### COMMONWEALTH OF KENTUCKY BEFORE THE PUBLIC SERVICE COMMISSION

In	the	M	latte	er	of:
----	-----	---	-------	----	-----

ELECTRONIC APPLICATION OF BLUEGRASS	)	
WATER UTILITY OPERATING COMPANY, LLC	)	
FOR ADJUSTMENT OF SEWAGE RATES	)	CASE NO. 2022-00432

# BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

Bluegrass Water Utility Operating Company, LLC, ("Bluegrass Water" or the "Company") by counsel, files its responses to the Commission Staff's Supplemental Request for Information, issued in the above-captioned case on April 28, 2023.

FILED: May 12, 2023

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-1:** Refer to the Direct Testimony of Dylan W. D'Ascendis (D'Ascendis

Direct Testimony). Provide all exhibits and work papers in Excel spreadsheet format with all

formulas, rows, and columns fully accessible and unprotected.

**RESPONSE:** Please see attached hereto Exhibit PSC 2-1 (Part 1 of 4), which is a

copy of all of Mr. D'Ascendis' exhibits and workpapers that were prepared utilizing Excel.

Please also see attached hereto as Exhibit PSC 2-1 (Parts 2 – 4 of 4), which are exhibits and

workpapers that were not prepared utilizing Excel.

Witness:

Dylan D'Ascendis

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-2:** Refer to the D'Ascendis Direct Testimony, Table 1, page 3 and Table 3, page 30.

- a. Describe the frequency that Bluegrass Water goes to the market for additional long-term debt, when Bluegrass Water incurred its long-term debt at a rate of 6.80 percent and when it expects to go back to the market for additional long-term debt.
- b. Using the same time period reflected in Tables 1 and 3, explain what cost of long-term debt Bluegrass Water's other regulated affiliates have incurred and when that debt was incurred.
- c. Explain why Bluegrass Water used a 5.98 expected bond yield instead of 6.80 percent embedded cost of long-term debt in the risk premium model.

RESPONSE: (a) Bluegrass Water plans to continue to evaluate the debt market and the company's ability to source debt for use in its future capital structure. At this time, there is no formal timeline as to when Bluegrass Water will go back to the market. The company closed on its current debt on December 22, 2022.

- (b) Two of Bluegrass Water's regulated affiliates have debt instruments which were also obtained in December 2022. The weighted average interest is 6.4%.
- (c) The goal of a cost of equity study is to ascertain the marginal cost of equity (i.e., cost of equity at the time of the study). Since the Company's long-term debt cost rate is an embedded cost (i.e., a weighted average cost over time), utilizing the 6.80 long-term debt rate in the risk premium model would not result in an accurate representation of expected debt costs.

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

Witness: Brent Thies as to (a) and (b)

Dylan D'Ascendis as to (c)

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-3:** Refer to the D'Ascendis Direct Testimony, pages 9–11. Explain the specific business risks that are associated with Bluegrass Water.

RESPONSE: Recognizing that the pending rate case is confined solely to wastewater services, Bluegrass Water is answering this data request from that viewpoint. In general, Bluegrass Water references the Direct Testimony of Josiah Cox, Jacob Freeman, and Dylan D'Ascendis for a discussion of the business risks faced by Bluegrass Water.

At pages 9-12 of his Direct Testimony, Mr. D'Ascendis provides a description of the business risks faced by the wastewater industry in general. Bluegrass Water believes that it is exposed to each of these general business risks identified by Mr. D'Ascendis.

In addition, Bluegrass Water faces business risks beyond those faced by the industry in general. For instance, as Mr. D'Ascendis discusses at pages 48-49, unlike most other wastewater utilities, Bluegrass Water purchases "troubled" systems that are typically in a state of non-compliance with environmental permitting limits. As reflected in Mr. Freeman's testimony, to address this risk Bluegrass Water seeks to engage the environmental regulator, through Agreed Orders, to address a timeline for bringing these systems into compliance. There is a substantial business risk associated with relying on the environmental regulator to continue to allow a grace period for bringing such systems into compliance especially in the recent era of continued industrial equipment supply chain issues. Some wastewater equipment like large electrical panels and variable frequency drives have 55 week lead times compared to 16 weeks pre-pandemic. These supply chain issues slow project development and puts Bluegrass Water in potential violation of agreed orders.

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

In addition, at the time that it purchases these systems, Bluegrass Water adopts the rates that are currently in place for those systems. As Mr. Cox states, in some instances, these systems have not sought rate increases in years or even decades. As such, these adopted rates do not come close to reflecting current operating and compliance costs, including recent inflation-driven cost increases. As an example, a wastewater system with inoperable or missing blowers and aerators will not utilize much electricity. Similarly, a system with a faulty disinfection system will not utilize any or very much disinfection agent. Upon acquisition, Bluegrass Water will install such blowers / aerators and will begin dosing with proper amounts of disinfection chemicals. As such, these operation expenses are immediately increased well beyond the amounts that are included in the adopted rates. As a result of the inadequate rates and the increased operating expenses for these systems, Bluegrass Water is immediately exposed to operating losses that will continue until rates are increased. This is a substantial business risk.

In addition, Bluegrass Water is exposed to regulatory lag associated with capital improvements. For instance, in many cases, the systems acquired by Bluegrass Water were built to treat permitted limits existing at the time of construction. As new pollutants are identified and / or permitted limits become increasingly stricter, these systems are incapable of meeting permitted limits with the processes existing at that treatment plant. For this reason, as explained by Mr. Freeman, Bluegrass Water has had to invest capital for process improvements beyond those existing at the plant. For instance, Mr. Freeman discusses the MBBR's planned for Persimmon Ridge, Delaplain, and Herrington Haven. Other types of

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

capital improvements include, but are not limited to, solids handling at Delaplain and a

peroxyacetic acid treatment system at Herrington Haven.

These operating losses and capital improvement regulatory lag are increasingly risky

when one recognizes Bluegrass Water's small size. As Mr. D'Ascendis explains at pages 49-

53 of his testimony, Bluegrass Water's "smaller size relative to the Utility Proxy Group

companies indicates greater relative business risk for the Company because, all else being

equal, size has a material bearing on risk."

A further risk particular to Bluegrass is the concentration of revenue from a small

group of commercial customers in a single service area. Bluegrass' commercial customers

are concentrated almost exclusively in the Delaplain service area. In fact, a group of only 5

commercial customers accounts for 10% of the Company's revenue. Any economic or other

event affecting that service area and those specific customers could significantly impact the

revenues of the Company. Any efforts to mitigate this risk through cost allocation or rate

design are hampered by the fact that the Delaplain service area also provides service to a

significant number of residential customers in addition to the commercial customers.

Witness:

Josiah Cox

Bluegrass Water's Response to PSC 2-3

Page 3 of 3

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-4:** Refer to the D'Ascendis Direct Testimony, pages 12–13. Explain

the specific financial risks that are associated with Bluegrass Water.

RESPONSE: As explained in Mr. D'Ascendis' Direct Testimony pages 12-13,

financial risk is the additional risk created by the introduction of debt and preferred stock

into the capital structure. Bluegrass Water's actual capital structure consists of 38.84% long-

term debt and 61.16% common equity, as shown on page 1 of Exhibit DWD-1. Therefore,

Bluegrass Water has financial risk because there is debt in its capital structure. In addition

to the above, Bluegrass Water's ability to access capital is exacerbated by its business risks

explained in Response to PSC Request 2-3.

Witness:

Dylan D'Ascendis

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-5:** Refer to the D'Ascendis Direct Testimony, page 13. Provide a list

of Bluegrass Water's regulated affiliates, including the state where each regulated affiliate is

located, and explain whether size adjustments were made by the state regulatory authority in

authorizing the affiliate's rate of return. If size adjustments were made, explain what size

adjustment was used in the rate of return calculation approved by the state regulatory authority.

RESPONSE: A list of the regulated affiliates, and the state of operation, can be found

in Exhibit 1 to the Direct Testimony of Josiah Cox. To date, rate cases have been filed for

affiliates in Louisiana, Missouri, and Mississippi. Each of those rate cases was resolved

through a black-box settlement. Therefore, the final commission decision does not address

a size adjustment.

Witness:

**Brent Thies** 

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-6:** Refer to the D'Ascendis Direct Testimony, page 17 and to Exhibit

DWD-3, page 1. Provide Bluegrass Water's percentage of total operating income and total assets

attributable to regulated water or wastewater operations.

**RESPONSE:** 100% of Bluegrass Water's operating income and 100% of Bluegrass

Water's total assets are attributable to regulated water and wastewater operations.

**Witness:** Brent Thies

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-7:** Refer to the D'Ascendis Direct Testimony, page 33.

- a. Provide support for the statement that total returns are the sum of capital appreciation and income returns.
- b. Explain why the average of the median estimated values dividend yield for common stocks was used in calculating the prospective market return, as opposed to average dividend yield values.

RESPONSE: (a) The statement is supported by Exhibit PSC 2-7 attached hereto, Kroll 2022 SBBI Yearbook, at 200-201. Specifically, Kroll notes: "The total return comprises three return components: the income return, the capital appreciation return, and the reinvestment return. The income return is defined as the portion of the total return that results from a periodic cash flow or, in this case, the bond coupon payment. The capital appreciation return results from the price change of a bond over a specific period. Bond prices generally change in reaction to unexpected fluctuations in yields. Reinvestment return is the return on a given month's investment income when reinvested into the same asset class in the subsequent months of the year. The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return."

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

b. Please see D'Ascendis Workpaper 23 - Supporting Data from Value Line

Summary & Index, which is included within Exhibit PSC 2-1 (Part 4 of 4). As shown, Value

Line only provides the median dividend yield for common stocks. As a result, the median

was used instead of the average because the median is the only data published by Value Line.

Witness:

Dylan D'Ascendis

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-8:** Refer to the D'Ascendis Direct Testimony, Exhibit DWD-2, page

2. Also refer to D'Ascendis Direct Testimony, Table 1, page 3. Provide the 2022 capital structures

for the proxy group, including the average of the 2022 proxy group's long-term debt, preferred

stock, and common equity.

RESPONSE: Please see the attached Exhibit PSC 2-8 - Proxy Group Capital

Structures 2022 Update.

Witness:

Dylan D'Ascendis

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-9:** Explain in specific detail any circumstances that have changed since Bluegrass Water's awarded capital structure in Case No. 2020-00290.<sup>1</sup>

RESPONSE: Since Bluegrass Water's capital structure was awarded in Case No. 2020-00290, Bluegrass Water has incurred commercial debt. At the time of 2020-00290 the company had no commercial debt.

**Witness:** Brent Thies

<sup>&</sup>lt;sup>1</sup> Case No. 2020-00290, Electronic Application of Bluegrass Water Utility Operating Company, LLC for an Adjustment of Rates and Approval of Construction (Ky. PSC Sept. 30, 2020).

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REOUEST NO. 2-10:** Refer to the D'Ascendis Direct Testimony, Exhibit DWD-4, page 1.

- Explain why the average of the mean and median Beta was used in applying the a. discounted cash flow (DCF) model to the proxy group and explain whether this is common practice for ROE analysis.
- b. Provide the most recent ROE awards and the date of each award for each proxy group utility's operating subsidiary.

This discovery request is unclear. Betas were not used in **RESPONSE:** (a) calculation of the DCF model.

- Please see below for details on Cost of Capital proceedings for each utility **(b)** company in the proxy group. Please also see Exhibit PSC 2-10(b).
  - **AWR:** 
    - GSWC's last authorized rate of return on rate base of 7.91% remained applicable through December 31, 2021." (2021 10-K p. 30)
  - **AWK:** 
    - Several jurisdictions. (see, e.g., 2021 10-K p. 57-58)
  - **CWT:** 
    - "In April of 2017, Cal Water, along with three other water utilities, filed an application to adopt a new cost of capital and capital structure for 2018. On March 22, 2018, the CPUC adopted a revised decision in the cost of capital proceeding for Cal Water and three

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

other water utilities for the years 2018, 2019, and 2020, establishing for Cal Water a 9.20% return on equity and a 5.51% cost of debt, with a capital structure of 46.60% long-term debt and 53.40% common equity, and an authorized return on rate base of 7.48%, compared with Cal Water's prior return on equity of 9.43%, cost of debt of 6.24%, and authorized return on rate base of 7.94%." (2019 10-K p. 10)

• "On May 3, 2021, Cal Water filed its required application with the CPUC to review its cost of capital for 2022 through 2024. Cal Water requested a return on equity of 10.35%, a cost of debt of 4.23%, and a 53.4% equity capital structure." (2021 10-K p. 10)

#### WTRG:

 Several jurisdictions. (see, e.g., 2021 10-K p. 120, 2020 10-K p. 120-121)

#### MSEX:

• In December 2021, Middlesex's petition to the NJBPU seeking permission to increase its base water rates was concluded, based on a negotiated settlement, resulting in an expected increase in annual operating revenues of \$27.7 million. The approved tariff rates were designed to recover increased operating costs as well as a return on

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

invested capital of \$513.5 million, based on an authorized return on common equity of 9.6%." (2021 10-K p. 7)

- SJW:
  - CA: 8.90% ROE; CT: 9.00% ROE; TX: 10.88% ROE; MEL 9.81% ROE. (2021 10-K p. 4-5)

Witness: Dylan D'Ascendis

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-11:** Refer to the D'Ascendis Direct Testimony, Exhibit DWD-5,

page 8, footnotes 4–6.

a. Explain the basis for analyzing a larger group of companies in footnote 4 (1,700

companies) and narrowing the analysis to S&P 500 companies in footnotes 5 and 6.

b. Footnote 5 is incomplete. Provide the expected equity that is being subtracted from

the average consensus forecast of Aaa corporate bonds.

RESPONSE: (a) The final equity risk premium is an equal weight average of six

equity risk premiums from Kroll, Value Line, and Bloomberg. These six equity risk

premiums are all calculated using different methods, as explained in Mr. D'Ascendis' Direct

Testimony, pages 30-35.

(b) Footnote 5 of DWD 5, page 8 should read: "Using data from Value Line for

the S&P 500, an expected total return of 15.52% was derived based upon expected dividend

yields and long-term earnings growth estimates as a proxy for capital appreciation.

Subtracting the average consensus forecast of Aaa corporate bonds of 5.05% results in an

expected equity risk premium of 10.47%."

Witness:

Dylan D'Ascendis

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-12:** Refer to the D'Ascendis Direct Testimony, Exhibit DWD-6, page 1.

- a. Explain the difference between Value Line and Bloomberg Betas other than the time periods used in their respective derivation.
- b. Explain why short-term volatility is avoided in the derivation of the Value Line Beta but not in the Bloomberg Beta.
- c. Explain why adjusted Yahoo! Finance Beta values were used in some analyses but not in the CAPM and risk premium analyses.
- d. Provide an update to the CAPM analysis that includes Yahoo! Finance adjusted Betas.

RESPONSE: (a) Betas from Value Line and Bloomberg are calculated by a regression analysis of the relationship between weekly percentage changes in the price of a stock (dependent variable) and the weekly percentage changes in the overall market (independent variable). Value Line uses the NYSE Index as the independent variable, and Bloomberg uses the S&P 500 Index as the independent variable.

(b) Short-term volatility is not avoided in the derivation of either the Value Line Beta or the Bloomberg Beta. Generally, betas calculated using a two-year horizon (Bloomberg "default" beta) may more readily reflect significant changes in risk that occur over a short period than a beta coefficient calculated over a five-year horizon (Value Line calculation), but the additional time period does not avoid short-term volatility. Given that both two-year and five-year Beta coefficients are considered by investors (Bloomberg and

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

Value Line), including both sources provide valid measures of the systematic risk of a firm and reflects the nuances of different investors' expectations.

- (c) This discovery request is unclear. Mr. D'Ascendis did not use Yahoo! Finance Beta values in any of his analysis.
- (d) Please see attached Excel file Exhibit PSC 2-12(d) CAPM Update with Yahoo Betas. Mr. D'Ascendis did not have access to Yahoo! Finance beta values as of January 13, 2023, so he used the beta calculation tool from Bloomberg Professional Services to calculate the unadjusted beta values consistent with Yahoo! Finance's approach (i.e., monthly covariance of returns between the company and the S&P 500 for a five-year period). Data was used as of January 13, 2023 to be consistent with the analysis presented with the Direct Testimony of Dylan D'Ascendis. As it relates to the use of Yahoo! Finance betas, and/or betas calculated consistent with Yahoo! Finance's approach, Mr. D'Asecndis notes Yahoo! Finance betas are not suitable for cost of capital purposes as they are unadjusted, or "raw" betas, which are not forward-looking and are calculated on a monthly, instead of weekly, basis, which does not adequately reflect changes in market data.

#### 1. Unadjusted Betas

Betas are measured using an Ordinary Least Squares ("OLS") regression, in which the dependent variable is the return of the subject security, and the independent variable is the return on the market as measured by a given index (*Value Line*, for example, uses the New York Stock Exchange Index). Beta is represented by the slope term of the regression

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

estimates. Intuitively, beta measures the change in the subject company's returns relative to the change in the market return.

The resulting beta is considered "raw", or unadjusted. Unadjusted betas are historical in nature as they use historical market data. Blume studied the stability of beta over time and found that "[n]o economic variable including the beta coefficient is constant over time."<sup>2</sup> Consistent with that finding, Blume observed a tendency of raw betas to change gradually over time. Blume further stated:

...there is obviously some tendency for the estimated values of the risk parameter [beta] to change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the future values, and furthermore the values of the risk coefficients as measured by the estimates of  $\beta_1$  tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios. (emphasis added)<sup>3</sup>

Blume proposed a correction for this tendency, also known as "regression bias," which is inherent in the calculation of all betas. He stated:

In so far as the rate of regression towards the mean is stationary over time, one can in principle correct for this tendency in forming one's assessments.

\* \* \*

For individual securities as well as portfolios of two or more securities, the assessments adjusted for the historical rate of regression are more

Marshal E. Blume, On the Assessment of Risk, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

Marshal E. Blume, *On the Assessment of Risk*, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

accurate than the unadjusted or naïve assessments. Thus, an improvement in the accuracy of one's assessments of risk can be obtained by adjusting for the historical rate of regression even though the rate of regression over time is not strictly stationary.<sup>4</sup>

Based on Blume's results, the typical adjustment is calculated based upon an approximate of the following formula:

$$\beta_{adjusted} = 0.35 + .67 x \beta_{raw (unadjusted)}$$

This adjustment transforms the historical unadjusted beta into an expectational value, consistent with the expectational nature of the cost of capital.

#### As noted by Morin:

Several authors have investigated the regression tendency of beta and generally reached similar conclusions [as Blume]. High-beta portfolios have tended to decline over time toward unity, while low-beta portfolios have tended to increase over time toward unity...He demonstrated that the Value Line adjustment procedure anticipated differences between past and future betas.<sup>5</sup>

#### **Morin further notes:**

A comprehensive study of beta measurement methodology by Kryzanowski and Jalilvand (1983) concludes that raw unadjusted beta (OLS beta) is one of the poorest beta predictors, and is outperformed by the Blume-style Bayesian beta approach. Gombola and Kahl (1990) examine the time-series properties of utility betas and find strong support for the application of adjustment procedures such as the Value Line and Bloomberg procedures.

\*\*\*

Because of this observed regressive tendency, a company's raw unadjusted beta is not the appropriate measure of market risk to use.

Marshal E. Blume, *On the Assessment of Risk*, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

Roger A. Morin, Modern Regulatory Finance, PUR Books, 2021 at 81. ("Morin")

#### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

Current stock prices reflect expected risk, that is, expected beta, rather than historical risk or historical beta. Historical betas, whether raw or adjusted, are only surrogates for expected beta. The best of the two surrogates is adjusted beta.6

Morin also provides economic and statistical justification for using adjusted betas to estimate the cost of equity for utilities. Relative to economic justification, he states:

> Adjusted betas compensate for the tendency of regulated utilities to be extra interest-sensitive relative to industrials. (footnote omitted) In the same way that bondholders get compensated for inflation through an inflation premium in the interest rate, utility shareholders receive compensation for inflation through an inflation premium in the allowed Thus, utility company returns are sensitive to rate of return. fluctuations in interest rates. Conventional betas do not capture this extra sensitivity to interest rates. This is because the market index typically used in estimating betas is a stock-only index, such as the S&P 500. A focus on stocks alone distorts the betas of regulated companies. The true risk of regulated utilities relative to other companies is understated because when interest rates change, the stocks of regulated companies react in the same way as bonds do. A nominal interest rate on the face value of a bond offers the same pattern of future cash flows as a nominal return applied on a book value rate base. Empirical studies of utility returns confirm that betas are higher when calculated in a way that captures interest rate sensitivity. The use of adjusted betas compensates for the interest sensitivity of regulated companies. (italics added for emphasis)<sup>7</sup>

#### Relative to statistical justification, Morin states:

There is a statistical justification for the use of adjusted betas as well. High-estimated betas will tend to have positive error (overestimated) and low-estimated betas will tend to have negative error (underestimated). Therefore, it is necessary to squash the estimated betas in toward 1.00. One way to accomplish this is by measuring the extent to which estimated betas tend to regress toward the mean over time. As a result of this beta drift, several commercial beta producers

Morin, at 81-82.

Morin. at 82.

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

adjust their forecasted betas toward 1.00 in an effort to improve their forecasts. This adjustment, which is commonly performed by investment services such as Value Line, and Bloomberg, uses the formula:

$$\beta_{adjusted} = 1.0 + a(\beta_{raw} - 1.0) (4-3)$$

where "a" is an estimate of the extent to which estimated betas regress toward the mean based on past data. Value Line and Bloomberg betas are adjusted for their long-term tendency to regress toward 1.0 by giving approximately 66% weight to the measured beta and approximately 34% weight to the prior value of 1.0 for each stock, that is, a = 0.66 in the above equation:

$$\beta_{\text{adjusted}} = 1.0 + 0.66 (\beta_{\text{raw}} - 1.0)$$

$$= 0.33 + 0.66 \beta_{\text{raw}} \quad (4-4)^{8}$$

Many commercial sources, including *Value Line* and Bloomberg, provide adjusted betas. Given the commercial use and acceptance of adjusted betas they are the proper measure of systematic risk in the CAPM.

#### 2. Monthly Betas

Betas calculated using weekly returns incorporate more observable market data than betas that use monthly returns. Weekly return betas are calculated using significantly more observations (260 weekly observations compared to 60 monthly observations for a five-year measurement period) which reduces the likelihood of measurement error. The lower number of observations of monthly returns may particularly be an issue for companies with relatively high dividend yields, such as the proxy companies, due to dividend-related price behavior. Because the value of a stock just prior to its dividend payment date is equal to the sum of the

\_

<sup>8</sup> Morin. *at 82-83*.

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

expected dividend, plus the going concern value of the business, following the ex-dividend date (the date on which a stockholder becomes entitled to the announced dividend) the value of the stock will adjust downward to reflect only the going concern value. That price behavior may skew the calculation of both the relative volatility of market returns and the correlation of market returns which determine betas.

Given Both *Value Line* and Bloomberg calculate betas based on weekly returns. Other sources, such as Zacks and Yahoo! Finance, calculate betas assuming monthly returns. As discussed previously, it is appropriate to use weekly data as opposed to monthly data because monthly data give less weight to market movements experienced in shorter time periods, thereby dampening volatility for the market index and the subject stock, although possibly not to the same degree for each.

To assess the difference in results, I calculated betas for a proxy group consisting of seven companies using both monthly and weekly return data from May 2000 through May 2023. The proxy group consists of: AWR, AWK, CWT, WTRG, MSEX, and SJW. The results shown in Charts 1 and 2, below, confirm that monthly betas do not capture the full extent of the risk faced by equity investors.

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

150 100 0.50

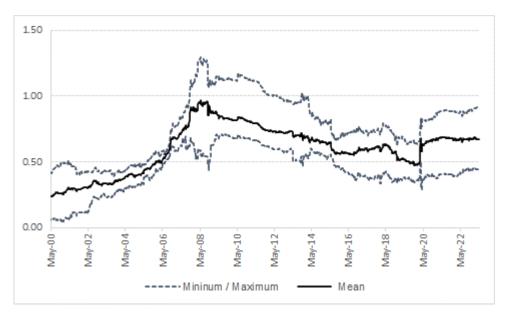
egative Beta Estimates

---- Mininum / Maximum

Negative Beta Esti

Chart 1: Calculated Monthly Betas for the Proxy Group<sup>9</sup>





Source S&P Global Market Intelligence.

-1.00

Source S&P Global Market Intelligence.

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

It also is clear from Charts 1 and 2 that a greater number of negative betas are

observed when monthly returns are assumed. Taken at face value, a negative beta implies a

cost of equity less than the risk-free rate of return. That prospect is highly unlikely, especially

when other proxy companies did not have contemporaneously negative betas. Given the

practical implications of negative betas, the use of weekly data provides more plausible

results and ROE estimates.

Witness:

Dylan D'Ascendis

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-13:** Explain how Bluegrass Water obtains equity capital and, if all equity

capital is obtained from the Central State Water Resource (CSWR), include in the explanation a

discussion on how and when equity is allocated to Bluegrass Water.

**RESPONSE:** Bluegrass Water respectfully refers the Commission to its Responses

to PSC Request Nos. 1-14(d), 1-22, and 1-24. All equity capital is obtained from CSWR, LLC.

Bluegrass Water requests equity on an as needed basis to fund necessary investments.

Witness:

**Brent Thies** 

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-14:** Provide the current capital structure of CSWR.

**RESPONSE:** Bluegrass Water respectfully refers the Commission to its Responses to PSC Request Nos. 1-14(d), 1-22, and 1-24.

**Witness:** Brent Thies

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-15:** Provide the current capital structure of each individual Bluegrass

Water regulated affiliates that are owned by CSWR.

**RESPONSE:** The current capital structure of other CSWR regulated affiliates are

subject to the review, approval, and regulation of utility commissions in other jurisdictions.

The capital structures of affiliates in other jurisdictions range from 100% equity to 60%

equity.

Witness:

**Brent Thies** 

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-16:** Explain whether Bluegrass Water has encountered any problems raising capital for its construction projects, and, if so, describe.

**RESPONSE:** Under current levels of regulatory support, Bluegrass Water has not encountered any problems raising capital.

**Witness:** Brent Thies

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-17:** Refer to the Direct Testimony of Brent Thies Direct (Thies Direct

Testimony), Exhibits BT1-BT14. Provide a copy of Exhibits BT1-14 in Excel spreadsheet format

with all formulas, rows, and columns unprotected and fully accessible.

**RESPONSE:** Please see CONFIDENTIAL Exhibit PSC 2-17 for a copy of Exhibits

BT 1-14 in Excel spreadsheet format.

**Witness:** Brent Thies

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

REQUEST NO. 2-18: Refer to Thies Direct Testimony, Exhibit BT-9. Provide an

explanation and calculation for the retirement entries under NARUC Accounts 372.000 and

373.000.

RESPONSE: As construction projects are completed and new equipment is

procured, it is necessary to retire utility plant in service that has been on the Company's

books. The accounting and engineering staff of CSWR work together to determine whether

the new assets or newly constructed items have replaced an asset. When it is determined that

an asset has been replaced, asset balances must be retired. The asset values in NARUC

Accounts 372.000 and 373.000 represent book values from acquisition where no specificity

was provided from the prior owner. The balances represent substantially all of the utility

plant in service related to treatment at those plants. Bluegrass Water management believes

that given the circumstances it is appropriate to write off the entire balance. No further

detailed calculation is available.

Witness:

**Brent Thies** 

Bluegrass Water's Response to PSC 2-18

Page 1 of 1

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-19:** Refer to the Direct Testimony of Todd Thomas (Thomas Direct

Testimony), page 9. Provide a copy of the service contract between Bluegrass Water and Midwest

Water Operations, LLC (Midwest).

**RESPONSE:** Please see the Agreement between Bluegrass Water and Midwest

Water Operations, LLC included within Exhibit 22 to the Application. Please also see

Exhibit PSC 2-19. Midwest Water Operations, LLC was acquired by Clearwater Solutions,

LLC. As a result of this acquisition, Bluegrass Water consented to the assignment of the

Midwest contract to Clearwater Solutions, LLC, effective as of April 1, 2023.

Witness:

**Todd Thomas** 

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

REQUEST NO. 2-20: Refer to Thomas Direct Testimony, page 9. Explain whether

Midwest is the only contractor Bluegrass Water uses for operations and management (O&M)

services, and, if there are other O&M service providers, provide a copy of the service contracts

with the other O&M contractors.

**RESPONSE:** Midwest is the only contractor Bluegrass Water previously utilized to

provide O&M services. Effective April 1, 2023, the only contractor is Clearwater Solutions,

LLC. Please also see Response to PSC 2-19.

Witness:

**Todd Thomas** 

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-21:** Refer to Thomas Direct Testimony, page 9. Provide in Excel

spreadsheet format with all formulas, rows, and columns fully accessible and unprotected, a

breakdown of contract operator expenses during the historical test year showing sums paid under

(1) the basic service provision of those contracts, (2) the hourly provision of those contracts for

additional in-person inspections beyond the basic service provision, and (3) the hourly provision

of those contracts for repairs.

RESPONSE: Please see attached Exhibit PSC 2-21, (which is provided in 23

subparts). The tab labeled "Midwest Summary" represents the total sums paid during the

test year. On the tab labeled "Midwest Detail," Column I delineates between the basic service

provision and maintenance performed by Midwest Water. Midwest does not provide a

breakout between inspections and repairs. Therefore, everything is coded to maintenance

expense accounts as shown in column G and H. For further details on maintenance expenses,

please refer to the invoices produced as Exhibit PSC 2-21 (Parts 2-23).

Witness:

**Brent Thies** 

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-22:** Explain whether the contract with Midwest includes in-

person inspection services in the basic service provision and, if not, why these are separate fees.

RESPONSE: As reflected in Exhibit A to the Midwest operating agreement, Page 25 of Application Exhibit 22, both the water and wastewater operating services include inperson inspections.

Witness: Todd Thomas

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-23:** Refer to the Cox Direct Testimony, page 11. Explain whether

Bluegrass Water has considered a phase-in approach to the rate increase in order to mitigate rate

shock.

**RESPONSE:** In his Direct Testimony, Josiah Cox specifically references the ability

of system consolidation to mitigate rates. The Commission recognized this on page 113 of its

decision in Case No. 2020-00290. "A separate rate for each geographically distinct merged

system of Bluegrass Water would create unreasonable and undue hardship to individuals in

some areas served by Bluegrass Water." Beyond the consolidation proposal, Bluegrass has

not proposed any other specific mitigation mechanism. That said, Bluegrass Water would

consider a further phase-in approach that would provide for future recovery of any deferral

associated with the phase-in.

Witness:

Josiah Cox

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-24:** Refer to the Direct Testimony of Timothy S. Lyons (Lyons Direct Testimony), page 7, Figure 3. Provide the basis for the allocation percentages for unmetered and metered service, and provide an Excel spreadsheet with all formulas, rows, and columns fully accessible and unprotected, demonstrating with how the allocation percentages were calculated.

RESPONSE: The Excel spreadsheet used to develop Figure 3 on page 7 was provided as filename, "Application Exhibit 11 – Lyons Workpapers – Cost of Service Analysis."

The Company's proposed approach to recover 77.28 percent of the proposed revenue requirement of \$3.7 million from unmetered service customers and 22.7 percent from metered service customers reflects bill impact and cost of service considerations.

First, the Company presently recovers 81.51 percent of current revenues from unmetered service customers and 18.49 percent from metered service customers. Thus, as an initial matter, the proposed approach reflects a shift in the revenue requirement of 4.2 percent from unmetered service customers to metered service customers.

Second, rates for most unmetered service customers approximately doubled in the Company's rate increase in Case No. 2020-00290, while rates for metered service customers remained unchanged. Thus, the proposed approach helps mitigate the proposed increase on most unmetered service customers whose rates would otherwise increase to 21.9 percent without the shift rather than the proposed 15.6 percent with the shift.

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

Third, the Company plans to expand its wastewater treatment facilities in Delaplain to meet a growing demand for wastewater treatment services, a significant portion of which is from metered service, commercial and industrial customers.

Witness: Timothy S. Lyons

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-25:** Refer to the Lyons Direct Testimony, page 7, Figure 3, and page 8.

Reconcile the difference between the proposed variable charge of \$14.91 in Figure 3 and the

proposed usage charge for metered service of \$14.70 on page 8.

**RESPONSE:** The proposed usage charge for metered service is \$14.91, as shown in

Figure 3 on page 7 and line 13 on page 8. The proposed usage charge of \$14.70 on line 3 of

page 8 is a typographical error.

Witness:

Timothy S. Lyons

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-26:** Provide support using the nonrecurring cost justification forms

available on the Commission's website at <a href="https://psc.ky.gov/Home/UtilForms">https://psc.ky.gov/Home/UtilForms</a> for Bluegrass

Water's proposed revision to its returned check fee of \$15.00.

**RESPONSE:** Please see attached hereto Exhibit PSC 2-26, which is a completed copy

of the nonrecurring cost justification form available on the Commission's website for the

requested returned check fee.

Witness:

**Brent Thies** 

CASE NO. 2022-00432

BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE

COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

**REQUEST NO. 2-27:** Refer to Application, Exhibit 19.

a. State which NARUC expense account(s) include the costs of operating remote

monitoring systems.

b. State the amount of the costs of operating remote monitoring systems during the

historical test period.

c. State whether any pro forma adjustments reflect the cost of operating remote

monitoring systems.

**RESPONSE:** (a) The costs associated with operating remote monitoring systems

is included in Account 923.900 - Outside Services (IT).

(b) The cost of operating the remote monitoring systems during the test period

was \$11,416.42.

(c) No pro forma adjustments reflect the use of remote monitoring have been

included in the requested revenue requirement. As is reflected in Response to PSC 1-32 and

corresponding Exhibit PSC 1-32(a), if the Commission grants the requested relief in Case

No. 2022-00216 during the pendency of this proceeding, Bluegrass Water estimates the net

effect on operating expenses would be a reduction of \$250,070.

Witness:

**Brent Thies** 

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

### **VERIFICATION**

	Josiah Cox President/CEO
	Bluegrass Water Utility Operating Company, LLC
STATE OF MISSOURI	)
COUNTY OF ST. LOUIS	) ss: )
SUBSCRIBED AND SWORN TO I  My commission expires:	before me on this the $12^{+1}$ day of $16.2025$
	Notary Public Sanders
	YVETTE SANDERS Notary Public - Notary Seal STATE OF MISSOURI St. Louis County My Commission Expires: Feb. 16, 2025 Commission # 17144342

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

#### **VERIFICATION**

I, <u>Todd Thomas</u> verify, state, and affirm that the information request responses filed with this verification for which I am listed as a witness are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

	Tord Thomas
	Name: Todd Thomas
	Title: Senior Vice President
	Bluegrass Water Utility Operating Company, LLC
STATE OF MISSOURI	)
	) ss:
COUNTY OF ST. LOUIS	)

SUBSCRIBED AND SWORN TO before me on this the 12 day of May, 2023.

My commission expires: D2.16.2025

Notary Public

YVETTE SANDERS
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis County
My Commission Expires: Feb. 16, 2025
Commission # 17144342

### BLUEGRASS WATER UTILITY OPERATING COMPANY, LLC'S RESPONSES TO THE COMMISSION STAFF'S SUPPLEMENTAL REQUEST FOR INFORMATION

### **VERIFICATION**

	n that the information request responses filed with this ss are true and accurate to the best of my knowledge, nable inquiry.	
	Name: Brent Thies	
	Title: Vice President and Corporate Controller	
	Bluegrass Water Utility Operating Company, LLC	
STATE OF MISSOURI	) } age	
COUNTY OF ST. LOUIS	) ss: )	
SUBSCRIBED AND SWORN TO before me on this the day of May, 2023.  My commission expires: 02.16.2025		
	Notary Public Notary Public	
	YVETTE SANDERS Notary Public - Notary Seal STATE OF MISSOURI St. Louis County My Commission Expires: Feb. 16, 2025 Commission # 17144342	