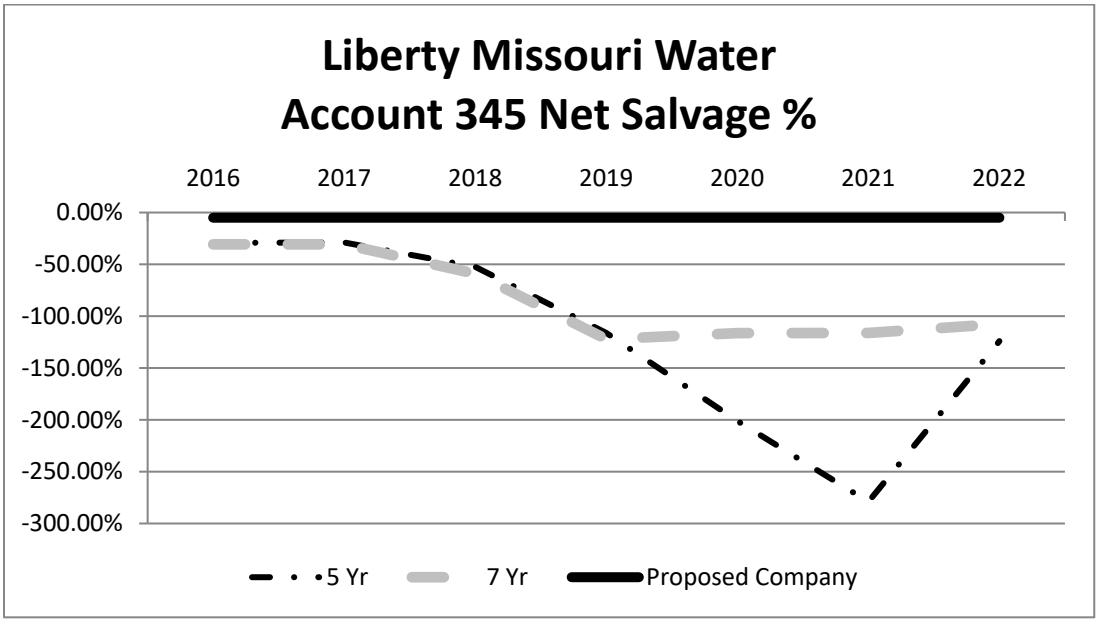
Account 342 Reservoirs and Standpipes does not have sufficient net salvage experience. Both Staff and the Company propose negative 5 percent net salvage.

Account 343 Net Salvage Experience



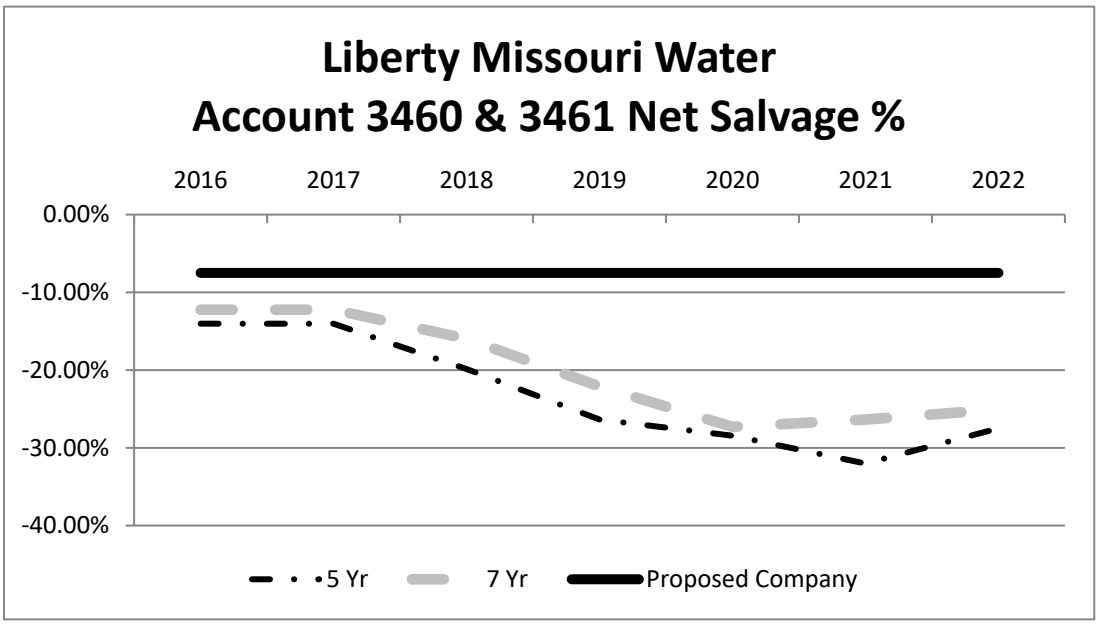
Account 343 is the Company's largest water account by plant investment. The Company proposes negative 5 percent net salvage, and Staff's proposal is zero. Company experience shows a dramatically higher negative net salvage than the Staff proposed zero percent and the Company's recommendation is conservative compared to historic trends.

Account 345 Net Salvage Experience



Account 345 Services is the Company's second largest water account by plant investment. The Company proposes negative 5 percent net salvage, and Staff's proposal is zero. Company experience shows a dramatically higher negative net salvage than the Staff proposed zero percent and the Company's recommendation is again conservative compared to historic trends.

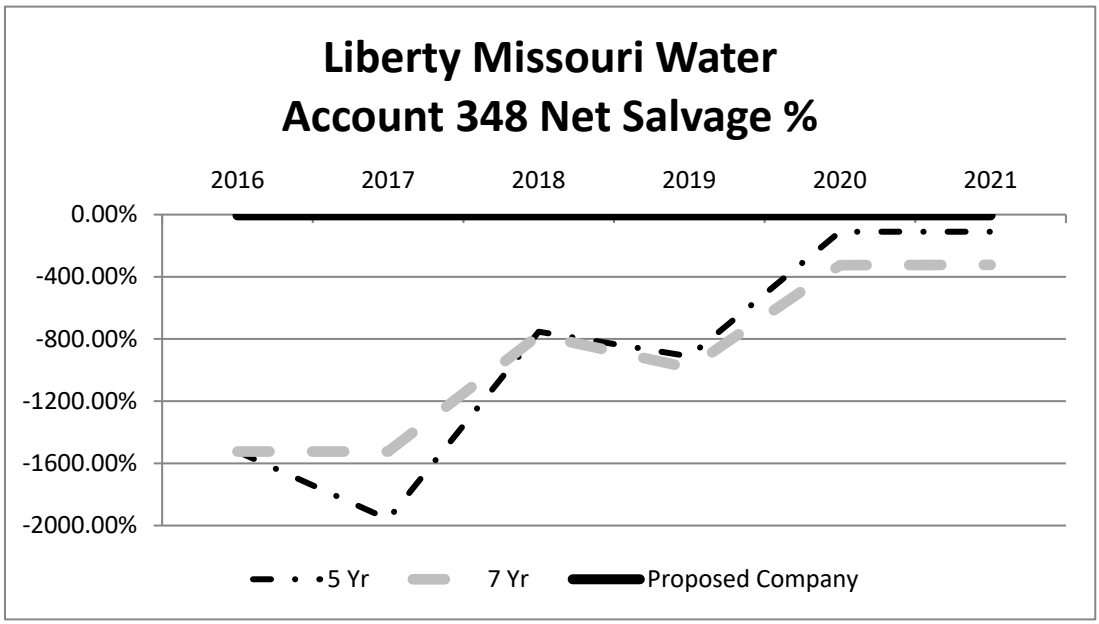
Account 346 Net Salvage Experience



For Account 346, Meters, the Company proposes negative 7.5 percent net salvage, and Staff's proposal is zero. Company experience shows a dramatically higher negative net salvage than the Staff proposed zero percent and the Company's recommendation is again conservative. compared to historic trends

Account 347 is Meters Installations. There is insufficient data to produce a chart. Company SMEs state assets in Account 347 will have a similar experience to Account 346. The Company proposes negative 7.5 percent net salvage, and Staff's proposal is zero. Company experience for Account 346 shows a dramatically higher negative net salvage than the Staff proposed zero percent and the Company's recommendation is again conservative compared to historic trends.

Account 348 Net Salvage Experience



Account 348 is Hydrants. The Company proposes negative 5 percent net salvage, and Staff's proposal is zero. While negative net salvage appears to decline (become less negative, the 5 and 7 year net salvage percentages in 2021 are negative 110 and negative 323 percent respectively, much greater than the proposed negative 5 percent. Company experience for Account 348 shows a dramatically higher negative net salvage than the Staff proposed zero percent.

Q. Is Liberty proposing negative net salvage for its sewer plant assets?

A. For some of them, yes. The accounts where negative net salvage is requested are shown below.

Table 2- Sewer Accounts Where Negative Net Salvage is Proposed

Account	Description	Company Proposed Net Salvage	Staff Proposed Net Salvage	Missouri American Water WR2022-0303
3521	Collection - Sewers Forced	-5%	0%	-10%

3522	Collection - Sewers Gravity	-5%	0%	-20%
3530	Collection - Services	-5%	0%	-40%
3620	Pumping – Receiving Wells	-20%	-5%	0%
3630	Electric Pumping	-20%	0%	-5%

Q. What does Liberty's recent experience for wastewater accounts show?

A. For most of the accounts, there is little available history. Recommendations are derived from experience with water accounts and input from the Company's engineering consultant.

Q. Do you have any concluding remarks to add to your rebuttal testimony?

A. Yes. The Commission should approve the Company's proposed depreciation rates. The Company's continued use of the average life group, remaining life methodology is consistent with the Commission's recent decisions and offers an automatic true-up mechanism for theoretical reserve and book reserve differences that Staff's proposed whole-life method does not offer. The remaining life depreciation system eliminates the need to calculate reserve adjustments in this and future depreciation studies to resolve reserve imbalances that impact shareholders and ratepayers. Additionally, the lives and net salvage factors recommended in the Company's study reflect the best available information on the characteristics of the Company's assets.

Q, Does this conclude your rebuttal testimony?

A. Yes, it does.

VERIFICATION

I, Dane A. Watson, under penalty of perjury, on this 27th day of September, 2024, declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Dane A. Watson