COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of

Electronic Application of Bluegrass Water Utility Operating Company, LLC for Certificates of Convenience and Necessity for Projects at the Woodland Acres Site	))))	Case No. 2022-00015

Bluegrass Water's Response to Staff's Third Request for Information

The Applicant, Bluegrass Water Utility Operating Company, LLC ("Bluegrass") herewith submit its Response to the Commissions Staff's Third Request for Information. Signed, notarized verification for these Responses appears on the following pages. The undersigned counsel is responsible for any objection noted for a particular response.

Respectfully submitted,

/s/ Kathryn A. Eckert

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Verification

I, **Aaron Silas**, Regulatory Case Manager of Central States Water Resources, Inc., the manager of Applicant Bluegrass Operating Company, LLC being duly sworn, state that I prepared or supervised the preparation of the following responses to PSC's Third Request for Information, and that the matters and things set forth in the responses are true and correct to the best of my knowledge, information and belief formed after reasonable inquiry.

Aaron Silas

STATE OF MISSOURI)
COUNTY OF St. Louis)

Subscribed, sworn to, and acknowledged this 10th day of June, 2022, before me, a Notary Public in and before said County and State.

My Commission expires: 11.13.2022

NOTARY PUBLIC

{seal}

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

MERANDA K. KEUBLER
My Commission Expires
November 13, 2022
St. Louis County
Commission #14631487

Request

1. Refer to Bluegrass Water's response to Commission Staff's First Request for Information (Staff's First Request), Item 8.
    a. State the estimated costs of utilizing any alternatives to the moving bed biofilm reactor (MBBR) system identified in this response and provide documentation of the estimated costs.
    b. State the estimated useful life of any alternatives to the MBBR system identified in this response and provided documentation regarding the estimated useful lives.
    c. If Bluegrass Water is unable to provide costs and useful lives for alternatives to the MBBR system, state how you determined the alternatives are less costly alternative than the proposed construction.

Response

a. The response to 1 PSC 08 identified the alternatives of IFAS system and additional aeration tankage. The estimate for the conventional IFAS system was not developed because the third-party engineer stated that costs would run 30-60% higher than the proposed MBBR project at an estimation of $286,020-$326,880. The estimated cost for building additional aeration tankage was approximately $400,000 - $600,000 and would require all the same equipment as plant replacement discussed below, scaled back to handle only the additional capacity required at the existing plant. Additionally, the responses to 1 PSC 27 identified the overall alternatives of connecting to the City of Shepherdsville ("City") and total plant replacement, and 2 PSC 08 provided additional information regarding the estimated costs for the City connection. Specifically, the estimated cost to connect to the City consists of both capital costs to build out to meet the city system ($3,000,000, $3,600,000, or $6,000,000 depending on the point at which a connection to the City system is made) as well as increased operating costs (cost of purchased treatment from the city of $5,900 to $8,900 per month and the cost to operate 4 new lift stations of approximately $4,200 per

month). The other overall alternative discussed, total plant replacement, has an estimated cost of $800,000 - $1,200,000 depending on the flow received.

b. The IFAS alternative considered by Bluegrass would have an estimated useful life of 20 years. The alternative of plant replacement and the alternative of installation of additional aeration tankage would both have expected useful lives of 20 years. The alternative of main extension to the City with lift stations would have a useful life of 40-50 years. Bluegrass has estimated used useful lives based on the approved service life and depreciation rates for similar types of assets; no documentation exists for estimated useful life specific to the above alternatives.

c. Please see the responses to subparts (a-b) above, as well as the response to 1 PSC 27. Third party engineer 21 Design Group informed Bluegrass that the conventional IFAS system would offer no advantage in treatment over the MBBR, would have the same useful life as the MBBR, and would cost significantly more than MBBR. As a result, this option was not explored far enough to develop a capital estimate. Ultimately, the MBBR project selected was chosen because it is the lowest cost solution that will achieve compliance with permitted limits while still having a similar useful life as the other options available and minimizing customer rate impact as much as possible.

Request

2. Refer to Bluegrass Water's response to Staff's First Request, Item 17.
    a. State the estimated costs of utilizing any alternatives to the peracetic acid disinfection system identified in this response and provide documentation of the estimated costs
    b. State the estimated useful life of any alternatives to the peracetic acid disinfection system identified in this response and provided documentation regarding the estimated useful lives.
    c. If Bluegrass Water is unable to provide costs and useful lives for alternatives to the peracetic acid disinfection system, state how you determined the alternatives are less costly than the proposed construction.

Response

a. Please see the response to 1 PSC 17 for estimated costs for connecting to the City of Shepherdsville ("City") and alternatively replacing the entire system. Additional alternatives considered were chlorine disinfection with dechlorination or ultraviolet disinfection. The capital costs of a chlorine disinfection system would be nearly the same as the proposed peracetic acid project as it would rely on almost identical equipment, with the disinfection chemical being the primary difference. Specifically, the chlorine disinfection system would have the additional capital expense of a tablet dechlorination chemical feed at approximately $3,000. It would also have higher operational costs due to the need to dose an additional chemical. Please also see responses to 1 PSC 26a-b in which Bluegrass discussed the estimated operational cost for the peracetic acid system. Bluegrass was informed by its third-party engineer 21 Design Group that the ultraviolet disinfection option would be prohibitively expensive from a capital cost perspective, while offering no advantage in treatment over either the proposed PAA or chlorine alternatives. For this reason, ultraviolet disinfection was not explored further. Ultraviolet disinfection would

not offer any operating cost reductions relative to the PAA project as it would involve higher electrical costs as well as bulb replacement.

b. The chlorine disinfection and dechlorination alternative considered by Bluegrass would have an estimated useful life of 20 years. The alternative of main extension to the City with lift stations would have a useful life of 40-50 years. The alternative of plant replacement would have an expected useful life of 20 years. Bluegrass has used useful life estimates that are based on the approved service life and depreciation rates for similar types of assets. No documentation exists for useful life estimates specific to these alternatives.

c. Please see response to subpart (b) above; please also see the response to 3 PSC 01 discussing this information for the City connection and total plant replacement alternatives. As stated in subpart (a), the chlorine disinfection system would have both a higher capital and operating cost while offering the same useful life of the proposed PAA project, and the ultraviolet disinfection system would offer no advantage in treatment over the proposed PAA disinfection system or chlorine while costing significantly more. Therefore, this option was not explored far enough to develop a capital estimate because the most significant difference in the implementation of an ultraviolet disinfection compared to the proposed project and the chlorine alternative would be greater capital cost, followed by greater rate impact. Ultimately, the project selected was chosen because it is the lowest cost solution that will achieve compliance with permitted limits while still having a similar useful life to the other options available.

Request

3. Refer to Bluegrass Water's response to Staff's First Request, Item 23.
   a. State the estimated costs of utilizing any alternatives to the wet weather overflow system identified in this response and provide documentation of the estimated costs.
   b. State the estimated useful life of any alternatives to the wet weather overflow system identified in this response and provided documentation regarding the estimated useful lives.
   c. If Bluegrass Water is unable to provide costs and useful lives for alternatives to the wet weather overflow system, state how you determined the alternatives are less costly than the proposed construction.

Response

a. Please see the response to 3 PSC 01 for discussion of the costs associated with total plant replacement or connecting to the City of Shepherdsville ("City"). The other alternatives discussed in the response to 1 PSC 23were either a concrete or steel tank instead of the less expensive polymer tank proposed. Discussions with third-party engineers made clear that a polymer tank is significantly less expensive than either an in-ground concrete or steel tank installation. The third-party engineers did state that the cost of either steel or concrete would be highly variable depending on the availability of tanks at the time the project actually begins; however, they communicated that it would be reasonable to expect the cost of either alternative material to be 3-6 times the cost of the polymer tank due to higher material and installation costs, estimating a range of $212,100 - $424,200.

b. The steel or concrete tank alternatives considered by Bluegrass would have an estimated useful life of 20-30 years depending on the individual components of treatment and the tank itself. The alternative of main extension to the City with lift stations would have a useful life of 40-50 years. An alternative that involved installation of a new plant would

include treatment components with a useful life of 20 years and plant structures with a useful life of 30-40 years. Bluegrass has utilized useful life estimates that are based on approved service life and depreciation rates for similar assets. There is, however, no documentation of the useful life estimates that are specific to these alternatives.

c. Please see the response to subpart (b) above. As stated in subpart (a), the reasonable expectation provided by third-party engineers is that the anticipated cost for a steel or concrete tank would likely be 3-6 times that of the polymer tank at $212,100 - $424,200 Therefore, this option was selected because the polymer tank was a much more economical option that would minimize capital cost and rate impact.

Request

4. Refer to Bluegrass Water's Response to Staff's First Request, Item 31, Corrective Action Plan (KY2022-00015_BW_0390 to KY2022-00015_BW_0391).
    a. State the estimated costs of all phase two projects required or recommended by the Corrective Action Plan and provide documentation of the estimated costs.
    b. State the estimated useful lives of all phase two projects required or recommended by the Corrective Action Plan and provided documentation regarding the estimated useful lives.

Response

a. No capital estimate has been prepared for the phase two projects as there is no anticipated timeline for implementing these improvements. Specifically, given the possibility that a City connection may become more economical in the future, these projects may prove to be unnecessary and never actually constructed. Should a time arrive where these projects become necessary, Bluegrass will first work with its third-party engineers to prepare more detailed plans and capital estimates and then approach both the Division of Water for necessary permit approvals and the Commission for a CPCN approval.

b. Please see the response to subpart (a).

Request

5. Refer to Bluegrass Water's response to Commission Staff's Second Request for Information, Item 7.
    a. State the estimated cost of replacing the tank identified in this response and provide documentation of the estimated costs.
    b. State the estimated useful life of a new tank identified in this response and provided documentation regarding the estimated useful lives
    c. If Bluegrass Water is unable to provide costs and useful lives for tank replacement, state how you determined that repair is a less costly alternative than replacing the tank.

Response

a. Because potential exists for the connection to the City to become less expensive in the next 5 to 10 years as the City expands its collection system infrastructure, as well as the fact that the Division of Water may then require connection to the City, Bluegrass determined that it would be unwise to proceed with tank replacement at this time. Specifically, given the 40-year useful life of a tank replacement, Bluegrass was concerned that this would become a wasteful investment if a City connection became more economical and required by the Division of Water. For this reason, a detailed capital estimate has not been prepared at this time. However, the alternative proposing plant replacement (discussed in responses to 1 PSC 02, 17 and 20 and responses to 3 PSC 01-3) addresses the cost of replacing the tank. Reasonable estimated costs for this alternative of a new tank would require an anticipated investment in the range of $600,000-$800,000, including the costs to decommission the existing tank following the installation of new tanks.

b. The new tank would have a useful life of 30 years. Bluegrass utilized a useful life estimate that is based on approved service life and depreciation rates for similar assets. There is no documentation of the estimate that specific to these assets.

c. Please see response to subpart (a).