

FINAL REPORT

DEPRECIATION STUDY

B&V PROJECT NO. 402547

PREPARED FOR

JEA

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Section 1. Executive Summary

This report presents the results of our analysis of the depreciation expense requirements of the electric, water, wastewater, and chilled water utility properties solely owned and maintained by JEA (collectively referred to as the “combined utilities”). The results presented herein are representative of activity through December 2018 with recognition given to certain known and measurable changes that have occurred or are anticipated to occur subsequent to that date. We consider the rates developed and recommended herein to be reasonable and appropriate for prospective use. We recommend, however, that depreciation rates be reviewed at a minimum of once every five years. Existing depreciation rates were developed in 2011 based on plant activity through May 2011. Ultimately, the appropriate level of depreciation expense rates is a management decision taking into account various factors.

Black & Veatch conducted physical site observations of major JEA facilities on June 24 through 27, 2019. During the plant tours, we interviewed and were assisted by JEA staff that appeared experienced, qualified, well trained, and knowledgeable with regard to JEA’s routine and preventative maintenance practices. We appreciate the cooperation we received during our plant tours.

Based on our observations and interviews conducted, JEA appears to operate and maintain its systems prudently and in accordance with current regulatory standards and generally accepted industry practices.

Since 2005, JEA has accrued depreciation expense and maintained reserve balances as prescribed by the Federal Energy Regulatory Commission (“FERC”) for the electric system and the National Association of Regulatory Utility Commissioners (“NARUC”) for the water and wastewater systems. JEA currently accrues depreciation at the account level, and as such, we have identified appropriate rates for each applicable FERC and NARUC account used by JEA.

Depreciation rate recommendations for production and treatment accounts are primarily based upon our unit property analyses. Survivor curve analysis and benchmarking of comparable utilities are relied upon in our analyses for mass property accounts. JEA’s continuing property record contains sufficient retirement history to perform survivor curve analyses on some, but not all of the accounts. We therefore relied upon the experience of comparable utilities for the balance of accounts for which survivor curve analyses could not be effectively utilized. The rates recommended in this report for mass property accounts are reflective of results derived from survivor curve analyses, where appropriate, and observations made relative to benchmarking against our comparable utility survey.

In Section 2 of this report, we briefly discuss the practice of depreciation accounting.

In Section 3 we discuss, in general, the type of information examined in the analysis and the methods applied to develop depreciation expense rates. The results of the analyses performed are discussed in Sections 4 through 6. These discussions include a determination of whole life depreciation accrual rates for unit property accounts (Section 4), mass property accounts (Section 5), and our analysis of the adequacy of current depreciation reserve amounts and recommended

depreciation rates (Section 6). The depreciation expense rates developed for the purpose of this report are considered appropriate for use in the near future.

In the following table, we summarize the change in annual depreciation expense resulting from our recommended rates:

Recommended Change in Depreciation Expense

DESCRIPTION	AMOUNT
Electric Utility	
Steam Production	(\$251,311)
Other Production	(\$1,582,638)
Transmission	(\$699,926)
Distribution	(\$2,007,546)
General Plant	(\$260,633)
Water Utility	
Source of Supply & Pumping Plant	(\$84,622)
Water Treatment Plant	(\$50,346)
Transmission & Distribution Plant	(\$46,698)
General Plant	(\$190,827)
Wastewater Utility	
Collection Plant	(\$3,258)
System Pumping Plant	(\$100,227)
Treatment & Disposal Plant	(\$478,818)
Reclaimed Water Plant	(\$10,429)
Reclaimed Water Distribution Plant	\$0
General Plant	(\$25,788)
Chilled Water Utility	
Chilled Water Plant	\$110,515
TOTAL	(\$5,682,552)

As shown in the table above, the depreciation rates we recommend in this report result in an overall annual decrease in depreciation expense of approximately \$5.7million. This is a decrease of approximately 1.5 percent. The principal factors contributing to this recommended decrease are related to:

- **Electric Production.** Approximately \$1.6 million of the decrease to depreciation expense relates to Other Production plant. Based on our unit property analysis of JEA's Other Production plants, we recommend a decrease to the composite depreciation rate for other production from 4.69 percent to 4.50 percent. The decrease is primarily the result of changes to lifespan estimates for the generation stations. Our recommendation is based on the current level of investment in electric production plant as well as the estimated life spans, capital expenditures and interim activities.

- **Electric Transmission.** Approximately \$700,000 of the reduction to depreciation expense is related to electric transmission plant. We find that the current depreciation rates are higher than those indicated by our actuarial analysis of JEA's data, and higher than the majority of the comparable utilities in our benchmarking study. We also find that many transmission accounts are heavily depreciated, with reserve ratios above 50 percent. This is the basis for our recommendation that JEA reduce depreciation expense for electric transmission.
- **Electric Distribution.** Of the approximately \$2 million reduction to depreciation expense related to electric distribution plant, \$800,000 relates to Overhead Conductor and Devices and \$900,000 relates to Services. We find that JEA's current depreciation rates are higher than the majority of the comparable utilities in our benchmarking study. We also find that the results of our actuarial analysis indicate longer average service lives than the current depreciation rates would imply for these accounts. This is the basis for our recommendation that JEA adjust its depreciation rates down to move partway towards the rates indicated in our analyses.
- **Treatment and Disposal Equipment.** Approximately \$500,000 of the decrease to depreciation expense is related to wastewater treatment plants. Based on our unit property analysis of JEA's wastewater treatment plants, we recommend a decrease from 3.88 percent to 3.78 percent on a composite basis. The decrease is driven by a change in expected lifespans of wastewater treatment plants. Our recommendation is based on the current level of investment in wastewater treatment plant as well as the estimated life spans, capital expenditures and interim activities.

CONCLUSIONS AND RECOMMENDATIONS

- In order to have data specific to JEA to perform depreciation studies, we recommend JEA continue to maintain its books and records in accordance with the Uniform System of Accounts. JEA currently (and since 1999) maintains detailed data regarding plant additions, retirements, and transfers by account, vintage year, and transaction year.
- We recommend JEA implement the recommended depreciation rates set forth in Section 6.0, in Column Q of Tables 6-1 (electric), 6-2 (water), 6-3 (wastewater), and 6-4 (chilled water)
- We recommend JEA transfer depreciation reserve between accounts in the amounts set forth in Column M of Tables 6-1, and 6-2.
- We recommend JEA again review the adequacy of its depreciation rates in five years.

Section 2. Depreciation Accounting

The FERC Uniform System of Accounts defines “Depreciation” as:

“[T]he loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and requirements of public authorities.”¹

Although this definition applies specifically to electric property, NARUC has a nearly identical definition applicable to water and wastewater utility property.

Depreciation accounting provides a method whereby charges for the loss in service value are made against current income derived from operation of the utility. By properly charging depreciation, the total cost of utility property is appropriately distributed over the useful life in such a way as to equitably allocate cost to the period during which service is provided through the use and consumption of such property. It should be noted that for the purposes delineated herein, total cost represents gross plant investment less salvage value (if any) plus cost of removal.

ANNUAL DEPRECIATION EXPENSE

Annual depreciation expense represents the annual charge against income associated with the loss of service value of utility property. Historically, utilities have relied on a number of different methods to identify the appropriate level of depreciation expense. Some of these methods include:

- A direct apportionment by management;
- A percentage of revenues;
- An amount equal to the original cost investment retired during the year;
- A charge per unit of delivery (kWh, kW, Mcf, Ccf, gallons, etc.); and
- A percentage of the investment in depreciable property.

JEA calculates depreciation expense based on the application of a straight-line depreciation rate to the respective balance in each plant account. This rate, which represents a fixed percentage of investment, yields an annual depreciation expense that is intended to amortize the total cost (or original investment plus cost of removal less salvage) over the life of the property in generally equal amounts.

DEPRECIATION RESERVE

Depreciation reserve is a balance sheet item that reflects the accumulation of annual depreciation activities and associated retirement accounting. Under the FERC and NARUC System of Accounts, depreciation reserve is shown on the balance sheet as “Accumulated Provision for Depreciation.”

¹ Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act. (18 CFR Part 101 Definitions). For the purposes of this report, we use the term “loss in service value” in the accounting sense where value represents the original cost of facilities.

The depreciation expense charged against income is credited to (accumulated in) depreciation reserve. For utility properties, FERC and NARUC provide that upon retirement of an asset, the utility depreciation reserve is reduced by the original cost of the asset retired, is increased by any benefits derived from the sale of assets removed (salvage), and reduced by the costs attributable to removal.² As such, the use of appropriate depreciation rates corresponding to the service life of utility properties will result in accruals to the depreciation reserve which equal the total investment ultimately retired, adjusted for salvage and cost of removal.

For the purposes of this report, we have included consideration for net salvage (salvage less cost of removal) where appropriate. More specifically, for those depreciation rates recommended for unit property accounts and rates derived through actuarial analysis for mass property accounts, we have provided allowance for net salvage³ based on industry trends and our experience with similar property. For the mass property accounts, we have also used as a reference the historical salvage, cost of removal, and retirement experience of JEA. Additionally, for those recommended depreciation rates derived from the results of industry survey, an allowance for net salvage equal to that which is imbedded in the rates of the comparable utilities surveyed is incorporated in our recommended depreciation rates.

² Note that the depreciation practices for utilities as prescribed by FERC and NARUC differ substantially from the practices followed for non-utility property.

³ Net salvage represents proceeds from sale of retired assets less cost of removal.

Section 3. Historical Information and Procedures

Depreciation expense rates are intended to recover the net investment (total cost) in utility property over its useful life. In this regard, depreciation rates typically consist of three components. The components, which are further defined below, include the following: (i) service life of the property; (ii) total cost to be recovered; and (iii) reserve requirements.

Normally, the determination of average service life is largely dependent on analyses of detailed utility records. Such records generally provide information regarding additions and retirements by transaction year (year added or retired) and vintage (year originally installed) for each account and for each production, water treatment, and wastewater treatment plant. Once determined, we adjust average service life to reflect expectations over the remaining service life based on our experience, judgment, and those conditions anticipated to occur.

We normally develop average service lives by account. We first separate accounts into two groups: mass property and unit property. Mass property represents relatively homogeneous property units that tend to be retired individually. Meters, mains, conduit, conductor, services, and line transformers are examples of mass property. Conversely, unit property represents a more heterogeneous property group, which by the nature of their interconnected or integrated operations, tends to be retired simultaneously, or as a group. We normally consider power generation facilities for electric utilities and treatment facilities for water and wastewater utilities as unit property. Generally, utilities maintain detailed unit property data by physical location. Utilities typically maintain mass property data on an aggregate level.

For unit property accounts, we typically define service life based on planned retirement dates. We normally develop a history of investment activity by account for each location or site. This life history reflects gross additions, retirements, surviving property and account balances. Based on the estimated lifespan (planned retirement date) for each unit property (generating station, chilled water plant, water treatment plant, wastewater treatment plant), we typically forecast plant investment activity (interim additions, retirements and account balances) at the account level for each year that units within such an account are forecast to remain in service. We then calculate a whole life, straight line depreciation accrual rate by dividing the gross additions (original investment plus interim additions) by the sum of the annual depreciable plant balances over the life of the unit property. Gross additions include both historical and forecast additions and retirements to unit properties throughout the entire lifespan of such properties.

For mass property, we typically define service lives by account based on actuarial analyses (retirement or survivor curve analysis) or semi-actuarial analysis (simulated plant balance). These analyses, which are based on historical plant activity (specifically retirements), utilize survivor curves to illustrate the percent of vintage additions surviving by age for each account. More specifically, using a least squares technique, actual survivor stub curves (specific to the utility property under investigation) are compared to general survivor curve types to identify the best fitting curves and lives. We use average service lives developed by this method as a principal method to determine a reasonable average service life applicable to each account. Appropriate whole life depreciation expense rates are then calculated by dividing one minus the expected net salvage ratio by the average service life. In addition to our analysis of historical experience, we

consider our experience in the industry, practices of other utilities, and basic information regarding expected life characteristics of the property. Results derived from the application of these methods are then evaluated in connection with other available information such as: (i) past, present, and anticipated economic conditions; (ii) recent industry trends; and (iii) engineering experience and judgment.

Each of these techniques, including a summary of the information required and the information provided by JEA, are further discussed below.

JEA DATA

Currently JEA's books and records do not provide sufficient detailed data upon which to develop depreciation expense rates as outlined above for many accounts. Data since 1999, when JEA converted to its existing Power Plant accounting system, appear relatively complete. Data prior to 1999, however, are limited to vintage plant balances at the time of conversion to Power Plan, which does not provide sufficient detail to perform comprehensive analysis due to the lack of retirement history. JEA is not unique in this regard.

With limited exception, municipally owned utility systems often do not have a comprehensive record of additions and retirements. We have also encountered investor-owned utility accounting records which do not have the required detail for one reason or another (often due to records system conversion) even though required by state and federal regulations to maintain detailed records in conformance with the Uniform System of Accounts. JEA, as have other municipal systems we have worked with, has maintained sufficient accounting records, but did not preserve the detail of somewhat limited value when changing accounting systems. Instead, in order to simplify converting accounting systems, the utilities have "rolled-up" historical detailed data.

Where we have encountered investor-owned systems without a complete history of detailed data, we usually have been able to rely on less detailed data. Investor-owned electric and gas systems had filed reports annually as a result of federal and state regulatory requirements. These annual reports contain data regarding annual plant additions and plant balances by account. Usually investor-owned utilities have available most, if not all, of these reports for 50 or more years. We can rely on this data to perform semi-actuarial simulated plant balance studies, which provide some insight into historical retirement experience.

Municipally owned systems, on the other hand, do not have the detailed reporting requirement. While the utility may report (audit or other reports) total annual additions and plant balances, municipal utilities seldom report more detailed information by plant account. We make these observations solely to demonstrate that any lack of detailed retirement records that JEA has is by no means unique. We find that of the level detail maintained by JEA is consistent with our experience with other municipal systems. In fact, if regulations did not require investor owned systems to maintain and report such detailed data, investor-owned systems would probably not maintain or report it.

JEA's historical data that we rely on include the following:

- Plant balances by account, by plant (for unit property), and by vintage (year of initial installation).
- Vintage beginning balances, additions, retirements, and adjustments by account for transaction years (year of activity) 2000 through 2018.

PLANNED RETIREMENTS (UNIT PROPERTY ACCOUNTS)

For JEA's unit property, data are limited upon which to develop an investment history. A complete life history would reflect gross additions, retirements, surviving property, and account balances by year since the unit property initially went into service. JEA's property records include vintage balances as of 1999 and a complete history going forward. Based on the estimated life (planned retirement date based on expected lifespan for the various units), we forecast plant investment activity (interim additions, retirements, and balances) for each year that we expect the property to remain in service. In the event that other reasonably anticipated planned additions and retirements are required in order for the property to reach the final retirement date, we consider implications of such additions and retirements as well. We reviewed the 2018 Annual Water Resource Master Plan and the 2019 Ten Year Site Plan (electric) to identify anticipated retirement dates and major capital additions. Additionally, JEA management provided information related to forecasted retirement dates, which was relied upon along with our experience and consideration of our site observations to develop reasonable lifespans for each unit property. We also relied upon JEA's capital projects budget, where JEA identifies several major projects relating to the electric generation, water and wastewater treatment plants, and the district energy system. We incorporate this information into our recommended depreciation rates.

Based on the data described above, we calculate a whole life, straight line depreciation accrual rate by dividing the gross additions (original investment plus interim additions) by the sum of the annual depreciable balances over the life of the unit property accounts. Gross additions include both historical and forecast additions to plant in-service. Annual depreciable balances are based on actual balances reported plus forecast balances, considering forecast additions and retirements. Our recommended rates for unit property accounts are discussed in Section 4.

RETIREMENT ANALYSIS (MASS PROPERTY ACCOUNTS)

In general, the level of effort required for any depreciation rate study is highly dependent upon the availability of the continuing property record ("CPR") and fixed asset data, and the available format and "condition" of this data. If CPR data is sufficiently complete, we use "retirement analysis" or survivor curve analysis as the primary measure of average service life for mass property accounts. In performing retirement analyses, we rely on computerized statistical routines to determine the average service life which best fits historical data using individual generalized survivor curves, typically referred to as "Iowa Curves." A comparison of the statistical fits of the various Iowa Curves (using the "best fitting" average service life) provides an indication of the average service life of mass properties based on historical retirements.

In this regard, JEA provided original cost account balances by vintage year along with subsequent additions, retirements, and transfers for the period September 2000 through December 2018.

Eighteen years of retirement history seldom provides sufficient detail to perform reliable retirement analysis, however for shorter lived accounts the results can be reasonable. We prefer 30 years of data but can often get reasonable results with less provided vintage plant balances are reliable and available retirement data is reasonable. We conducted retirement analyses for all electric, water and wastewater mass property accounts. The results of the analyses were generally not statistically robust for many accounts but were improved from our pervious study. For accounts that produced curve fits, we used the resulting average service lives as a directional guide for making our depreciation recommendation.

SIMULATED PLANT BALANCE (MASS PROPERTY ACCOUNTS)

As an alternative to retirement analysis, we normally rely on a method referred to as the simulated plant balance approach. We use the simulated plant balance method when aged retirement data are unavailable or insufficient. In order to estimate average service lives using the simulated plant balance approach, we require a history (preferably at least 30 years) of annual additions and end of year plant balances by account. In the simulated plant balance approach, each of a number of combinations of survivor curves and average service lives is used to compute a series of plant balances at the end of a number of chosen time periods. We test each combination to determine which calculated plant balances most closely simulates the actual book balances.

As discussed earlier, JEA does not have a history of annual additions and end of year plant balances by account, only remaining balances as of 1999. Therefore, the data available are the same as for the actuarial analysis making simulated plant balance irrelevant.

COMPARABLE UTILITY ANALYSIS (MASS PROPERTY ACCOUNTS)

With an absence of a statically robust retirement analysis for many mass property accounts, we relied on benchmarking as the primary approach to determine average service lives (depreciation rates). In Appendix A, we show depreciation rates that we summarized for the electric, water, wastewater and chilled water utilities in our benchmarking survey. Using this data, we determine the median depreciation rates for each mass property account. We consider these median values to be a preliminary indication of the appropriate depreciation rates. The results derived from the aforementioned survey activities are summarized below for the electric, water, wastewater, and chilled water systems.

Comparable Electric Utilities

We surveyed depreciation expense rates used by 15 electric utilities across the nation. The complete listing of utilities in our survey can be found in Appendix A. The utilities include Florida investor-owned systems and electric utilities serving approximately the same number of customers as JEA.

In Table 3-1 we summarize the median, first quartile (25th percentile), and third quartile (75th percentile) depreciation expense rates from our electric utility survey and compare those to JEA's existing depreciation expense rates for mass property accounts. We provide a median value depreciation expense rate in order to eliminate the effect of outliers. In addition, we show quartiles to demonstrate a more reasonable measure of range rather than simple minimum and maximum

values. We also show the number of data points included for each account in Table 3-1. In Appendix A, we present additional detail.

Table 3-1 Depreciation Benchmarking Results of Electric Utility Analysis

Acct.	Description	Median	1st Quartile	3rd Quartile	Data Points	JEA
311	Structures & Improvements	2.39%	2.33%	3.07%	5	3.51%
312	Boiler Plant Equipment	2.96%	2.66%	3.51%	5	3.71%
314	Turbogenerator Equipment	3.04%	2.78%	3.75%	5	3.38%
315	Accessory Electric Equipment	3.35%	2.45%	3.55%	5	3.43%
316	Miscellaneous Plant Equipment	2.89%	2.39%	3.89%	5	4.14%
341	Structures & Improvements	3.50%	2.84%	4.05%	6	4.10%
342	Fuel Holders, Producers / Accessories	2.57%	2.41%	3.69%	6	4.90%
343	Prime Movers	3.16%	2.94%	3.83%	6	4.83%
344	Generators	2.93%	2.81%	3.79%	6	4.75%
345	Accessory Electric Equipment	3.42%	3.04%	3.95%	6	4.02%
346	Miscellaneous Plant Equipment	3.23%	2.62%	3.90%	6	3.90%
352	Structures & Improvements	1.78%	1.70%	1.96%	17	2.24%
353	Station Equipment	1.99%	1.86%	2.30%	17	2.54%
354	Towers & Fixtures	1.69%	1.40%	2.00%	17	2.14%
355	Poles & Fixtures	2.35%	2.27%	3.51%	17	3.24%
356	Overhead Conductors & Devices	2.00%	1.64%	2.33%	17	2.51%
357	Underground Conduit	1.63%	1.30%	1.80%	10	1.81%
358	Underground Conductors & Devices	1.87%	1.35%	2.26%	15	2.18%
359	Roads & Trails	1.49%	1.39%	1.64%	14	1.76%
361	Structures & Improvements	1.60%	1.52%	1.76%	17	2.43%
362	Station Equipment	2.08%	1.85%	2.40%	17	2.57%
364	Poles, Towers & Fixtures	3.58%	2.38%	4.00%	17	4.20%
365	Overhead Conductors & Devices	2.72%	2.15%	3.26%	17	4.24%
366	Underground Conduit	1.81%	1.61%	2.02%	17	2.33%
367	Underground Conductors & Devices	1.99%	1.83%	2.40%	17	2.90%
368	Line Transformers	2.82%	2.08%	3.40%	17	3.62%
369	Services	2.92%	2.17%	3.53%	16	4.66%
370	Meters	6.51%	3.70%	7.19%	17	6.68%
371	Installations on Customers' Premises	4.02%	1.15%	5.28%	13	4.00%
373	Street Lighting & Signal Systems	3.87%	2.69%	4.55%	17	5.27%
382	Computer Hardware	14.22%	10.63%	19.89%	10	20.00%
383	Computer Software	14.22%	10.63%	19.89%	10	20.00%
390	Structures & Improvements	2.30%	2.00%	2.83%	17	3.07%
391	Office Furniture & Equipment	6.16%	4.95%	10.77%	14	4.00%
392	Transportation Equipment	5.48%	5.28%	8.29%	11	7.50%
393	Stores Equipment	4.67%	4.00%	5.23%	13	5.39%
394	Tools, Shop & Garage Equipment	5.00%	4.00%	6.67%	13	6.69%
395	Laboratory Equipment	5.70%	4.15%	6.67%	13	4.00%
396	Power Operated Equipment	5.99%	4.40%	8.39%	13	6.63%
397	Communications Equipment	5.68%	4.47%	10.18%	16	6.66%
398	Miscellaneous Equipment	5.00%	5.00%	5.67%	13	4.00%
399	Other Tangible Property	20.00%	20.00%	20.00%	1	8.67%

Comparable Water and Wastewater Utilities

Similar to the process outlined above for the electric system, we conducted a survey of 12 water and 11 wastewater utilities located in Florida. The complete listing of utilities in our survey can be found in Appendix A. The utilities surveyed ranged in size from nominally less than 1,000 customers to greater than 36,000 customers. Data was gathered from Annual Reports filed before the Florida Public Service Commission.

In Tables 3-2 and 3-3, we summarize the median, first quartile (25th percentile), and third quartile (75th percentile) depreciation expense rates from our water and wastewater utility survey and compare those to JEA’s existing depreciation expense rates by NARUC account. The rates listed below for JEA and the comparable utilities are representative of a composite rate considering all functional components of the NARUC system of accounts.

Table 3-2 Depreciation Benchmarking Results of Water Utility Analysis

Acct.	Description	Median	1st Quartile	3rd Quartile	Data Points	JEA
804.2	Structure and Improvements	3.03%	3.03%	3.13%	11	3.03%
805.2	Collecting and Impounding Reservoirs	2.00%	2.00%	2.00%	2	2.00%
806.2	Lake, River and Other Intakes	2.50%	2.50%	2.50%	2	2.50%
807.2	Wells and Springs	3.33%	3.33%	3.70%	12	3.33%
808.2	Infiltration Galleries and Tunnels	2.50%	2.50%	2.50%	1	2.50%
809.2	Supply Mains	2.86%	2.86%	3.13%	9	2.86%
810.2	Power Generation Equipment	5.00%	5.00%	5.88%	9	5.00%
811.2	Pumping Equipment	5.00%	5.00%	5.22%	12	5.00%
820.3	Water Treatment Equipment	4.55%	4.55%	4.88%	12	3.86%
830.4	Distribution Reservoirs and Standpipes	2.70%	2.70%	2.87%	11	3.07%
831.4	Transmission and Distribution Mains	2.33%	2.33%	2.53%	12	2.33%
833.4	Services	2.50%	2.50%	2.59%	12	2.50%
834.4	Meters and Meter Installations	5.00%	5.00%	5.22%	12	6.67%
835.4	Hydrants	2.22%	2.22%	2.50%	11	2.22%
836.4	Backflow Prevention Devices	6.67%	6.67%	6.67%	3	6.67%
839.4	Other Plant / Miscellaneous Equipment	5.00%	4.00%	5.56%	9	4.00%
840.52	Office Furniture & Equipment	6.67%	6.67%	6.67%	11	4.00%
841.5	Transportation Equipment	16.67%	16.67%	16.67%	11	7.50%
842.5	Stores Equipment	5.56%	5.42%	5.56%	4	5.39%
843.5	Tools, Shop and Garage Equipment	6.25%	6.25%	6.25%	12	6.69%
844.5	Laboratory Equipment	6.67%	6.67%	6.67%	5	4.00%
845.5	Power Operated Equipment	8.33%	8.33%	8.33%	8	6.63%
846.5	Communication Equipment	10.00%	10.00%	10.00%	6	6.66%
847.5	Miscellaneous Equipment	6.67%	6.67%	6.67%	4	4.00%
848.5	Other Tangible Plant	10.00%	10.00%	10.00%	7	8.67%

Table 3-3 Depreciation Benchmarking Results of Wastewater Utility Analysis

Acct.	Description	Median	1st Quartile	3rd Quartile	Data Points	JEA
854.2	Structures and Improvements	3.13%	3.08%	3.70%	11	3.13%
855.2	Power Generation Equipment	5.00%	5.00%	5.00%	5	5.00%
860.2	Collection Sewers - Force	3.33%	3.33%	3.70%	11	3.33%
861.2	Collection Sewers - Gravity	2.22%	2.22%	2.50%	9	2.23%
862.2	Special Collecting Structures	2.60%	2.50%	3.03%	8	2.50%
863.2	Services to Customers	2.63%	2.63%	2.86%	10	2.63%
864.2	Flow Measuring Devices	20.00%	20.00%	20.00%	7	10.00%
865.2	Flow Measuring Installations	2.63%	2.63%	2.63%	3	5.96%
866.6	Reuse Services	2.50%	2.50%	2.50%	3	3.64%
867.6	Reuse Meters and Meter Installations	5.00%	5.00%	5.00%	3	6.67%
870.3	Receiving Wells	3.67%	3.33%	4.39%	8	3.33%
871.3	Pumping Equipment	5.56%	5.56%	5.56%	9	5.00%
874.5	Reuse Distribution Reservoirs	2.70%	2.70%	2.70%	1	2.70%
875.6	Reuse Transmission and Distribution System	2.33%	2.33%	2.89%	4	2.33%
880.4	Treatment and Disposal Equipment	5.56%	5.56%	6.67%	9	3.75%
881.4	Plant Sewers	2.86%	2.86%	2.86%	3	3.10%
882.4	Outfall Sewer Lines	3.33%	3.33%	3.33%	5	3.57%
889.2	Other Plant / Miscellaneous Equipment	5.56%	5.56%	6.67%	9	6.25%
890.72	Office Furniture and Equipment	6.67%	6.67%	9.17%	8	4.00%
891.7	Transportation Equipment	16.67%	16.67%	20.00%	7	7.50%
892.7	Stores Equipment	5.56%	5.56%	5.56%	3	5.39%
893.7	Tools, Shop and Garage Equipment	6.25%	6.25%	6.46%	7	6.69%
894.7	Laboratory Equipment	6.67%	6.67%	6.67%	5	4.00%
895.7	Power Operated Equipment	8.33%	8.33%	9.17%	7	6.63%
896.7	Communication Equipment	10.00%	10.00%	10.00%	3	6.66%
897.7	Miscellaneous Equipment	6.67%	6.67%	6.67%	4	4.00%
898.7	Other Tangible Plant	10.00%	10.00%	10.00%	6	0.00%

Comparable Chilled Water Utilities

Our survey of chilled water utilities resulted in only two similar utilities. We found that most chilled water utilities are privately operated (by University campuses, for example), and identifying publicly available depreciation information was not readily accessible.

Section 4. Unit Property

In Tables 4-1, 4-2, and 4-3, we summarize whole life depreciation accrual rates for the unit properties of the electric, water, wastewater, and chilled water utilities by FERC and NARUC account numbers, as applicable. The whole life accrual rate is defined as the rate which, when applied to annual depreciable plant balances, will result in recovery of the original cost of gross additions, including net salvage, over the entire life of a property. The depreciation accrual rates applicable to unit property developed in this report are based on application of the whole life method.

We show summary data regarding the unit property owned by JEA as of December 2018 in Tables 4-3, 4-4, and 4-5. The retirement dates shown for each of the unit properties are based on input from JEA management, our experience and general guidelines regarding the lifespan of utility properties comparable to JEA's. The lifespan values represent reasonable levels based on our experience in a variety of settings, as well as information ascertained from JEA's master plan, capital budget, and management.

In Table 4-4, we summarize the in-service date, projected retirement date, capacity, unit type and fuel type for each generating unit. JEA solely owns and operates electric generating equipment at four sites. These are identified as J. Dillon Kennedy, Northside, Brandy Branch, and Greenland. The aggregate capacity of JEA's solely owned generation amounts to nominally 2,908 MW in the winter⁴.

We summarize information regarding JEA's water and wastewater unit properties in Tables 4-5 and 4-6. In these tables we show the in-service date, projected retirement date, and associated capacity of each plant. JEA's water treatment facilities consist of 38 water treatment plants (WTPs) having an aggregate capacity (average daily flow rate) of approximately 309 MGD. Capacities of the WTPs range from 0.04 MGD to 23.1 MGD. JEA's wastewater treatment facilities consist of 11 wastewater treatment plants (WWTPs) having a combined permitted capacity of approximately 120 MGD. Capacities of the WWTPs range from 0.24 MGD to 52.2 MGD.

We summarize information regarding JEA's chilled water unit properties in Table 4-7. There are four chilled water plants currently operating in JEA's District Energy Service (DES). DES was established as a separate utility system within JEA in 2004. The DES chilled water plants have an aggregate capacity of 26,700 tons and range from 800 tons to 9,700 tons.

The annual accrual rates we develop will, if applied to annual unit property account balances over the entire life of the various properties from the year of commercial operation to the year of retirement, recover JEA's investment, including consideration for the impact of net salvage. The principal forecasts, for which assumptions are made, that we rely on in the analyses include:

- The retirement date (life span) of the individual facilities.
- The level of interim additions and retirements.

⁴ In addition to the capacity of this solely owned equipment, JEA jointly owns the St. John's River Power Park and Scherer Unit 4.

- The level of major plant additions, upgrades, and improvements anticipated for the individual units over the next 10 years.
- The level of forecasted future additions and retirements beyond the 10-year CIP projection required to operate facilities until final retirement.
- The net salvage values associated with interim and final retirements.

With regard to major plant additions, upgrades, and improvements, we have included only those items identified in JEA’s capital projects budget. Estimated additions and retirement for the period beyond the budget are primarily based on historical interim activity.

Table 4-1 Depreciation Rate Analysis – Electric Unit Properties

[A] Acct. No.	[B] Description	[C] [D] Depreciation Rate		[E] Net Salvage
		Existing	Indicated	
Steam Production				
311	Structures and Improvements	3.51%	3.49%	-10.00%
312	Boiler Plant Equipment	3.71%	3.69%	-8.00%
314	Turbogenerator Units	3.38%	3.36%	-5.00%
315	Accessory Generation Equipment	3.43%	3.55%	-5.00%
316	Miscellaneous Power Plant Equipment	4.14%	3.86%	-5.00%
Other Production				
341	Structures and Improvements	4.10%	3.82%	-8.00%
342	Fuel Holders	4.90%	4.64%	-8.00%
346	Prime Movers	4.83%	4.73%	-8.00%
344	Generators	4.75%	4.48%	-10.00%
345	Accessory Electrical Equipment	4.02%	4.05%	-5.00%
346	Miscellaneous Power Plant Equipment	3.90%	3.98%	-5.00%

Table 4-2 Depreciation Rate Analysis – Water and Wastewater Unit Properties

[A] Acct. No.	[B] Description	[C] [D] Depreciation Rate		[E] Net Salvage
		Existing	Indicated	
Water Treatment				
804.3	Structures & Improvements	4.31%	4.22%	-10.00%
811.3	Pumping Equipment	5.00%	5.00%	-10.00%
820.3	Water Treatment Equipment	3.86%	3.94%	-10.00%
Wastewater Treatment and Disposal				
854.4	Structures and improvements	4.12%	4.02%	-15.00%
855.4	Power Generation Equipment	5.84%	4.63%	-10.00%
880.4	Treatment & Disposal Equipment	3.75%	3.67%	-10.00%
881.4	Plant Sewer	3.10%	3.20%	-5.00%
882.4	Outfall Sewer Line	3.57%	3.34%	-10.00%
889.4	Other Plant & Misc. Equipment	4.03%	4.00%	-5.00%

Table 4-3 Depreciation Rate Analysis – Chilled Water Unit Properties

[A] Acct. No.	[B] Description	[C] [D] Depreciation Rate		[E] Net Salvage
		Existing	Indicated	
362	Station Equip - Chilled Water	4.19%	4.94%	-5.00%
369	Services - Chilled Water	3.87%	3.73%	-5.00%
390	Structures - Chilled Water	4.15%	3.24%	-5.00%

Table 4-4 Summary of Electric Plant Characteristics

[A] Line	[B] Plant/Unit	[C] In-Service Date	[D] Estimated Retirement Date	[E] Capacity ⁽¹⁾	[F] Unit Type ⁽²⁾	[G] Fuel Type ⁽³⁾	[H] Estimated Age at Retirement
1	Kennedy						
2	Unit 7	2000	2040	191	CT	G/LO	40
3	Unit 8	2009	2049	191	CT	G/LO	40
4	Northside						
5	Unit 1	2003 ⁽⁴⁾	2063	293	ST	PC/C	60
6	Unit 2	2003 ⁽⁴⁾	2063	293	ST	PC/C	60
7	Unit 3	1977	2029	524	ST	G/HO	52
8	Unit 3	1975	2030	62	CT	LO	55
9	Unit 4	1975	2030	62	CT	LO	55
10	Unit 5	1974	2030	62	CT	LO	56
11	Unit 6	1974	2030	62	CT	LO	56
12	Brandy Branch						
13	Unit 1	2001	2041	191	CT	G/LO	40
14	Unit 2	2001	2041	186	CT	G/LO	40
15	Unit 3	2001	2041	186	CT	G/LO	40
16	Unit 2-3	2005	2041	223	CC	WH	36
17	Greenland						
18	Unit 1	2011	2051	191	CT	G/LO	40
19	Unit 2	2011	2051	191	CT	G/LO	40

(1) Winter capacity shown in megawatts (MW).

(2) CT – Combustion Turbine; ST – Steam Turbine; IC – Internal Combustion Engine; CC – Steam Turbine Component of Combined Cycle.

(3) LO – Light Oil; G – Natural Gas; PC – Pet Coke; C – Coal; HO – Heavy Oil; WH – Waste Heat.

(4) Retrofit boilers. Original install dates: Unit 1, 1966; Unit 2, 1972.

Source: Annual Disclosure Report for Electric Utility System, May 28, 2019, Page 21.

Table 4-5 Summary of Water Plant Characteristics

[A] Line	[B] Plant/Unit	[C] In-Service Date	[D] Estimated Retirement Date	[E] Capacity ⁽¹⁾	[F] Estimated Age at Retirement
1	Major Grid (Duval and St. Johns Counties)				
2	Arlington	1991	2046	9.42	55
3	Beacon Hills	2010	2065	2.55	55
4	Brierwood	1999	2054	18.00	55
5	Cecil Commerce Center	2004	2059	10.80	55
6	Community Hall	1994	2049	13.03	55
7	Deerwood III	1998	2053	22.61	55
8	Fairfax	1950	2030	13.29	80
9	Greenland	2018	2068	5.76	50
10	Hendricks	2001	2056	16.63	55
11	Highlands	2001	2056	14.40	55
12	Julington Creek Plantation	1999	2054	4.32	55
13	Lakeshore	1950	2030	12.46	80
14	Lovegrove	1971	2030	8.31	59
15	Main Street	1890	2030	23.11	140
16	Marietta	1974	2030	9.64	56
17	McDuff	1950	2030	16.06	80
18	Monument Road	1985	2040	2.47	55
19	Northwest	2019	2069	6.50	50
20	Norwood	1950	2030	8.86	80
21	Oakridge	1977	2030	16.39	53
22	Ridenour	1996	2051	19.44	55
23	Royal Lakes	1972	2030	6.98	58
24	Southeast	1995	2050	5.54	55
25	Southwest	1981	2036	18.72	55
26	St. Johns Forest	2002	2057	3.35	55
27	St. Johns North	1988	2043	3.19	55
28	Westlake	2002	2057	3.00	55
29	Woodmere	1965	2035	3.54	70
30	Independent Plant				
31	Mayport	1993	2048	0.79	55
32	Lofton Oaks Grid (Nassau County)				
33	Lofton Oaks	1989	2044	0.04	55
34	Nassau Regional	1999	2054	4.29	55
35	Otter Run	1995	2050	0.59	55
36	West Nassau	2019	2069	1.41	50
37	Ponce de Leon Grid (St. Johns County)				
38	A1A North	1965	2035	0.09	70
39	A1A South	1965	2035	0.09	70
40	Ponce de Leon	1988	2043	0.87	55
41	Ponte Vedra Grid (St. Johns County)				
42	Corona Road	1968	2035	2.08	67
43	Ponte Vedra North	1968	2035	0.98	67

(1) Permitted Capacity shown in millions of gallons per day (MGD) on an average daily basis.

Source: Annual Water Resource Master Plan, Septemeber 2018, Pages W-15, W-29,W-44, W-55, W-65, W-75.

Table 4-6 Summary of Wastewater Plant Characteristics

[A]	[B]	[C]	[D]	[E]	[F]
Line	Plant/Unit	In-Service Date	Estimated Retirement Date	Capacity ⁽¹⁾	Estimated Age at Retirement
1	Buckman	1961	2035	52.50	74
2	Arlington East	1978	2040	25.00	62
3	Southwest	1976	2040	14.00	64
4	District II	1970	2030	10.00	60
5	Mandarin	1998	2048	8.75	50
6	Monterey	1996	2046	3.60	50
7	Blacks Ford	1999	2049	3.00	50
8	Nassau Regional	1989	2039	1.55	50
9	Julington Creek	2008	2058	1.00	50
10	Ponte Vedra	2004	2054	0.80	50
11	Ponce De Leon	2008	2058	0.24	50

(1) Permitted Capacity shown in millions of gallons per day (MGD).

Source: Annual Water Resource Master Plan, Septemeber 2018, Page 5-8.

Table 4-7 Summary of Chilled Water Plant Characteristics

[A]	[B]	[C]	[D]	[E]	[F]
Line	Plant/Unit	In-Service Date	Estimated Retirement Date	Capacity ⁽¹⁾	Estimated Age at Retirement
1	Springfield	2005	2035	9,000	30
2	Downtown	2003	2033	7,200	30
3	Hogan's Creek	2003	2033	9,700	30
4	San Marco	2007	2037	800	30

(1) Capacity shown in tons.

Source: Annual Disclosure Report for Water and Sewer System and District Energy System, May 28, 2018, Page 39.

Section 5. Mass Property

For mass property accounts (transmission, distribution, collection, general plant, etc.), we develop base (indicated) depreciation rates based on retirement analyses (where applicable) and the depreciation rates reported by comparable utilities, as previously discussed in Section 3. In this section, we summarize JEA's existing and indicated base accrual rates and the annual change in depreciation expense which results if these indicated rates are applied to the depreciable plant balance.

There are two fundamental approaches (methods) used to develop depreciation rates. These are the whole life approach and the remaining life approach. The basic equation used to determine a whole life depreciation rate is as follows:

$$\text{Whole Life Rate} = \frac{1 - \text{Salvage Ratio}}{\text{Estimated Average Life}}$$

As evident from the above, this equation consists of two elements. The first element reflects recovery of the initial investment. The second element reflects recovery of net salvage. As we previously indicated, the purpose of considering net salvage in determining the accrual rate is to credit salvage and recover cost of removal over the life of the property.

An underlying assumption of the whole life method is that for mass property accounts, as property is retired, and new property is installed, the average service life of the group does not change significantly. The whole life method is predicated on homogeneity of the property units included in this group. For mass property accounts that have significant retirement history, where vintage retirement history is available, and where we consider life characteristics in the future to be similar to those observed in the past, we use an actuarial analysis as the principal basis to estimate average service life.

The basic equation used to determine a remaining life depreciation rate is as follows:

$$\text{Remaining Life Rate} = \frac{1 - \text{Salvage Ratio} - \text{Reserve Ratio}}{\text{Estimated Average Remaining Life}}$$

As demonstrated above, the whole life and remaining life equations are comparable. The only difference is, as the names imply, that under the whole life approach, investment is recovered equally over the entire life. With the remaining life method, undepreciated investment is recovered over the remaining life. So long as no change in life or other characteristics occur, the whole life and remaining life depreciation rates will be the same.

In order to develop the annual accrual rates for the mass property accounts using the whole life methodology, we determine the expected average service life and the general survivor curve type that reasonably approximates retirement experience. JEA provided available detailed historical data for each mass property account. This data includes additions, retirements and transfers by vintage and transaction year from beginning of fiscal year 2000 through calendar year 2018.

Upon receipt of this data, we verified its reasonableness and accuracy. In addition, we adjusted certain data to eliminate negative vintage year and account balances. We analyze in detail the

original cost additions by vintage year along with retirements and adjustments for each year in which data was provided to develop survivor curves based on the life (retirement) history of each mass property account. “Stub survivor curves” are developed since the development of a complete survivor curve is not possible until all properties have been retired. Theoretically, a complete survivor curve can only be developed after a period of time equal to approximately twice the average service life and then only if the number of property units retired is sufficient to produce meaningful results. As we previously discussed, we are able to generate reasonable results for many accounts, however the results of the analyses were generally not statistically robust. Additionally, the actuarial results generally indicate lower depreciation rates than those currently used by JEA as well as those resulting from our survey of comparable utilities. For accounts that produced curve fits, we used the resulting average service lives as a directional guide for making our depreciation recommendation. We have summarized the actuarial results in Table 5-1.

We base our recommendation of indicated depreciation accrual rates on a number of factors. In general, for accounts where the existing depreciation rate is within the bounds of our comparable utility survey and the account is not heavily depreciated, we have left the rate unchanged. For those mass property accounts which fall outside of the bounds of the comparable utilities and have a reserve ratio greater than 50 percent, we use our actuarial results to provide an indication of whether the lives are trending shorter and adjusted the depreciation recommendation accordingly. As a result, we shifted the depreciation rates gradually towards the median for several accounts where the actuarial results indicate actual experience is much different from the depreciation rate. In Tables 5-2 through 5-4, we summarize existing and indicated base accrual rates for each mass property account. Although no net salvage ratio is explicitly stated for these accounts, inherent in the results observed for the surveyed utilities is an implicit allowance.

For general plant, we analyzed the data for the electric, water and wastewater utilities together. We set the depreciation rates applicable to water and wastewater general plant equal to the rates for electric utility. We are unaware of any justification for general plant depreciation rates to differ dramatically between the various utilities. This approach is consistent with our previous study and JEA’s current practice.

Table 5-1 Depreciation Rate Analysis – Mass Property Accounts Retirement Analysis

Acct.	Description	Actuarial Indicated		JEA Existing	Benchmark Survey	
		ASL ⁽¹⁾	Rate ⁽²⁾		Median	3rd Quartile
Electric Mass Property						
352	Structures and Improvements	60	1.67%	2.24%	1.78%	1.96%
353	Station Equipment	50	2.00%	2.54%	1.99%	2.30%
354	Towers and Fixtures	no fit	na	2.14%	1.69%	2.00%
355	Poles and Attachments	50	2.00%	3.24%	2.35%	3.51%
356	Overhead Conductor and Devices	65	1.54%	2.51%	2.00%	2.33%
357	Underground Conduit	no fit	na	1.81%	1.63%	1.80%
358	Underground Conductor and Devices	70	1.43%	2.18%	1.87%	2.26%
359	Roads and Trails	no fit	na	1.76%	1.49%	1.64%
361	Structures and Improvements	55	1.82%	2.43%	1.60%	1.76%
362	Station Equipment	45	2.22%	2.57%	2.08%	2.40%
364	Poles, Towers, and Fixtures	43	2.33%	4.20%	3.58%	4.00%
365	Overhead Conductor and Devices	35	2.86%	4.24%	2.72%	3.26%
366	Underground Conduit	60	1.67%	2.33%	1.81%	2.02%
367	Underground Conductor and Devices	45	2.22%	2.90%	1.99%	2.40%
368	Line Transformers	32	3.13%	3.62%	2.82%	3.40%
369	Services	30	3.33%	4.66%	2.92%	3.53%
370	Meters	20	5.00%	6.68%	6.51%	7.19%
373	Street Light and Signal Systems	19	5.26%	5.27%	3.87%	4.55%
Water Mass Property						
804.2	Structures & Improvements	40	2.50%	3.03%	3.03%	3.13%
805.2	Collecting & Impounding Reservoirs	50	2.00%	2.00%	2.00%	2.00%
806.2	Lake, River & Other Intakes	no fit	na	2.50%	2.50%	2.50%
807.2	Wells & Springs	50	2.00%	3.33%	3.33%	3.70%
808.2	Infiltration Galleries & Tunnels	no fit	na	2.50%	2.50%	2.50%
809.2	Supply Mains	40	2.50%	2.86%	2.86%	3.13%
810.2	Power Generation Equipment	25	4.00%	5.00%	5.00%	5.88%
811.2	Pumping Equipment	30	3.33%	5.00%	5.00%	5.22%
804.4	Structures & Improvements	40	2.50%	3.03%	3.03%	3.13%
811.4	Pumping Equipment	30	3.33%	5.00%	5.00%	5.22%
830.4	Distribution Reservoirs & Standpipes	38	2.63%	3.07%	2.70%	2.87%
831.4	Transmission & Distribution Mains	55	1.82%	2.33%	2.33%	2.53%
833.4	Services	55	1.82%	2.50%	2.50%	2.59%
834.4	Meters & Meter Installations	25	4.00%	6.67%	5.00%	5.22%
835.4	Hydrants	50	2.00%	2.22%	2.22%	2.50%
836.4	Backflow Prevention Devices	20	5.00%	6.67%	6.67%	6.67%
839.4	Other Plant & Miscellaneous Equipment	12	8.33%	4.00%	5.00%	5.56%
Wastewater Mass Property						
854.2	Structures & Improvements	50	2.00%	3.13%	3.13%	3.70%
855.2	Power Generation Equipment	25	4.00%	5.00%	5.00%	5.00%
860.2	Collection Sewers - Force	40	2.50%	3.33%	3.33%	3.70%
861.2	Collection Sewers - Gravity	50	2.00%	2.23%	2.22%	2.50%
862.2	Special Collecting Sewers	35	2.86%	2.50%	2.60%	3.03%
863.2	Services to Customers	50	2.00%	2.63%	2.63%	2.86%
864.2	Flow Measuring Devices	25	4.00%	10.00%	20.00%	20.00%
865.2	Flow Measuring Installations	30	3.33%	5.96%	2.63%	2.63%
889.2	Other Plant & Miscellaneous Equipment	20	5.00%	6.25%	5.56%	6.67%
854.3	Structures & Improvements	50	2.00%	3.13%	3.13%	3.70%
855.3	Power Generation Equipment	25	4.00%	5.00%	5.00%	5.00%
870.3	Receiving Wells	40	2.50%	3.33%	3.67%	4.39%
871.3	Pumping Equipment	35	2.86%	5.00%	5.56%	5.56%
889.3	Other Plant & Miscellaneous Equipment	20	5.00%	6.25%	5.56%	6.67%
854.5	Structures & Improvements	50	2.00%	3.13%	3.13%	3.70%
855.5	Power Generation Equipment	25	4.00%	5.00%	5.00%	5.00%
871.5	Pumping Equipment	35	2.86%	5.00%	5.56%	5.56%
874.5	Reuse Distribution Reservoirs	no fit	na	2.70%	2.70%	2.70%
880.5	Treatment & Disposal Equipment	no fit	na	5.56%	5.56%	6.67%
854.6	Structures & Improvements	50	2.00%	3.13%	3.13%	3.70%
867.6	Reuse Meters & Meter Installations	no fit	na	6.67%	3.33%	3.70%
875.6	Reuse Transmission & Distribution System	no fit	na	2.33%	2.60%	3.03%

(Continued next page)

Acct.	Description	Actuarial Indicated		JEA Existing	Benchmark Survey	
		ASL ⁽¹⁾	Rate ⁽²⁾		Median	3rd Quartile
Combined General Plant Mass Property						
	Computer Hardware	10	10.00%	20.00%	14.22%	19.89%
	Computer Software	no fit	na	20.00%	14.22%	19.89%
	Structures and Improvements	35	2.86%	3.07%	2.30%	2.83%
	Office Furniture and Equipment	10	10.00%	4.00%	6.16%	10.77%
	Transportation Equipment	19	5.33%	7.50%	5.48%	8.29%
	Stores Equipment	15	6.67%	5.39%	4.67%	5.23%
	Tools, Shop, and Garage Equipment	16	6.33%	6.69%	5.00%	6.67%
	Laboratory Equipment	18	5.56%	4.00%	5.70%	6.67%
	Mobile Equipment	18	5.56%	6.63%	5.99%	8.39%
	Communications Equipment	22	4.55%	6.66%	5.68%	10.18%
	Miscellaneous Equipment	25	4.00%	4.00%	5.00%	5.67%
	Other Tangible Property	12	8.33%	8.67%	0.00%	0.00%

(1) Average Service Life rounded to full year.

(2) Excludes allowance for net salvage

Table 5-2 Summary of Existing and Indicated Rates for Mass Property Accounts – Electric Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line	FERC Acct.	Description	Depreciable Plant ⁽¹⁾	Base Accrual Rate		Difference in Depreciation	
				Existing	Indicated ⁽²⁾	Amount	Percent
Transmission							
1	352	Structures and Improvements	45,145,402	2.24%	2.24%	-	0.00%
2	353	Station Equipment	295,722,832	2.54%	2.54%	-	0.00%
3	354	Towers and Fixtures	28,587,227	2.14%	1.92%	(62,892)	-10.28%
4	355	Poles and Attachments	94,388,985	3.24%	2.80%	(415,312)	-13.58%
5	356	Overhead Conductor and Devices	71,827,128	2.51%	2.26%	(179,568)	-9.96%
6	357	Underground Conduit	14,683,400	1.81%	1.72%	(13,215)	-4.97%
7	358	Underground Conductor and Devices	19,292,889	2.18%	2.03%	(28,939)	-6.88%
8	359	Roads and Trails	5,946,643	1.76%	1.76%	-	0.00%
9		Total Transmission	\$ 575,594,505	2.57%	2.45%	\$ (699,926)	-4.73%
Distribution							
11	361	Structures and Improvements	31,566,648	2.43%	2.43%	-	0.00%
12	362	Station Equipment	176,187,487	2.57%	2.49%	(140,950)	-3.11%
13	364	Poles, Towers, and Fixtures	136,365,866	4.20%	4.10%	(136,366)	-2.38%
14	365	Overhead Conductor and Devices	248,344,773	4.24%	3.91%	(819,538)	-7.78%
15	366	Underground Conduit	279,928,517	2.33%	2.33%	-	0.00%
16	367	Underground Conductor and Devices	352,470,826	2.90%	2.90%	-	0.00%
17	368	Line Transformers	428,536,484	3.62%	3.62%	-	0.00%
18	369	Services	159,770,558	4.66%	4.09%	(910,692)	-12.23%
19	370	Meters	130,586,769	6.68%	6.68%	1,306	0.01%
20	373	Street Light and Signal Systems	117,265,225	5.27%	5.27%	-	0.00%
21		Total Distribution	\$ 2,061,023,153	3.70%	3.60%	\$ (2,006,240)	-2.63%
General Plant							
23	382	Computer Hardware	48,339,146	20.00%	20.00%	-	0.00%
24	383	Computer Software	94,175,510	20.00%	20.00%	-	0.00%
25	390	Structures and Improvements	89,417,769	3.07%	2.86%	(187,777)	-6.84%
26	391	Office Furniture and Equipment	4,990,887	4.00%	4.00%	-	0.00%
27	392	Transportation Equipment	69,996,893	7.50%	7.50%	-	0.00%
28	393	Stores Equipment	1,292,666	5.39%	4.67%	(9,307)	-13.36%
29	394	Tools, Shop, and Garage Equipment	10,834,451	6.69%	6.33%	(39,004)	-5.38%
30	395	Laboratory Equipment	4,304,576	4.00%	5.56%	67,151	39.00%
31	396	Mobile Equipment	8,569,709	6.63%	5.56%	(91,696)	-16.14%
32	397	Communications Equipment	65,491,574	6.66%	6.66%	-	0.00%
33	398	Miscellaneous Equipment	3,548,428	4.00%	4.00%	-	0.00%
34	399	Other Tangible Property	9,475,117	8.67%	8.67%	-	0.00%
35		Total General Plant	\$ 410,436,725	10.61%	10.55%	\$ (260,633)	-0.60%
36		TOTAL MASS PROPERTY	\$ 3,047,054,383	4.41%	4.32%	\$ (2,966,799)	-2.21%

(1) As of December 2018

(2) Representative of results derived from retirement analyses and comparable utilities survey.

Table 5-3 Summary of Existing and Indicated Rates for Mass Property Accounts – Water Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line	Account No.	Description	Depreciable Plant ⁽¹⁾	Base Accrual Rate		Difference in Depreciation	
				Existing	Indicated ⁽²⁾	Amount	Percent
1		Source of Supply & Pumping Plant					
2	804.2	Structures & Improvements	25,785,447	3.03%	3.03%	-	0.00%
3	805.2	Collecting & Impounding Reservoirs	20,847,194	2.00%	2.00%	-	0.00%
4	806.2	Lake, River & Other Intakes	90,296	2.50%	2.50%	-	0.00%
5	807.2	Wells & Springs	38,037,422	3.33%	3.33%	-	0.00%
6	808.2	Infiltration Galleries & Tunnels	-	2.50%	2.50%	-	0.00%
7	809.2	Supply Mains	20,869,658	2.86%	2.68%	(37,565)	-6.29%
8	810.2	Power Generation Equipment	9,411,305	5.00%	4.50%	(47,057)	-10.00%
9	811.2	Pumping Equipment	34,755,303	5.00%	5.00%	-	0.00%
10		Total Source of Supply & Pumping Plant	\$ 149,796,626	3.52%	3.46%	\$ (84,622)	-1.61%
11		Transmission & Distribution Plant					
12	804.4	Structures & Improvements	4,087,780	3.03%	2.50%	(21,665)	-17.49%
13	811.4	Pumping Equipment	2,789,842	5.00%	5.00%	-	0.00%
14	830.4	Distribution Reservoirs & Standpipes	5,931,919	3.07%	2.85%	(13,050)	-7.17%
15	831.4	Transmission & Distribution Mains	781,704,579	2.33%	2.33%	-	0.00%
16	833.4	Services	128,210,765	2.50%	2.50%	-	0.00%
17	834.4	Meters & Meter Installations	254,437,858	6.67%	6.67%	-	0.00%
18	835.4	Hydrants	59,604,454	2.22%	2.22%	-	0.00%
19	836.4	Backflow Prevention Devices	717,542	6.67%	5.00%	(11,983)	-25.04%
20	839.4	Other Plant & Miscellaneous Equipment	7,045	4.00%	4.00%	-	0.00%
21		Total Transmission & Distribution Plant	\$ 1,237,491,785	3.25%	3.25%	\$ (46,698)	-0.12%
22		General Plant					
23	804.5	Structures & Improvements	89,638,438	3.03%	2.86%	(152,385)	-5.61%
24	840.51	Computer Equipment	31,732,252	20.00%	20.00%	-	0.00%
25	840.52	Office Furniture & Equipment	5,103,572	4.00%	4.00%	-	0.00%
26	841.5	Transportation Equipment	31,578,242	7.50%	7.50%	-	0.00%
27	842.5	Stores Equipment	849,709	5.39%	4.67%	(6,118)	-13.36%
28	843.5	Tools, Shop & Garage Equipment	3,112,614	6.69%	6.33%	(11,205)	-5.38%
29	844.5	Laboratory Equipment	1,880,908	4.00%	5.56%	29,342	39.00%
30	845.5	Power Operated Equipment	4,715,975	6.63%	5.56%	(50,461)	-16.14%
31	846.5	Communication Equipment	44,379,865	6.66%	6.66%	-	0.00%
32	847.5	Miscellaneous Equipment	1,460,681	4.00%	4.00%	-	0.00%
33	848.5	Other Tangible Equipment	30,207,882	8.67%	8.67%	-	0.00%
34		Total General Plant	\$ 244,660,139	7.32%	7.24%	\$ (190,827)	-1.07%
35		TOTAL MASS PROPERTY	\$ 1,631,948,549	3.88%	3.86%	\$ (322,148)	-0.51%

(1) As of December 2018

(2) Representative of results derived from retirement analyses and comparable utilities survey.

Table 5-4 Summary of Existing and Indicated Rates for Mass Property Accounts – Wastewater Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line	Account No.	Description	Depreciable Plant ⁽¹⁾	Existing	Indicated ⁽²⁾	Amount	Percent
				Base Accrual Rate		Difference in Depreciation	
Collection Plant							
1	854.2	Structures & Improvements	354,534	3.13%	3.13%	-	0.00%
2	855.2	Power Generation Equipment	102,592	5.00%	4.50%	(513)	-10.00%
3	860.2	Collection Sewers - Force	386,829,533	3.33%	3.33%	-	0.00%
4	861.2	Collection Sewers - Gravity	1,010,062,614	2.23%	2.23%	-	0.00%
5	862.2	Special Collecting Sewers	270,818	2.50%	2.50%	-	0.00%
6	863.2	Services to Customers	98,381,471	2.63%	2.63%	-	0.00%
7	864.2	Flow Measuring Devices	102,479	10.00%	10.00%	-	0.00%
8	865.2	Flow Measuring Installations	93,017	5.96%	3.33%	(2,446)	-44.12%
9	889.2	Other Plant & Miscellaneous Equipment	23,952	6.25%	5.00%	(299)	-19.97%
10		Total Collection Plant	\$ 1,496,221,009	2.54%	2.54%	\$ (3,258)	-0.01%
System Pumping Plant							
12	854.3	Structures & Improvements	139,507,296	3.13%	3.13%	-	0.00%
13	855.3	Power Generation Equipment	28,669,567	5.00%	4.50%	(143,348)	-10.00%
14	870.3	Receiving Wells	22,873,020	3.33%	3.67%	77,768	10.21%
15	871.3	Pumping Equipment	206,995,669	5.00%	5.00%	-	0.00%
16	889.3	Other Plant & Miscellaneous Equipment	2,771,750	6.25%	5.00%	(34,647)	-20.00%
17		Total System Pumping Plant	\$ 400,817,302	4.26%	4.24%	\$ (100,227)	-0.59%
Reclaimed Water Plant							
19	854.5	Structures & Improvements	27,316,662	3.13%	3.13%	-	0.00%
20	855.5	Power Generation Equipment	345,980	5.00%	4.50%	(1,730)	-10.00%
21	871.5	Pumping Equipment	6,816,866	5.00%	5.00%	-	0.00%
22	874.5	Reuse Distribution Reservoirs	305,860	2.70%	2.70%	-	0.00%
23	880.5	Treatment & Disposal Equipment	18,225,367	5.56%	5.56%	-	0.00%
24	881.5	Reuse Plant Sewers	368,589	5.56%	3.20%	(8,699)	-42.45%
25		Total Reclaimed Water Plant	\$ 53,379,325	4.22%	4.21%	\$ (10,429)	-0.20%
Reclaimed Water Distribution Plant							
27	854.6	Structures & Improvements	353,681	3.13%	3.13%	-	0.00%
28	866.6	Reuse Services	3,924,693	3.64%	3.64%	-	0.00%
29	867.6	Reuse Meters & Meter Installations	1,006,498	6.67%	6.67%	-	0.00%
30	871.6	Reuse Pumping Equipment	1,507,975	5.00%	5.00%	-	0.00%
31	875.6	Reuse Transmission & Distribution System	77,230,635	2.33%	2.33%	-	0.00%
32	889.6	Reuse Other Miscellaneous Equipment	17,329	5.56%	5.56%	-	0.00%
33		Total Reclaimed Water Distribution Plant	\$ 84,040,809	2.50%	2.50%	\$ -	0.00%
General Plant							
35	854.7	Structures & Improvements	5,788,116	3.13%	2.86%	(15,628)	-8.63%
36	890.71	Computer Equipment	6,779,450	20.00%	20.00%	-	0.00%
37	890.72	Office Furniture & Equipment	1,043,747	4.00%	4.00%	-	0.00%
38	891.7	Transportation Equipment	7,973,721	7.50%	7.50%	-	0.00%
39	892.7	Stores Equipment	25,846	5.39%	4.67%	(186)	-13.35%
40	893.7	Tools, Shop & Garage Equipment	3,869,171	6.69%	6.33%	(13,929)	-5.38%
41	894.7	Laboratory Equipment	1,362,624	4.00%	5.56%	21,257	39.00%
42	895.7	Power Operated Equipment	1,616,972	6.63%	5.56%	(17,302)	-16.14%
43	896.7	Communication Equipment	25,814,377	6.66%	6.66%	-	0.00%
44	897.7	Miscellaneous Equipment	1,130,612	4.00%	4.00%	-	0.00%
45	898.7	Other Tangible Equipment	18,940,881	0.00%	0.00%	-	0.00%
46		Total General Plant	\$ 74,345,518	5.87%	5.83%	\$ (25,788)	-0.59%
47		TOTAL MASS PROPERTY	\$ 2,108,803,964	3.03%	3.02%	\$ (139,702)	-0.22%

(1) As of December 2018

(2) Representative of results derived from retirement analyses and comparable utilities survey.

Table 5-5 Summary of Existing and Indicated Rates for Mass Property Accounts – Chilled Water Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
Line	Account No.	Description	Depreciable Plant ⁽¹⁾	Base Accrual Rate		Difference in Depreciation	
				Existing	Indicated	Amount	Percent
1		Chilled Water					
2	303	CW Intangible Software - DES	-	10.00%	10.00%	\$ -	0.00%
3	361	CW Structures and Improvements	-	4.00%	4.00%	-	0.00%
4	365	CW Overhead Conductor and Devices	-	4.00%	4.00%	-	0.00%
5	366	CW UG Conduit	6,510,694	4.00%	4.00%	-	0.00%
6	370	CW Meters	1,811,376	5.00%	5.00%	-	0.00%
7		Total Distribution	\$ 8,322,071	4.22%	4.22%	\$ -	0.00%
8		General Plant					
9	382	Computer Hardware	607,860	20.00%	20.00%	-	0.00%
10	383	Computer Software	322,130	20.00%	20.00%	-	0.00%
11	391	CW Office Furniture and Equipment	25,314	4.00%	4.00%	-	0.00%
12	394	CW Tools, Shop, and Garage Equipment	20,148	6.69%	6.33%	(72)	-5.33%
13	396	CW Mobile Equipment	46,917	6.63%	5.56%	(504)	-16.21%
14	397	CW Communications Equipment	1,264,578	6.66%	6.66%	-	0.00%
15		Total General Plant	\$ 2,286,947	12.05%	12.03%	\$ (576)	-0.21%
16		TOTAL MASS PROPERTY	\$ 10,609,017	5.91%	5.90%	\$ (576)	-0.09%

(1) As of December 2018

Section 6. Recommended Depreciation Rates

In Sections 4 and 5, we develop indicated depreciation expense rates for unit and mass property accounts, respectively. As the final step in developing recommended depreciation rates, we consider our experience, the adequacy of JEA's depreciation reserve levels, and other appropriate factors. In Tables 6-1 through 6-4, we summarize the development of our recommended rates.

As we describe in Section 5, for those mass property accounts for which we were unable to conduct retirement analyses, we rely on the depreciation rates charged by comparable utilities to inform our recommendation. We use the experience of other utilities in the expectation that the service lives and other considerations, which should go into the development of JEA's depreciation rates, are similar to those of these other utilities. We also factored JEA's depreciation reserve balances into our recommendation. The ratio of depreciation reserve to plant in service represents the reserve ratio. We do not expect this ratio, which provides a relative measure of the reserve, to exceed 50 percent (absent consideration for net salvage) for mature systems such as JEA. In general, we limited our recommendations regarding reducing depreciation rates to those accounts that had a reserve ratio greater than 50 percent for mass property accounts.

For both unit and mass properties, we recommend that reserves be transferred between accounts in the amounts shown in Column M of Tables 6-1 (electric), 6-2 (water), 6-3 (waste water), and 6-4 (chilled water). For unit properties, the transfers are generally recommended so that the number of years to depreciate the various accounts is comparable. For mass properties, the transfers are intended to generally reduce the reserve ratio to about 50 to 60 percent. As an initial step, to the extent practical, we transfer reserves (in \$100,000 increments) between accounts within the same category (i.e. steam production) so that the maximum reserve ratio does not exceed 50 percent. By this recommended transfer, we reduce the reserve associated with highly depreciated accounts which, in turn, increases the reserve to accounts less depreciated. However, we have limited the number of reserve transfers in this study to allow for easier tracking of the effect of the recommended depreciation rates on reserve accruals in JEA's next depreciation study.

Our recommended depreciation rates are set forth in Column Q of Tables 6-1, 6-2, 6-3, and 6-4 for the electric, water, wastewater and chilled water utilities, respectively. Overall, the depreciation expense resulting from our recommended rates decreases by 1.5 percent, or approximately \$5.7 million.

Our recommended depreciation rates for the electric assets of JEA account for approximately \$4.8 million of the reduction to depreciation. For the Steam Production accounts, our recommended depreciation rates result in a small decrease in the composite depreciation rate from 3.60 percent to 3.59 percent, resulting in a decrease of approximately \$250,000. For the Other Production accounts, our recommended depreciation rates result in a decrease to the composite depreciation rate from 4.69 percent to 4.50 percent, resulting in a decrease of approximately \$1.6 million to annual depreciation expense. The decrease for electric unit property is primarily the result of changes to lifespan estimates for the generation stations. Our recommendation is based on the current level of investment in electric production plant as well as the estimated life spans, capital expenditures and interim activities.

For the electric transmission accounts, our recommended depreciation rates result in a composite decrease from 2.57 percent to 2.45 percent, resulting in an approximate \$700,000 reduction. We find that the current depreciation rates are higher than those indicated by our actuarial analysis of JEA's data and the majority of the comparable utilities in our benchmarking study. We recommend reducing depreciation only on the accounts with reserve ratios above 50 percent.

For the electric distribution accounts, our recommended depreciation rates result in a composite decrease from 3.70 percent to 3.60 percent, resulting in an approximate \$2 million reduction. The primary drivers of this reduction are Overhead Conductor and Devices and Services which we recommend reducing annual depreciation by approximately \$800,00 and \$900,000, respectively. We find that JEA's current depreciation rates are higher than the majority of the comparable utilities in our benchmarking study. We also find that the results of our actuarial analysis indicate longer average service lives than the current depreciation rates would imply for these accounts. We recommended reducing depreciation only on the accounts with reserve ratios above 50 percent. Our recommendation adjusts these depreciation rates down to move partway toward the rates indicated in our analyses

Our recommended depreciation rates for the water assets of JEA is minor and spread across all functions. In total our recommended depreciation rates for water assets is approximately \$370,000 of the overall reduction to depreciation.

Our recommended depreciation rates for the wastewater assets of JEA account for approximately \$600,000 of the reduction to depreciation. Approximately \$500,000 of this decrease to depreciation expense is related to wastewater treatment plants. Based on our unit property analysis of JEA's wastewater treatment plants, our recommended depreciation rates result in a decrease from 3.88 percent to 3.78 percent on a composite basis. The decrease is primarily driven by a change in expected lifespans of wastewater treatment plants. Our recommendation is based on the current level of investment in wastewater treatment plant as well as the estimated life spans, capital expenditures and interim activities.

There is minimal change recommended to chilled water assets based on our unit property analysis. Chilled water depreciation expense increases by \$110,000 as a result of our recommendation.

We recommend JEA continue to maintain its books and records in accordance with the Uniform System of Accounts to build a more complete CPR for future depreciation studies. We further recommend JEA review the adequacy of its depreciation rates in five years

Table 6-1 Recommended Depreciation Rates – Electric Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	
Line	No.	Account Description	Dec. 31, 2018 Plant Balance	Net Salvage	Total Cost To Recover	Base Accrual Rate		Depreciation Expense Difference	Existing Reserve		Yrs. To Depreciate	Depreciation Reserve		Adjusted Reserve	Adjusted Ratio	Yrs. To Depreciate	Accrual Rate	Change In Expense
						Existing	Indicated		Amount	Ratio		Transfer	Yrs. To Depreciate					
Production Plant																		
Steam Production																		
1	311	Structures and Improvements	126,192,041		126,192,041	3.51%	3.49%	(25,238)	69,830,879	55.34%	12.8	-	69,830,879	55.34%	12.8	3.49%	(25,238)	
2	312	Boiler Plant Equipment	801,376,979		801,376,979	3.71%	3.69%	(160,275)	513,755,041	64.11%	9.7	-	513,755,041	64.11%	9.7	3.69%	(160,275)	
3	314	Turbogenerator Units	335,201,417		335,201,417	3.38%	3.36%	(67,040)	204,013,240	60.86%	11.6	-	204,013,240	60.86%	11.6	3.36%	(67,040)	
4	315	Accessory Generation Equipment	50,626,674		50,626,674	3.43%	3.55%	60,752	16,646,402	32.88%	18.9	-	16,646,402	32.88%	18.9	3.55%	60,752	
5	316	Miscellaneous Power Plant Equipment	21,253,558		21,253,558	4.14%	3.86%	(59,510)	12,075,541	56.82%	11.2	-	12,075,541	56.82%	11.2	3.86%	(59,510)	
6		Total Steam Production	\$ 1,334,650,668		\$ 1,334,650,669	3.60%	3.59%	\$ (251,311)	\$ 816,321,103	61.16%	10.8	\$ -	\$ 816,321,103	61.16%	10.8	3.59%	\$ (251,311)	
Other Production																		
8	341	Structures and Improvements	65,594,091		65,594,091	4.10%	3.82%	(183,663)	35,091,062	53.50%	12.2	-	35,091,062	53.50%	12.2	3.82%	(183,663)	
9	342	Fuel Holders	74,624,637		74,624,637	4.90%	4.64%	(194,024)	30,027,865	40.24%	12.9	-	30,027,865	40.24%	12.9	4.64%	(194,024)	
10	343	Prime Movers	285,893,748		285,893,748	4.83%	4.73%	(285,894)	101,264,088	35.42%	13.7	-	101,264,088	35.42%	13.7	4.73%	(285,894)	
11	344	Generators	348,210,074		348,210,074	4.75%	4.48%	(940,167)	248,131,858	71.26%	6.4	-	248,131,858	71.26%	6.4	4.48%	(940,167)	
12	345	Accessory Electrical Equipment	49,770,187		49,770,187	4.02%	4.05%	14,931	18,058,369	36.28%	15.7	-	18,058,369	36.28%	15.7	4.05%	14,931	
13	346	Miscellaneous Power Plant Equipment	7,723,919		7,723,919	3.90%	3.98%	6,179	3,282,970	42.50%	14.4	-	3,282,970	42.50%	14.4	3.98%	6,179	
14		Total Other Production	\$ 831,816,656		\$ 831,816,656	4.69%	4.50%	\$ (1,582,638)	\$ 435,856,212	52.40%	10.6	\$ -	\$ 435,856,212	52.40%	10.6	4.50%	\$ (1,582,638)	
15		TOTAL PRODUCTION	\$ 2,166,467,324		\$ 2,166,467,325	4.02%	3.94%	\$ (1,833,949)	\$ 1,252,177,316	57.80%	10.7	\$ -	\$ 1,252,177,316	57.80%	10.7	3.94%	\$ (1,833,949)	
Transmission																		
17	352	Structures and Improvements	45,145,402	0.0%	45,145,402	2.24%	2.24%	-	9,149,302	20.27%	35.6	-	9,149,302	20.27%	35.6	2.24%	-	
18	353	Station Equipment	295,722,832	0.0%	295,722,832	2.54%	2.54%	-	126,454,309	42.76%	22.5	-	126,454,309	42.76%	22.5	2.54%	-	
19	354	Towers and Fixtures	28,587,227	0.0%	28,587,227	2.14%	1.92%	(62,892)	17,713,660	61.96%	19.8	-	17,713,660	61.96%	19.8	1.92%	(62,892)	
20	355	Poles and Attachments	94,388,985	0.0%	94,388,985	3.24%	2.80%	(415,312)	67,853,614	71.89%	10.0	-	67,853,614	71.89%	10.0	2.80%	(415,312)	
21	356	Overhead Conductor and Devices	71,827,128	0.0%	71,827,128	2.51%	2.26%	(179,568)	44,083,708	61.37%	17.1	-	44,083,708	61.37%	17.1	2.26%	(179,568)	
22	357	Underground Conduit	14,683,400	0.0%	14,683,400	1.81%	1.72%	(13,215)	7,501,505	51.09%	28.4	-	7,501,505	51.09%	28.4	1.72%	(13,215)	
23	358	Underground Conductor and Devices	19,292,889	0.0%	19,292,889	2.18%	2.03%	(28,939)	11,324,921	58.70%	20.3	-	11,324,921	58.70%	20.3	2.03%	(28,939)	
24	359	Roads and Trails	5,946,643	0.0%	5,946,643	1.76%	1.76%	-	1,862,501	31.32%	39.0	-	1,862,501	31.32%	39.0	1.76%	-	
25		Total Transmission	\$ 575,594,505		\$ 575,594,506	2.57%	2.45%	\$ (699,926)	\$ 285,943,519	49.68%	20.6	\$ -	\$ 285,943,519	49.68%	20.6	2.45%	\$ (699,926)	
Distribution																		
27	361	Structures and Improvements	31,566,648	0.0%	31,566,648	2.43%	2.43%	-	13,141,550	41.63%	24.0	-	13,141,550	41.63%	24.0	2.43%	-	
28	362	Station Equipment	176,187,487	0.0%	176,187,487	2.57%	2.49%	(140,950)	102,373,566	58.10%	16.8	-	102,373,566	58.10%	16.8	2.49%	(140,950)	
29	364	Poles, Towers, and Fixtures	136,365,866	-5.0%	143,184,159	4.20%	4.10%	(136,366)	81,146,577	59.51%	11.1	-	81,146,577	59.51%	11.1	4.10%	(136,366)	
30	365	Overhead Conductor and Devices	248,344,773	0.0%	248,344,773	4.24%	3.91%	(819,538)	143,643,794	57.84%	10.8	-	143,643,794	57.84%	10.8	3.91%	(819,538)	
31	366	Underground Conduit	279,928,517	0.0%	279,928,517	2.33%	2.33%	-	130,646,138	46.67%	22.9	-	130,646,138	46.67%	22.9	2.33%	-	
32	367	Underground Conductor and Devices	352,470,826	0.0%	352,470,826	2.90%	2.90%	-	164,551,993	46.69%	18.4	-	164,551,993	46.69%	18.4	2.90%	-	
33	368	Line Transformers	428,536,484	0.0%	428,536,484	3.62%	3.62%	-	184,052,403	42.95%	15.8	-	184,052,403	42.95%	15.8	3.62%	-	
34	369	Services	159,770,558	0.0%	159,770,558	4.66%	4.09%	(910,692)	115,817,055	72.49%	6.7	-	115,817,055	72.49%	6.7	4.09%	(910,692)	
35	370	Meters	130,586,769	0.0%	130,586,769	6.68%	6.68%	-	71,131,199	54.47%	6.8	-	71,131,199	54.47%	6.8	6.68%	-	
36	373	Street Light and Signal Systems	117,265,225	0.0%	117,265,225	5.27%	5.27%	-	65,084,386	55.50%	8.4	-	65,084,386	55.50%	8.4	5.27%	-	
37		Total Distribution	\$ 2,061,023,153		\$ 2,067,841,446	3.70%	3.60%	\$ (2,007,546)	\$ 1,071,588,661	51.99%	13.4	\$ -	\$ 1,071,588,661	51.99%	13.4	3.60%	\$ (2,007,546)	
General Plant																		
39	382	Computer Hardware	48,339,146	0.0%	48,339,146	20.00%	20.00%	-	47,510,558	98.29%	0.1	-	47,510,558	98.29%	0.1	20.00%	-	
40	383	Computer Software	94,175,510	0.0%	94,175,510	20.00%	20.00%	-	90,794,452	96.41%	0.2	-	90,794,452	96.41%	0.2	20.00%	-	
41	390	Structures and Improvements	89,417,769	0.0%	89,417,769	3.07%	2.86%	(187,777)	39,570,912	44.25%	19.5	1,000,000	40,570,912	45.37%	19.1	2.86%	(187,777)	
42	391	Office Furniture and Equipment	4,990,887	0.0%	4,990,887	4.00%	4.00%	-	3,818,856	76.52%	5.9	(500,000)	3,318,856	66.50%	8.4	4.00%	-	
43	392	Transportation Equipment	69,996,893	20.0%	55,997,514	7.50%	7.50%	-	43,832,862	62.62%	2.3	-	43,832,862	62.62%	2.3	7.50%	-	
44	393	Stores Equipment	1,292,666	0.0%	1,292,666	5.39%	4.67%	(9,307)	1,084,864	83.92%	3.4	(300,000)	784,864	60.72%	8.4	4.67%	(9,307)	
45	394	Tools, Shop, and Garage Equipment	10,834,451	5.0%	10,292,729	6.69%	6.33%	(39,004)	6,480,624	59.81%	5.6	-	6,480,624	59.81%	5.6	6.33%	(39,004)	
46	395	Laboratory Equipment	4,304,576	0.0%	4,304,576	4.00%	5.56%	67,151	2,637,008	61.26%	7.0	-	2,637,008	61.26%	7.0	5.56%	67,151	
47	396	Mobile Equipment	8,569,709	0.0%	8,569,709	6.33%	5.56%	(91,696)	6,763,984	78.93%	3.8	(200,000)	6,563,984	76.60%	4.2	5.56%	(91,696)	
48	397	Communications Equipment	65,491,574	0.0%	65,491,574	6.66%	6.66%	-	51,676,491	78.91%	3.2	-	51,676,491	78.91%	3.2	6.66%	-	
49	398	Miscellaneous Equipment	3,548,428	0.0%	3,548,428	4.00%	4.00%	-	2,644,592	74.53%	6.4	-	2,644,592	74.53%	6.4	4.00%	-	
50	399	Other Tangible Property	9,475,117	0.0%	9,475,117	8.67%	8.67%	-	821,493	8.67%	10.5	-	821,493	8.67%	10.5	8.67%	-	
51		Total General Plant	\$ 410,436,725		\$ 395,895,625	10.61%	10.55%	\$ (260,633)	\$ 297,636,696	72.52%	2.3	\$ -	\$ 297,636,696	72.52%	2.3	10.55%	\$ (260,633)	
52		TOTAL MASS PROPERTY	\$ 3,047,054,383		\$ 3,039,331,577	4.41%	4.32%	\$ (2,968,105)	\$ 1,655,168,876	54.32%	10.5	\$ -	\$ 1,655,168,876	54.32%	10.5	4.32%	\$ (2,968,105)	
53		GRAND TOTAL	\$ 5,213,521,708		\$ 5,205,798,902	4.25%	4.16%	\$ (4,802,054)	\$ 2,907,346,191	55.77%	10.6	\$ -	\$ 2,907,346,191	55.77%	10.6	4.16%	\$ (4,802,054)	

Table 6-2 Recommended Depreciation Rates – Water Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	
Line No.	Account No.	Description	Dec. 31, 2018 Plant Balance	Net Salvage	Total Cost To Recover	Base Accrual Rate Existing	[H] Indicated	Depreciation Expense Difference	Existing Reserve		Yrs. To Depreciate	Depreciation Reserve		Adjusted Reserve	Adjusted Ratio	Yrs. To Depreciate	Accrual Rate	Change In Expense
									Amount	Ratio		Transfer	Ratio					
1		Source of Supply & Pumping Plant																
2	804.2	Structures & Improvements	25,785,447	0.0%	25,785,447	3.03%	3.03%	-	13,532,152	52.48%	15.7	-	13,532,152	52.48%	15.7	3.03%	-	
3	805.2	Collecting & Impounding Reservoirs	20,847,194	0.0%	20,847,194	2.00%	2.00%	-	7,154,073	34.32%	32.8	2,000,000	9,154,073	43.91%	28.0	2.00%	-	
4	806.2	Lake, River & Other Intakes	90,296	0.0%	90,296	2.50%	2.50%	-	46,902	51.94%	19.2	-	46,902	51.94%	19.2	2.50%	-	
5	807.2	Wells & Springs	38,037,422	0.0%	38,037,422	3.33%	3.33%	-	17,476,452	45.95%	16.2	-	17,476,452	45.95%	16.2	3.33%	-	
7	809.2	Supply Mains	20,869,658	0.0%	20,869,658	2.86%	2.68%	(37,565)	9,667,819	46.32%	20.0	-	9,667,819	46.32%	20.0	2.68%	(37,565)	
8	810.2	Power Generation Equipment	9,411,305	0.0%	9,411,305	5.00%	4.50%	(47,057)	5,591,356	59.41%	9.0	-	5,591,356	59.41%	9.0	4.50%	(47,057)	
9	811.2	Pumping Equipment	34,755,303	0.0%	34,755,303	5.00%	5.00%	-	22,673,129	65.24%	7.0	(2,000,000)	20,673,129	59.48%	8.1	5.00%	-	
10		Total Source of Supply & Pumping Plant	\$ 149,796,626		\$ 149,796,625	3.52%	3.46%	\$ (84,622)	\$ 76,141,883	50.83%	14.2	\$ -	\$ 76,141,883	50.83%	14.2	3.46%	\$ (84,622)	
11		Water Treatment Plant																
12	804.3	Structures & Improvements	97,184,770		97,184,770	4.31%	4.22%	(87,466)	38,445,882	39.56%	14.3	-	38,445,882	39.56%	14.3	4.22%	(87,466)	
13	811.3	Pumping Equipment	9,505,306		9,505,306	5.00%	5.00%	-	4,389,106	46.18%	10.8	-	4,389,106	46.18%	10.8	5.00%	-	
14	820.3	Water Treatment Equipment	46,400,350		46,400,350	3.86%	3.94%	37,120	20,324,426	43.80%	14.3	-	20,324,426	43.80%	14.3	3.94%	37,120	
15	839.3	Other Plant & Miscellaneous Equipment	43,798		43,798	4.00%	4.00%	-	41,539	94.84%	1.3	-	41,539	94.84%	1.3	4.00%	-	
16		Total Water Treatment Plant	\$ 153,134,224		\$ 153,134,224	4.22%	4.18%	\$ (50,346)	\$ 63,200,953	41.27%	14.0	\$ -	\$ 63,200,953	41.27%	14.0	4.18%	\$ (50,346)	
17		Transmission & Distribution Plant																
18	804.4	Structures & Improvements	4,087,780	0.0%	4,087,780	3.03%	2.50%	(21,665)	3,074,382	75.21%	9.9	(1,000,000)	2,074,382	50.75%	19.7	2.50%	(21,665)	
19	811.4	Pumping Equipment	2,789,842	0.0%	2,789,842	5.00%	5.00%	-	117,490	4.21%	19.2	800,000	917,490	32.89%	13.4	5.00%	-	
20	830.4	Distribution Reservoirs & Standpipes	5,931,919	0.0%	5,931,919	3.07%	2.85%	(13,050)	2,799,453	47.19%	18.5	-	2,799,453	47.19%	18.5	2.85%	(13,050)	
21	831.4	Transmission & Distribution Mains	781,704,579	0.0%	781,704,579	2.33%	2.33%	-	247,097,434	31.61%	29.4	500,000	247,597,434	31.67%	29.3	2.33%	-	
22	833.4	Services	128,210,765	0.0%	128,210,765	2.50%	2.50%	-	55,433,022	43.24%	22.7	-	55,433,022	43.24%	22.7	2.50%	-	
23	834.4	Meters & Meter Installations	254,437,858	0.0%	254,437,858	6.67%	6.67%	-	120,235,017	47.26%	7.9	-	120,235,017	47.26%	7.9	6.67%	-	
24	835.4	Hydrants	59,604,454	0.0%	59,604,454	2.22%	2.22%	-	17,932,014	30.09%	31.5	-	17,932,014	30.09%	31.5	2.22%	-	
25	836.4	Backflow Prevention Devices	717,542	0.0%	717,542	6.67%	5.00%	(11,983)	656,158	91.45%	1.7	(300,000)	356,158	49.64%	10.1	5.00%	(11,983)	
26	839.4	Other Plant & Miscellaneous Equipment	7,045	0.0%	7,045	4.00%	4.00%	-	7,045	100.00%	0.0	-	7,045	100.00%	0.0	4.00%	-	
27		Total Transmission & Distribution Plant	\$ 1,237,491,785		\$ 1,237,491,784	3.25%	3.25%	\$ (46,698)	\$ 447,352,015	36.15%	19.7	\$ -	\$ 447,352,015	36.15%	19.7	3.25%	\$ (46,698)	
28		General Plant																
29	804.5	Structures & Improvements	89,638,438	0.0%	89,638,438	3.03%	2.86%	(152,385)	38,556,756	43.01%	19.9	-	38,556,756	43.01%	19.9	2.86%	(152,385)	
30	840.51	Computer Equipment	31,732,252	0.0%	31,732,252	20.00%	20.00%	-	31,464,656	99.16%	0.0	-	31,464,656	99.16%	0.0	20.00%	-	
31	840.52	Office Furniture & Equipment	5,103,572	0.0%	5,103,572	4.00%	4.00%	-	5,050,404	98.96%	0.3	-	5,050,404	98.96%	0.3	4.00%	-	
32	841.5	Transportation Equipment	31,578,242	20.0%	25,262,593	7.50%	7.50%	-	14,249,592	45.12%	4.7	-	14,249,592	45.12%	4.7	7.50%	-	
33	842.5	Stores Equipment	849,709	0.0%	849,709	5.39%	4.67%	(6,118)	768,383	90.43%	2.0	-	768,383	90.43%	2.0	4.67%	(6,118)	
34	843.5	Tools, Shop & Garage Equipment	3,112,614	5.0%	2,956,984	6.69%	6.33%	(11,205)	2,650,800	85.16%	1.6	-	2,650,800	85.16%	1.6	6.33%	(11,205)	
35	844.5	Laboratory Equipment	1,880,908	0.0%	1,880,908	4.00%	5.56%	29,342	685,020	36.42%	11.4	-	685,020	36.42%	11.4	5.56%	29,342	
36	845.5	Power Operated Equipment	4,715,975	0.0%	4,715,975	6.63%	5.56%	(50,461)	2,756,075	58.44%	7.5	-	2,756,075	58.44%	7.5	5.56%	(50,461)	
37	846.5	Communication Equipment	44,379,865	0.0%	44,379,865	6.66%	6.66%	-	32,919,709	74.18%	3.9	-	32,919,709	74.18%	3.9	6.66%	-	
38	847.5	Miscellaneous Equipment	1,460,681	0.0%	1,460,681	4.00%	4.00%	-	949,604	65.01%	8.7	-	949,604	65.01%	8.7	4.00%	-	
39	848.5	Other Tangible Equipment	30,207,882	0.0%	30,207,882	8.67%	8.67%	-	30,207,882	100.00%	0.0	-	30,207,882	100.00%	0.0	8.67%	-	
40		Total General Plant	\$ 244,660,139		\$ 238,188,859	7.32%	7.24%	\$ (190,827)	\$ 160,258,882	65.50%	4.4	\$ -	\$ 160,258,882	65.50%	4.4	7.24%	\$ (190,827)	
41		GRAND TOTAL	\$ 1,785,082,773		\$ 1,778,611,492	3.91%	3.89%	\$ (372,493)	\$ 746,953,733	41.84%	14.8	\$ -	\$ 746,953,733	41.84%	14.8	3.89%	\$ (372,493)	

Table 6-3 Recommended Depreciation Rates – Wastewater Utility

Line	No.	Account Description	[D]		[E]		[F]		[G]		[H]		[I]		[J]		[K]		[L]		[M]		[N]		[O]		[P]		[Q]		[R]	
			Account		Dec. 31, 2018	Net	Total Cost	Base Accrual Rate	Expense	Existing Reserve	Yrs. To	Adjusted	Adjusted	Yrs. To	Accrual	Change In																
			Plant Balance	Salvage	To Recover	Existing	Indicated	Difference	Amount	Ratio	Depreciate	Transfer	Reserve	Ratio	Depreciate	Rate	Expense															
		Collection Plant																														
1	854.2	Structures & Improvements	354,534	0.00%	354,534	3.13%	3.13%	-	103,181	29.10%	22.7	-	103,181	29.10%	22.7	3.13%	-															
2	855.2	Power Generation Equipment	102,592	0.00%	102,592	5.00%	4.50%	(513)	34,163	33.30%	14.8	-	34,163	33.30%	14.8	4.50%	(513)															
3	860.2	Collection Sewers - Force	386,829,533	0.00%	386,829,533	3.33%	3.33%	-	160,858,004	41.58%	17.5	-	160,858,004	41.58%	17.5	3.33%	-															
4	861.2	Collection Sewers - Gravity	1,010,062,614	0.00%	1,010,062,614	2.23%	2.23%	-	399,856,613	39.59%	27.1	-	399,856,613	39.59%	27.1	2.23%	-															
5	862.2	Special Collecting Sewers	270,818	0.00%	270,818	2.50%	2.50%	-	183,942	67.75%	12.9	-	183,942	67.75%	12.9	2.50%	-															
6	863.2	Services to Customers	98,381,471	0.00%	98,381,471	2.63%	2.63%	-	32,053,949	32.58%	25.6	-	32,053,949	32.58%	25.6	2.63%	0															
7	864.2	Flow Measuring Devices	102,479	0.00%	102,479	10.00%	10.00%	-	91,235	89.03%	1.1	-	91,235	89.03%	1.1	10.00%	-															
8	865.2	Flow Measuring Installations	93,017	0.00%	93,017	5.96%	3.33%	(2,446)	93,017	100.00%	0.0	-	93,017	100.00%	0.0	3.33%	(2,446)															
9	889.2	Other Plant & Miscellaneous Equipment	23,952	0.00%	23,952	6.25%	5.00%	(299)	23,952	100.00%	0.0	-	23,952	100.00%	0.0	5.00%	(299)															
10		Total Source of Supply & Pumping Plant	\$ 1,496,221,009	0.00%	\$ 1,496,221,010	2.54%	2.54%	\$ (3,258)	\$ 593,297,607	39.65%	23.7	\$ -	\$ 593,297,607	39.65%	23.7	2.54%	\$ (3,259)															
		System Pumping Plant																														
11		854.3 Structures & Improvements	139,507,296	0.00%	139,507,296	3.13%	3.13%	-	73,556,265	52.73%	15.1	-	73,556,265	52.73%	15.1	3.13%	-															
12	855.3	Power Generation Equipment	28,669,567	0.00%	28,669,567	5.00%	4.50%	(143,348)	10,724,925	37.41%	13.9	-	10,724,925	37.41%	13.9	4.50%	(143,348)															
13	870.3	Receiving Wells	22,873,020	0.00%	22,873,020	3.33%	3.67%	77,768	7,852,115	34.33%	17.9	-	7,852,115	34.33%	17.9	3.67%	77,768															
14	871.3	Pumping Equipment	206,995,669	0.00%	206,995,669	5.00%	5.00%	-	82,097,366	39.66%	12.1	-	82,097,366	39.66%	12.1	5.00%	0															
15	889.3	Other Plant & Miscellaneous Equipment	2,771,750	0.00%	2,771,750	6.25%	5.00%	(34,647)	772,641	27.88%	14.4	-	772,641	27.88%	14.4	5.00%	(34,647)															
16		Total System Pumping Plant	\$ 400,817,302	0.00%	\$ 400,817,302	4.26%	4.24%	\$ (100,227)	\$ 175,003,311	43.66%	13.3	\$ -	\$ 175,003,311	43.66%	13.3	4.24%	\$ (100,226)															
		Treatment & Disposal Plant																														
17	854.4	Structures & Improvements	185,169,415	0.00%	185,169,415	4.12%	4.02%	(185,169)	112,169,489	60.58%	9.8	-	112,169,489	60.58%	9.8	4.02%	(185,169)															
18	855.4	Power Generation Equipment	4,253,181	0.00%	4,253,181	5.84%	4.63%	(51,463)	2,090,901	49.16%	11.0	-	2,090,901	49.16%	11.0	4.63%	(51,463)															
19	880.4	Treatment & Disposal Equipment	297,180,124	0.00%	297,180,124	3.75%	3.67%	(237,744)	171,430,275	57.69%	11.5	-	171,430,275	57.69%	11.5	3.67%	(237,744)															
20	881.4	Plant Sewers	17,260,445	0.00%	17,260,445	3.10%	3.20%	17,260	8,831,094	51.16%	15.3	-	8,831,094	51.16%	15.3	3.20%	17,260															
21	882.4	Outfall Sewer Lines	9,423,484	0.00%	9,423,484	3.57%	3.34%	(21,674)	4,558,076	48.37%	15.5	-	4,558,076	48.37%	15.5	3.34%	(21,674)															
22	889.4	Other Plant & Miscellaneous Equipment	91,929	0.00%	91,929	4.03%	4.00%	(28)	91,929	100.00%	0.0	-	91,929	100.00%	0.0	4.00%	(28)															
23		Total Treatment & Disposal Plant	\$ 513,378,579	0.00%	\$ 513,378,578	3.88%	3.78%	\$ (478,818)	\$ 299,171,765	58.28%	11.0	\$ -	\$ 299,171,765	58.28%	11.0	3.78%	\$ (478,818)															
		Reclaimed Water Plant																														
24	854.5	Structures & Improvements	27,316,662	0.00%	27,316,662	3.13%	3.13%	-	10,775,987	39.45%	19.3	-	10,775,987	39.45%	19.3	3.13%	-															
25	855.5	Power Generation Equipment	345,980	0.00%	345,980	5.00%	4.50%	(1,730)	241,325	69.75%	6.7	-	241,325	69.75%	6.7	4.50%	(1,730)															
26	871.5	Pumping Equipment	6,816,866	0.00%	6,816,866	5.00%	5.00%	-	2,740,885	40.21%	12.0	-	2,740,885	40.21%	12.0	5.00%	(0)															
27	874.5	Reuse Distribution Reservoirs	305,860	0.00%	305,860	2.70%	2.70%	-	188,674	61.69%	14.2	-	188,674	61.69%	14.2	2.70%	-															
28	880.5	Treatment & Disposal Equipment	18,225,367	0.00%	18,225,367	5.56%	5.56%	-	10,526,790	57.76%	7.6	-	10,526,790	57.76%	7.6	5.56%	0															
29	881.5	Reuse Plant Sewers	368,589	0.00%	368,589	5.56%	3.20%	(8,699)	204,569	55.50%	13.9	-	204,569	55.50%	13.9	3.20%	(8,699)															
30		Total Reclaimed Water Plant	\$ 53,379,325	0.00%	\$ 53,379,324	4.22%	4.21%	\$ (10,429)	\$ 24,678,231	46.23%	12.8	\$ -	\$ 24,678,231	46.23%	12.8	4.21%	\$ (10,429)															
		Reclaimed Water Distribution Plant																														
31	854.6	Structures & Improvements	353,681	0.00%	353,681	3.13%	3.13%	-	129,805	36.70%	20.2	-	129,805	36.70%	20.2	3.13%	-															
32	866.6	Reuse Services	3,924,693	0.00%	3,924,693	3.64%	3.64%	-	985,156	25.10%	20.6	-	985,156	25.10%	20.6	3.64%	-															
33	867.6	Reuse Meters & Meter Installations	1,006,498	0.00%	1,006,498	6.67%	6.67%	-	547,582	54.40%	6.8	-	547,582	54.40%	6.8	6.67%	-															
34	871.6	Reuse Pumping Equipment	1,507,975	0.00%	1,507,975	5.00%	5.00%	-	604,641	40.10%	12.0	-	604,641	40.10%	12.0	5.00%	(0)															
35	875.6	Reuse Transmission & Distribution System	77,230,635	0.00%	77,230,635	2.33%	2.33%	-	18,487,966	23.94%	32.6	-	18,487,966	23.94%	32.6	2.33%	-															
36	889.6	Reuse Other Miscellaneous Equipment	17,329	0.00%	17,329	5.56%	5.56%	-	2,746	15.85%	15.1	-	2,746	15.85%	15.1	5.56%	-															
37		Total Reclaimed Water Distribution Plant	\$ 84,040,809	0.00%	\$ 84,040,811	2.50%	2.50%	\$ -	\$ 20,757,896	24.70%	30.2	\$ -	\$ 20,757,896	24.70%	30.2	2.50%	\$ (0)															
		General Plant																														
38	854.7	Structures & Improvements	5,788,116	0.00%	5,788,116	3.13%	2.86%	(15,628)	907,145	15.67%	29.5	-	907,145	15.67%	29.5	2.86%	(15,628)															
39	890.71	Computer Equipment	6,779,450	0.00%	6,779,450	20.00%	20.00%	-	6,779,450	100.00%	0.0	-	6,779,450	100.00%	0.0	20.00%	-															
40	890.72	Office Furniture & Equipment	1,043,747	0.00%	1,043,747	4.00%	4.00%	-	723,880	69.35%	7.7	-	723,880	69.35%	7.7	4.00%	0															
41	891.7	Transportation Equipment	7,973,721	20.00%	6,378,977	7.50%	7.50%	-	3,668,217	46.00%	4.5	-	3,668,217	46.00%	4.5	7.50%	-															
42	892.7	Stores Equipment	25,846	0.00%	25,846	5.39%	4.67%	(186)	12,954	50.12%	10.7	-	12,954	50.12%	10.7	4.67%	(186)															
43	893.7	Tools, Shop & Garage Equipment	3,869,171	5.00%	3,675,713	6.69%	6.33%	(13,929)	2,662,548	68.81%	4.1	-	2,662,548	68.81%	4.1	6.33%	(13,929)															
44	894.7	Laboratory Equipment	1,362,624	0.00%	1,362,624	4.00%	5.56%	21,257	629,697	46.21%	9.7	-	629,697	46.21%	9.7	5.56%	21,257															
45	895.7	Power Operated Equipment	1,616,972	0.00%	1,616,972	6.63%	5.56%	(17,302)	1,283,047	79.35%	3.7	-	1,283,047	79.35%	3.7	5.56%	(17,302)															
46	896.7	Communication Equipment	25,814,377	0.00%	25,814,377	6.66%	6.66%	-	16,415,477	63.59%	5.5	-	16,415,477	63.59%	5.5	6.66%	(0)															
47	897.7	Miscellaneous Equipment	1,130,612	0.00%	1,130,612	4.00%	4.00%	-	905,088	80.05%	5.0	-	905,088	80.05%	5.0	4.00%	(0)															
48	898.7	Other Tangible Equipment	18,940,881	0.00%	18,940,881	0.00%	0.00%	-	18,940,881	100.00%	0.00%	-	18,940,881	100.00%	0.00%	-																
49		Total General Plant	\$ 74,345,518	2.41%	\$ 72,557,315	5.87%	5.83%	\$ (25,788)	\$ 52,928,383	71.19%	4.5	\$ -	\$ 52,928,383	71.19%	4.5	5.83%	\$ (25,788)															
50		GRAND TOTAL	\$ 2,622,182,543	0.07%	\$ 2,620,394,340	3.19%	3.17%	\$ (618,520)	\$ 1,165,837,193	44.46%	17.5	\$ -	\$ 1,165,837,193	44.46%	17.5	3.17%	\$ (618,520)															

Table 6-4 Recommended Depreciation Rates – Chilled Water Utility

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	
Line	No.	Account Description	Dec. 31, 2018 Plant Balance	Net Salvage	Total Cost To Recover	Base Accrual Rate		Depreciation Expense Difference	Existing Reserve		Yrs. To Depreciate	Depreciation Reserve		Adjusted Reserve	Adjusted Ratio	Yrs. To Depreciate	Recommended	
						Existing	Indicated		Amount	Ratio		Transfer	Accrual Rate				Change In Expense	
Chilled Water Plant																		
1	303	CW Intangible Software - DES	-	-	-	10.00%	10.00%	-	-	-	-	-	-	-	-	-	-	-
2	361	CW Structures and Improvements	-	-	-	4.00%	4.00%	-	-	-	-	-	-	-	-	-	-	-
3	362	CW Station Equipment	26,451,691	-	26,451,691	4.19%	4.94%	197,166	10,889,019	41.17%	11.9	-	10,889,019	41.17%	11.9	4.94%	197,166	
4	365	CW Overhead Conductor and Devices	-	-	-	4.00%	4.00%	-	-	-	-	-	-	-	-	-	-	-
5	366	CW UG Conduit	6,510,694	0.00%	6,510,694	4.00%	4.00%	-	2,911,198	44.71%	13.8	-	2,911,198	44.71%	13.8	4.00%	-	
6	369	CW Services	11,657,390	0.00%	11,657,390	3.87%	3.73%	(16,732)	6,172,260	-	-	-	6,172,260	52.95%	12.6	3.73%	(16,732)	
7	370	CW Meters	1,811,376	0.00%	1,811,376	5.00%	5.00%	-	767,328	42.36%	11.5	-	767,328	42.36%	11.5	5.00%	-	
8		Total Distribution	\$ 46,431,152		\$ 46,431,151	4.11%	4.50%	180,434	20,739,805	44.67%	12.3	-	20,739,805	44.67%			180,434	
General Plant																		
10	382	Computer Hardware	607,860	0.00%	607,860	20.00%	20.00%	-	555,119	91.32%	0.4	-	555,119	91.32%	0.4	20.00%	-	
11	383	Computer Software	322,130	0.00%	322,130	20.00%	20.00%	-	322,130	100.00%	0.0	-	322,130	100.00%	0.0	20.00%	-	
12	390	CW Structures and Improvements	7,657,466	0.00%	7,657,466	4.15%	3.24%	(69,343)	4,164,910	54.39%	14.1	-	4,164,910	54.39%	14.1	3.24%	(69,343)	
13	391	CW Office Furniture and Equipment	25,314	0.00%	25,314	4.00%	4.00%	-	14,758	58.30%	10.4	-	14,758	58.30%	10.4	4.00%	-	
14	394	CW Tools, Shop, and Garage Equipment	20,148	0.00%	20,148	6.69%	6.33%	(72)	10,011	49.69%	7.9	-	10,011	49.69%	7.9	6.33%	(72)	
15	396	CW Mobile Equipment	46,917	0.00%	46,917	6.63%	5.56%	(504)	40,126	85.53%	2.6	-	40,126	85.53%	2.6	5.56%	(504)	
16	397	CW Communications Equipment	1,264,578	0.00%	1,264,578	6.66%	6.66%	-	316,786	25.05%	11.3	-	316,786	25.05%	11.3	6.66%	-	
17		Total General Plant	9,944,413		9,944,413	5.97%	5.26%	\$ (69,919)	\$ 5,423,840			-	\$ 5,423,840	54.54%			(69,919)	
18		GRAND TOTAL	\$ 56,375,565	0.00%	\$ 56,375,564	4.44%	4.64%	\$ 110,515	\$ 26,163,645	46.41%	11.6	\$ -	\$ 26,163,645	46.41%	11.6	4.64%	\$ 110,515	

Appendix A – Results of Comparable Utility Survey

Table A-1 – Electric Utility Depreciation Rate Survey Findings

FERC Account Number	Account Name	Baltimore Gas and Electric company	Cleo Power	Duke Energy Carolinas	Duke Energy Progress	Empire District Electric Company	Florida Power & Light	Florida Public Utilities	Georgia Power Company	Gulf Power Company	Indiana Michigan Power Company	Kansas City Power & Light	Northern Illinois Public Service Company	Oklahoma Gas & Electric	Potomac Electric Power Company - DC	Potomac Electric Power Company - MD	Santee Cooper	Tampa Electric Company	JEA (Existing)	Median	Average	1st Quartile	3rd Quartile	Count	
311	Structures & Improvements		2.33%	3.07%	1.95%	3.19%											2.39%		3.51%	2.39%	2.59%	2.33%	3.07%	5	
312	Boiler Plant Equipment		2.66%	2.96%	4.02%	3.51%											2.39%		3.71%	2.96%	3.11%	2.66%	3.51%	5	
314	Turbogenerator Equipment		3.75%	3.95%	3.04%	2.78%													3.38%	3.04%	3.18%	2.78%	3.75%	5	
315	Accessory Electric Equipment		4.23%	3.35%	3.55%	2.45%													2.39%	3.43%	3.35%	3.19%	2.45%	3.55%	5
316	Miscellaneous Plant Equipment		2.26%	4.09%	3.89%	2.89%													2.39%	4.14%	2.89%	3.10%	2.39%	3.89%	5
341	Structures & Improvements		2.51%	2.80%	2.95%	4.05%				4.70%									4.04%	4.10%	3.50%	3.51%	2.84%	4.05%	6
342	Fuel Holders, Producers / Accessories		2.51%	2.62%	2.25%	2.38%				4.70%									4.04%	4.90%	2.57%	3.08%	2.41%	3.69%	6
343	Prime Movers		3.13%	2.87%	3.18%	2.74%				4.70%									4.04%	4.83%	3.16%	3.44%	2.94%	3.83%	6
344	Generators		3.03%	2.80%	2.83%	2.28%				4.70%									4.04%	4.75%	2.93%	3.28%	2.81%	3.79%	6
345	Accessory Electric Equipment		2.51%	3.17%	3.67%	3.00%				4.70%									4.04%	4.02%	3.42%	3.52%	3.04%	3.95%	6
346	Miscellaneous Plant Equipment		2.50%	2.99%	3.46%	2.29%				4.70%									4.04%	3.90%	3.23%	3.33%	2.62%	3.90%	6
352	Structures & Improvements	2.78%	1.78%	1.96%	1.78%	1.82%	1.70%	1.80%	1.45%	1.70%	1.53%	1.71%	2.01%	1.66%	2.44%	3.27%	1.95%	1.70%	2.24%	1.78%	1.94%	1.70%	1.96%	17	
353	Station Equipment	1.97%	1.86%	2.13%	1.90%	2.23%	2.04%	2.60%	1.99%	2.80%	1.85%	1.54%	2.34%	1.78%	1.95%	3.07%	1.27%	2.30%	2.54%	1.99%	2.10%	1.86%	2.30%	17	
354	Towers & Fixtures	4.10%	2.47%	1.69%	1.35%	1.54%	1.11%	2.10%	1.56%	2.00%	1.65%	0.67%	0.46%	1.40%	1.69%	1.91%	1.82%	2.30%	2.14%	1.69%	1.75%	1.40%	2.00%	17	
355	Poles & Fixtures	2.35%	3.75%	2.27%	2.22%	3.51%	2.32%	4.10%	2.25%	4.60%	2.84%	2.34%	1.83%	2.29%	2.63%	2.91%	1.70%	3.60%	3.24%	2.35%	2.79%	2.27%	3.51%	17	
356	Overhead Conductors & Devices	2.14%	2.15%	2.00%	1.56%	1.71%	2.38%	2.50%	2.33%	2.60%	1.94%	1.08%	1.01%	2.29%	1.80%	1.51%	1.64%	2.80%	2.51%	2.00%	1.97%	1.64%	2.33%	17	
357	Underground Conduit	1.80%		1.12%			1.43%		1.26%		1.83%	1.14%	2.27%		1.75%	1.50%		1.80%	1.81%	1.63%	1.59%	1.30%	1.80%	10	
358	Underground Conductors & Devices	2.22%	0.79%	1.39%	2.30%		1.87%		2.11%	1.50%	1.69%	1.30%	3.20%	0.27%	1.93%	1.24%	2.77%	2.30%	2.18%	1.87%	1.79%	1.35%	2.26%	15	
359	Roads & Trails	1.94%	1.33%	1.46%	1.37%		1.33%	1.50%	1.48%	1.90%	1.49%		0.65%		1.87%	1.49%	1.68%	1.50%	1.76%	1.49%	1.50%	1.39%	1.64%	14	
361	Structures & Improvements	1.60%	1.64%	1.94%	1.52%	1.56%	1.75%	1.70%	1.88%	1.90%	1.44%	1.55%	1.59%	1.47%	1.76%	1.21%	1.47%	1.80%	2.43%	1.60%	1.63%	1.52%	1.76%	17	
362	Station Equipment	1.89%	1.67%	2.59%	2.33%	2.19%	1.90%	2.40%	2.70%	3.10%	2.03%	1.75%	2.08%	1.83%	2.54%	1.85%	1.81%	2.40%	2.57%	2.08%	2.18%	1.85%	2.40%	17	
364	Poles, Towers & Fixtures	2.26%	2.71%	1.98%	3.95%	4.00%	3.58%	3.90%	2.33%	4.30%	5.25%	11.76%	2.79%	2.74%	3.69%	2.38%	0.40%	4.40%	4.20%	3.58%	3.67%	2.38%	4.00%	17	
365	Overhead Conductors & Devices	1.91%	1.70%	1.94%	2.15%	3.39%	2.57%	3.40%	3.06%	3.00%	3.26%	2.72%	1.35%	2.66%	3.95%	2.41%	3.38%	3.10%	4.24%	2.72%	2.70%	2.15%	3.26%	17	
366	Underground Conduit	1.75%	2.13%	1.57%	2.26%	2.62%	1.42%	1.80%	1.86%	1.10%	1.84%	2.02%	1.30%	1.81%	2.07%	1.61%	1.87%	1.80%	2.33%	1.81%	1.81%	1.61%	2.02%	17	
367	Underground Conductors & Devices	1.97%	1.83%	2.00%	1.76%	2.58%	1.96%	3.20%	2.18%	2.40%	1.96%	1.71%	1.82%	1.83%	2.19%	1.99%	2.93%	3.00%	2.90%	1.99%	2.19%	1.83%	2.40%	17	
368	Line Transformers	1.69%	2.99%	1.77%	2.54%	2.08%	2.98%	4.00%	2.39%	3.40%	5.00%	1.56%	1.61%	2.82%	3.96%	2.63%	2.99%	4.40%	3.62%	2.92%	2.87%	2.08%	3.40%	17	
369	Services	2.95%	3.50%	1.32%	1.96%	4.44%	2.40%	3.60%	2.04%		3.05%	4.82%	55.00%	1.99%	2.89%	2.55%	2.21%	3.40%	4.66%	2.92%	6.13%	2.17%	3.53%	16	
370	Meters	12.03%	3.08%	7.19%	6.41%	2.37%	2.84%	3.70%	3.92%	7.90%	6.78%	4.96%	7.11%	6.51%	7.10%	10.00%	1.92%	7.20%	6.68%	6.51%	5.94%	3.70%	7.19%	17	
371	Installations on Customers' Premises	7.04%	42.38%	2.16%	1.15%	4.43%	3.33%	4.50%			9.04%	0.03%	4.02%	5.28%	0.70%	-5.58%			4.00%	4.02%	6.04%	1.15%	5.28%	13	
372	Leased Property		2.62%						4.57%											2.55%	3.25%	2.59%	3.60%	3	
373	Street Lighting & Signal Systems	2.75%	2.01%	2.69%	3.87%	3.49%	2.47%	4.90%	3.94%	4.10%	5.57%	4.55%	2.25%	4.20%	3.31%	2.30%	5.69%	5.40%	5.27%	3.87%	3.73%	2.69%	4.55%	17	
382	Computer Hardware	7.39%	20.00%	12.50%	12.50%	10.00%		20.00%				15.94%			10.00%	19.56%		25.00%	20.00%	14.22%	15.29%	10.63%	19.89%	10	
383	Computer Software	7.39%	20.00%	12.50%	12.50%	10.00%		20.00%				15.94%			10.00%	19.56%		25.00%	20.00%	14.22%	15.29%	10.63%	19.89%	10	
390	Structures & Improvements	7.11%	2.83%	3.22%	2.42%	3.57%	1.50%	2.00%	2.11%	2.00%	2.04%	2.79%	1.86%	1.58%	2.66%	13.97%	1.82%	2.30%	3.07%	2.30%	3.28%	2.00%	2.83%	17	
391	Office Furniture & Equipment	5.65%	12.16%	6.67%	5.00%	4.76%		14.29%	11.90%		4.69%	5.00%	4.93%	7.39%	1.99%	6.67%		14.30%	4.00%	6.16%	7.53%	4.95%	10.77%	14	
392	Transportation Equipment		5.00%	5.23%	10.29%	7.15%	5.48%	11.90%				9.42%	6.34%	5.33%			5.42%	5.10%	7.50%	5.48%	6.97%	5.28%	8.29%	11	
393	Stores Equipment	6.38%	2.42%	5.00%	5.00%	2.50%		14.29%			4.11%	4.00%	5.23%	4.00%	4.00%	4.67%		14.30%	5.39%	4.67%	5.84%	4.00%	5.23%	13	
394	Tools, Shop & Garage Equipment	4.94%	3.31%	5.00%	5.00%	5.00%		14.29%			6.70%	4.08%	3.71%	4.00%	4.00%	6.67%		14.30%	6.69%	5.00%	6.23%	4.00%	6.67%	13	
395	Laboratory Equipment	16.03%	2.37%	6.67%	6.67%	2.17%		14.29%			5.47%	4.08%	4.15%	5.00%	6.67%	5.70%		14.30%	4.00%	5.70%	7.20%	4.15%	6.67%	13	
396	Power Operated Equipment		2.01%	6.54%	5.99%	5.65%	7.05%	4.40%	16.44%	1.40%	4.35%	8.39%		4.87%			10.09%	14.30%	6.63%	5.99%	7.04%	4.40%	8.39%	13	
397	Communications Equipment	3.11%	6.16%	10.00%	5.00%	4.76%	1.95%	20.00%	4.01%	5.20%	3.83%	4.62%	10.73%	10.00%	6.63%	14.51%		14.30%	6.66%	5.68%	7.80%	4.47%	10.18%	16	
398	Miscellaneous Equipment	5.08%	4.09%	5.00%	5.00%	3.13%		14.29%	5.67%		3.15%		5.29%	5.00%	5.00%	6.65%		14.30%	4.00%	5.00%	6.28%	5.00%	5.67%	13	
399	Other Tangible Property							20.00%											8.67%	20.00%	20.00%	20.00%	20.00%	1	

Table A-2 – Water Utility Depreciation Rate Survey Findings

JEA Account Number	NARUC Account Number	Account Name	Lake Utility Services Inc. - FL	Lighthouse Utilities Company, Inc.	Marion Utilities, Inc. - FL	North Beach Utilities, Inc.	Parkland Utilities, Inc.	Peoples Water Service Company of Florida, Inc.	Royal Utility Company	Southlake Utilities, Inc.	Sunshine Utilities of Central Florida, Inc.	Tradewinds Utilities, Inc.	Utilities, Inc. of Florida	Water Management Services, Inc.	JEA (Existing)	Median	Average	1st Quartile	3rd Quartile	Count
	301	Organization					2.50%					25.00%	2.50%			2.50%	10.00%	2.50%	13.75%	3
	302	Franchises	2.50%						2.50%				2.50%			2.50%	2.50%	2.50%	2.50%	3
804.2	304	Structure and Improvements	3.13%	3.03%	3.03%	3.57%	3.70%	3.13%	3.03%	3.03%	3.03%		3.13%	3.03%	3.03%	3.17%	3.03%	3.13%	11	
805.2	305	Collecting and Impounding Reservoirs	2.00%										2.00%			2.00%	2.00%	2.00%	2.00%	2
806.2	306	Lake, River and Other Intakes	2.50%										2.50%		2.50%	2.50%	2.50%	2.50%	2	
807.2	307	Wells and Springs	3.33%	3.33%	3.33%	3.70%	3.70%	3.33%	5.00%	3.33%	3.33%	6.67%	3.33%	3.33%	3.33%	3.33%	3.81%	3.33%	3.70%	12
808.2	308	Infiltration Galleries and Tunnels	2.50%												2.50%	2.50%	2.50%	2.50%	2.50%	1
809.2	309	Supply Mains	2.86%	2.86%		3.13%	5.88%		2.86%		2.86%	3.13%	2.86%	2.86%	2.86%	2.86%	3.26%	2.86%	3.13%	9
810.2	310	Power Generation Equipment	5.00%	4.55%		5.88%			5.00%	5.00%	6.67%	6.67%	5.00%	5.00%	5.00%	5.00%	5.42%	5.00%	5.88%	9
811.2	311	Pumping Equipment	5.00%	5.00%	5.00%	5.88%	6.67%	5.00%	5.00%	5.00%	5.00%	6.67%	5.00%	5.00%	5.00%	5.00%	5.35%	5.00%	5.22%	12
820.3	320	Water Treatment Equipment	4.55%	4.55%	4.55%	5.88%	5.88%	4.55%	4.55%	4.55%	4.55%	14.29%	4.55%	4.55%	3.86%	4.55%	5.58%	4.55%	4.88%	12
830.4	330	Distribution Reservoirs and Standpipes	2.70%	2.70%	2.70%	3.03%		2.70%	2.70%	2.70%	4.55%	3.33%	2.70%	2.70%	3.07%	2.70%	2.96%	2.70%	2.87%	11
831.4	331	Transmission and Distribution Mains	2.33%	3.03%	2.33%	2.63%	2.63%	2.33%	2.22%	2.33%	2.33%	2.50%	2.33%	2.33%	2.33%	2.33%	2.44%	2.33%	2.53%	12
833.4	333	Services	2.50%	2.50%	2.50%	2.86%	2.86%	2.50%	2.50%	2.50%	2.33%	2.86%	2.50%	2.50%	2.50%	2.50%	2.58%	2.50%	2.59%	12
834.4	334	Meters and Meter Installations	5.00%	5.00%	5.00%	5.88%	5.88%	5.00%	5.00%	5.00%	5.00%	5.88%	5.00%	5.00%	6.67%	5.00%	5.22%	5.00%	5.22%	12
835.4	335	Hydrants	2.22%	5.00%		2.50%	2.50%	2.22%	2.22%	2.22%	2.22%	5.00%	2.22%	2.22%	2.22%	2.22%	2.78%	2.22%	2.50%	11
836.4	336	Backflow Prevention Devices	6.67%					6.67%					6.67%		6.67%	6.67%	6.67%	6.67%	6.67%	3
839.2	339	Other Plant / Miscellaneous Equipment	5.56%	5.00%			4.00%	5.56%	4.00%	4.00%	4.00%	16.67%	5.56%		4.00%	5.00%	6.04%	4.00%	5.56%	9
840.51	340	Office Furniture and Equipment - Computers													20.00%					0
840.52	340	Office Furniture and Equipment	6.67%		6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	6.67%	16.67%	6.67%	6.67%	4.00%	6.67%	7.58%	6.67%	6.67%	11
841.5	341	Transportation Equipment	20.00%	16.67%	16.67%	16.67%	16.67%	16.67%	16.67%		16.67%	16.67%	20.00%	16.67%	7.50%	16.67%	17.28%	16.67%	16.67%	11
842.5	342	Stores Equipment	5.56%					5.56%			5.00%		5.56%		5.39%	5.56%	5.42%	5.42%	5.56%	4
843.5	343	Tools, Shop and Garage Equipment	6.25%	5.00%	6.25%	7.14%	6.25%	6.25%	6.25%	6.25%	6.25%	6.67%	6.25%	6.25%	6.69%	6.25%	6.26%	6.25%	6.25%	12
844.5	344	Laboratory Equipment	6.67%					6.67%	6.67%		10.00%		6.67%		4.00%	6.67%	7.34%	6.67%	6.67%	5
845.5	345	Power Operated Equipment	8.33%	5.00%		10.00%		8.33%		8.33%	8.33%		8.33%	8.33%	6.63%	8.33%	8.12%	8.33%	8.33%	8
846.5	346	Communication Equipment	10.00%		10.00%			10.00%			10.00%		10.00%	10.00%	6.66%	10.00%	10.00%	10.00%	10.00%	6
847.5	347	Miscellaneous Equipment	6.67%						6.67%		6.67%		6.67%		4.00%	6.67%	6.67%	6.67%	6.67%	4
848.5	348	Other Tangible Plant	10.00%	20.00%	10.00%	10.00%			10.00%	10.00%			10.00%		8.67%	10.00%	11.43%	10.00%	10.00%	7

*Data from the Florida Public Service Commission Website 2018 Annual Reports

Table A-3 – Wastewater Utility Depreciation Rate Survey Findings

JEA Account Number	NARUC Account Number	Account Name	Forest Utilities, Inc.	Lake Utility Services INC	Marion Utilities, Inc.	Mid County Services Inc	North Beach Utilities, Inc.	North Peninsula Utility Corporation	Parkland Utilities, Inc.	Royal Utility Company	Southlake Utilities, Inc.	Tradewinds Utilities, Inc.	Utilities, Inc. of Florida	JEA (Existing)	Median	Average	1st Qaurtile	3rd Quartile	Count
851.1	351	Organization							2.50%			3.45%	2.00%	33.33%	2.50%	2.65%	2.25%	2.98%	3
852.1	352	Franchises	2.50%	2.50%		2.50%	2.50%					33.33%	2.50%	33.33%	2.50%	7.64%	2.50%	2.50%	6
854.2	354	Structures and Improvements	2.86%	3.13%	3.03%	3.13%	3.70%	3.70%	3.70%	2.86%	3.13%	3.70%	3.13%	3.13%	3.13%	3.28%	3.08%	3.70%	11
855.2	355	Power Generation Equipment	5.00%	5.00%		5.00%				5.00%			5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5
860.2	360	Collection Sewers - Force	3.33%	3.33%	3.33%	3.33%	3.70%	3.70%	3.70%	3.33%	3.33%	3.70%	3.33%	3.33%	3.33%	3.46%	3.33%	3.70%	11
861.2	361	Collection Sewers - Gravity	2.86%	2.22%		2.22%		2.50%	2.50%	2.22%	2.22%	2.50%	2.22%	2.23%	2.22%	2.38%	2.22%	2.50%	9
862.2	362	Special Collecting Structures	4.00%	2.50%	2.70%	2.50%			4.00%		2.50%	2.70%	2.50%	2.50%	2.60%	2.93%	2.50%	3.03%	8
863.2	363	Services to Customers	2.63%	2.63%	2.63%	2.63%	2.86%	2.86%	2.86%		2.63%	2.86%	2.63%	2.63%	2.63%	2.72%	2.63%	2.86%	10
864.2	364	Flow Measuring Devices	20.00%	20.00%		20.00%			20.00%	20.00%		5.88%	20.00%	10.00%	20.00%	17.98%	20.00%	20.00%	7
865.2	365	Flow Measuring Installations		2.63%		2.63%							2.63%	5.96%	2.63%	2.63%	2.63%	2.63%	3
866.6	366	Reuse Services		2.50%		2.50%							2.50%	3.64%	2.50%	2.50%	2.50%	2.50%	3
867.6	367	Reuse Meters and Meter Installations		5.00%		5.00%							5.00%	6.67%	5.00%	5.00%	5.00%	5.00%	3
870.3	370	Receiving Wells		3.33%	3.33%	3.33%	4.00%	4.00%	5.56%			5.56%	3.33%	3.33%	3.67%	4.06%	3.33%	4.39%	8
871.3	371	Pumping Equipment	5.56%	5.56%	5.00%	5.56%	6.67%	5.88%		5.56%	4.00%		5.56%	5.00%	5.56%	5.48%	5.56%	5.56%	9
874.5	374	Reuse Distribution Reservoirs	2.70%											2.70%	2.70%	2.70%	2.70%	2.70%	1
875.6	375	Reuse Transmission and Distribution System	4.55%	2.33%		2.33%							2.33%	2.33%	2.33%	2.89%	2.33%	2.89%	4
880.4	380	Treatment and Disposal Equipment	3.70%	5.56%	5.56%	5.56%	6.67%	6.67%			5.56%	6.67%	5.56%	3.75%	5.56%	5.72%	5.56%	6.67%	9
881.4	381	Plant Sewers		2.86%		2.86%							2.86%	3.10%	2.86%	2.86%	2.86%	2.86%	3
882.4	382	Outfall Sewer Lines		3.33%	3.33%	3.33%						6.67%	3.33%	3.57%	3.33%	4.00%	3.33%	3.33%	5
889.2	389	Other Plant / Miscellaneous Equipment		5.56%	5.56%	5.56%	10.00%		6.67%	5.56%	5.56%	2.86%	10.00%	6.25%	5.56%	6.37%	5.56%	6.67%	9
890.71	390	Office Furniture and Equipment - Computers												20.00%					
890.72	390	Office Furniture and Equipment	16.67%	6.67%		6.67%	6.67%			6.67%	6.67%	16.67%	6.67%	4.00%	6.67%	9.17%	6.67%	9.17%	8
891.7	391	Transportation Equipment	16.67%	20.00%		20.00%	16.67%		16.67%	16.67%			20.00%	7.50%	16.67%	18.10%	16.67%	20.00%	7
892.7	392	Stores Equipment		5.56%		5.56%							5.56%	5.39%	5.56%	5.56%	5.56%	5.56%	3
893.7	393	Tools, Shop and Garage Equipment		6.25%		6.25%	7.14%		6.25%	6.25%		6.67%	6.25%	6.69%	6.25%	6.44%	6.25%	6.46%	7
894.7	394	Laboratory Equipment	6.67%	6.67%		6.67%				6.67%			6.67%	4.00%	6.67%	6.67%	6.67%	6.67%	5
895.7	395	Power Operated Equipment	6.67%	8.33%		8.33%	10.00%				8.33%	10.00%	8.33%	6.63%	8.33%	8.57%	8.33%	9.17%	7
896.7	396	Communication Equipment		10.00%		10.00%							10.00%	6.66%	10.00%	10.00%	10.00%	10.00%	3
897.7	397	Miscellaneous Equipment		6.67%		6.67%				6.67%			6.67%	4.00%	6.67%	6.67%	6.67%	6.67%	4
898.7	398	Other Tangible Plant		10.00%	3.03%	10.00%				10.00%	10.00%		10.00%	0.00%	10.00%	8.84%	10.00%	10.00%	6

*Data from the Florida Public Service Commission Website 2018 Annual Reports

Table A-4 – Chilled Water Utility Depreciation Rate Survey Findings

Account Number	Chilled Water Account Name	Orlando Utilities Commission (FL)	Citizen's Thermal (IN)	JEA (Existing)
303	CW Intangible Software - DES	20.00%		10.00%
361	CW Structures and Improvements	2.84%	1.79%	4.00%
362	CW Station Equipment	5.00%	2.13%	4.19%
365	CW Overhead Conductor and Devices			4.00%
366	CW UG Conduit	2.64%	2.92%	4.00%
369	CW Services	2.61%	3.19%	3.87%
370	CW Meters	5.00%	2.97%	5.00%
	Total Distribution			
	General Plant			
382	Computer Hardware	20.00%	20.00%	20.00%
383	Computer Software	20.00%	20.00%	20.00%
390	CW Structures and Improvements	4.62%		4.15%
391	CW Office Furniture and Equipment	14.29%	4.00%	4.00%
394	CW Tools, Shop, and Garage Equipment		3.87%	6.69%
396	CW Mobile Equipment	20.00%	3.27%	6.63%
397	CW Communications Equipment	33.33%	6.39%	6.66%
	Total General Plant			