WRITTEN TESTIMONY OF JOSHUA BEAN

2023 Water Rate Increase Application (Docket #23-2443-01)

Q. Please state your name and contact information.

A. My name is Joshua Bean. My business address is 154 E. 14075 S., Draper, Utah 84020. My phone number is 801-495-2224. My email address is jbean@bowencollins.com.

Q. Briefly describe your educational and professional background relating to this rate increase.

A. I am employed by Bowen, Collins and Associates, Inc. (BC&A), which provides consulting engineering services to WaterPro Inc., (the Company), a wholly-owned subsidiary of Draper Irrigation Company. I am a licensed professional engineer in Utah. I have a bachelor's degree in civil and environmental engineering. I have been working in the civil engineering field for approximately 11 years and have worked on multiple public utility rate increase projects.

Q. Who else worked on the water rate model with you?

A. Keith Larson, a principal of BC&A and a licensed professional engineer in Utah also worked on the rate model. Keith has been working in the civil engineering field for over 20 years and has assisted in implementing utility rate increases with over 30 different public utility entities.

Q. What services does Bowen Collins and Associates, Inc. perform on behalf of the Company?

A. BC&A has assisted the Company with various civil engineering services, including, but not limited to: the development of the Company's water right master plan, culinary water

master plan, and pressure irrigation master plan, design of various waterline, well, and pump station projects, new development plan reviews, water rate studies, etc.

Q. What is the purpose of your testimony?

A. My testimony is intended to explain the water rate model (that was included in Appendix H of the rate increase application filed with the Utah Public Services Commission on May 4, 2023 (the Application)). That rate model was used as a basis for determination of the needed rate increase requested by the Company.

Q. Are impact fees addressed in this rate case application?

A. No. This rate case application is based upon BC&A's review of the Company's culinary water rates and proposed system improvements. That review was completed in order to determine when rate increases are necessary to maintain the existing level of service in the Company's culinary water system and ensure adequate funds are available to complete system improvements necessary to continue providing service to the Company's existing customers. That is distinct from the imposition of impact fees, which are intended to apportion the cost of constructing facilities required by new development. Impact fees are designed to reduce the subsidy existing customers pay for the construction of new facilities or infrastructure needed to serve new development.

Q. Can you briefly summarize Appendix H of the Application?

A. Appendix H of the Application contains the rate model used to determine the necessary rate increase. The first page is a summary of historic and projected expenses and income determined by the rate model. The bottom of that page shows the total cash flow comparisons of a scenario where the Company maintains its existing rates and a scenario where the Company has its income increased by the requested equivalent of 5.4%. As

shown, the Company is projected to have an approximately $385,000 deficit in 2024 if no rate changes are implemented. The Company is projected to have an approximately $15,000 deficit in 2024 if the rates structure changes are implemented as shown. This small deficit is expected to be covered from Company reserves. The next four pages of the rate model show the historic and projected non-rate income sources, operational and maintenance expenses, debt service, and capital improvements. The sixth page shows a figure summarizing the preceding 3 years and projected 3 years of revenue and expenditures at both the existing and proposed rates.

Q. Can you explain the source of the historic data included in the rate model?

A. The PSC requires the Company to annually submit financial data to the PSC in a certain format using certain budget item categories. The rate model was set up in a similar format as those annual PSC financial submissions for continuity and ease of review. The Company provided BC&A the last three years of data (2020-2022) that was submitted to the PSC. The rate model includes that PSC historic financial data.

Q. Can you explain the first page of the rate model (the model summary page)?

A. The summary lists the historic number of accounts and their actual growth rates along with the estimated number of future accounts. It should be noted that the future number of accounts was based on the growth rates estimated in the Company's most recent culinary and PI water master plan. The expenditures and income categories shown are copied from subsequent pages of the rate model. To determine the projected 2023 value of the 'Sales – Existing Rates' category, the 2021 and 2022 sales amounts were averaged (since 2022 sales dropped due to the severity of Utah's drought) and then grown at the projected system growth rate and the 5% rate increase that the PSC approved in 2022.

Later years were increased by growing the previous year by the projected system growth rate of that year.

Q. Can you explain the second page of the rate model (the non-rate revenue page)?

A. The 'Non-Utility Income' category was grown by increasing the previous year's revenue by the projected system growth rate with the exception of the 2023 income. 2023's revenue would normally be based off the average of the three prior years and then grown by the projected system growth rate. Based on discussions with the Company, the 2021 income was significantly higher than usual. The 2020 and 2022 values were much more in-line with historic expectations. To avoid overestimating income based on the anomaly observed in 2021, the 2023 projection was determined by averaging the 2020 and 2022 values and then grown at the system growth rate. The 'Fire Protection Customers', 'Miscellaneous Service Revenue', and 'Other Miscellaneous Water Revenues' categories were grown by increasing the previous year's revenue by the projected system growth rate and including an assumed annual inflation rate of 6.0%.

Q. Can you explain the third page of the rate model (the operation and maintenance expenditure page)?

A. Each operations and maintenance category was grown from the prior year's cost at an assumed inflation rate plus half of the system growth rate. Relative to growth, it is clear that costs will increase as the size of a system increases. However, because of economy of scale, operation and maintenance costs do not generally directly increase at the same rate as system growth. Correspondingly, the system growth rate was halved for these categories. Relative to inflation, 2022 was used as the basis for projecting these costs into the future since there have been significant cost increases in goods and services during

the years after the results of the COVID-19 pandemic. An inflation rate of 6 percent from 2022 to 2023 was assumed based on reported economic trends and recent observed increases in Company O&M budget categories.

Q. Can you explain the fourth and fifth pages of the rate model (the debt service and capital improvement projections page)?

A. The Company has an existing loan it obtained in 2013 to pay for pressure irrigation and culinary projects. The total loan amount, as shown in Appendix L of the Application, was $8,552,878. The Company has indicated that $4,000,000 of that loan amount was to pay for projects relating to installation of a new culinary water well and a pipeline from that well to the Water Treatment Plant. Therefore, 47% of the loan repayment schedule should be paid by the culinary system. That 47% amount is reflected in the loan payments that are projected into the culinary rate model. That page also shows the system replacement and other improvement projects that are projected to be required between now and 2025. The replacement projects include mostly old and under capacity water pipelines that will need to be replaced, well maintenance and replacement, and water meter upgrades. The listed projects also include construction of the reuse water projects. These improvements are needed to continue providing cost-effective and efficient service to the Company's existing customers. Also included in Appendix L is documentation for a future loan through the Utah Division of Water Resources to help pay for the reuse water projects. The loan has not been issued, just authorized based on WaterPro's prior application. The rate model shows the anticipated loan payments for the reuse loan. As the reuse projects will benefit both the culinary and irrigation systems per the Company's 2018 Water Rights Water Master Plan, the reuse loan payments and

capital projects have been allocated based on the same 80/20 split between the culinary and PI systems described in the Application.

Q. The capital improvement projects are shown to occur in particular years. Are those expenses certain to occur in those years?

A. All of the replacement and improvement projects shown are items the Company expects to be done within this three-year time period, but there is typically some flexibility. For instance, if the City or State has a separate project where the roads are already getting demolished/re-paved and there is a Company project located in that roadway, the Company will try to time its own projects so that they are done in concurrence the third-party road work. That allows the Company to do the work at a lower cost and minimizes the disruption to traffic and the public. Also, if revenues are less than expected or operational costs are higher than expected, the Company may have to postpone some projects.

Q. Can you summarize the test period used in the rate model?

A. Except as previously described, all income and expense categories were grown based on the 2022 financial data provided to BC&A. The 'Sales-Existing Rates' and 'Non-Utility Income' were the only categories with a test period that instead averaged the historical amounts from 2020 and 2022 to use a basis for projecting future values (as previously described). Again, those modifications to the otherwise standard 2022 test period were to account for some fluctuation in historical amounts that may not be as accurate in projecting future values.

Q. What do these projections show would be the result of the 5.4% effective increase in rates?

A. As shown in the summary page of the rate model, without any changes to existing rates the Company would be expected to have a deficit of approximately $385,000 in 2024 and greater annual deficits after that. Assuming the proposed rate structure changes are implemented in 2024 (resulting in an effective 5.4% rate increase), there would only be a deficit of approximately $15,000 in 2024. Although the Company could ask for a larger rate increase to eliminate all deficit, it has been decided at this time that the Company will slightly adjust the timing of some capital projects and/or dip into its reserve fund to offset the deficit in an attempt to lessen the burden of a larger rate increase on its customers.

Q. Can you explain the last page of Appendix H (the revenue impact from tier volume changes page)?

A. No increases are proposed to the actual rates to be charged. However, it is recommended that the definition of all tiers be adjusted. Specifically, the volume division points for all four existing water rate tiers are significantly higher than recommended to achieve the Company's goals of equitable distribution of cost and conservation. The Company's's volume cutoffs per tier (18 kgal, 57 kgal, and 150 kgal) are approximately double (or more) than the average tier cutoff of similar entities in the region. It is recommended that DIC implement culinary tier volume division points at 12 kgal, 30 kgal, and 75 kgal such that the tier volume cutoffs are low enough to provide an incentive for customers to conserve at nearly all levels of outdoor irrigation water use. This will also bring current charges more in line with the American Water Works Association's (AWWA) cost-of-service guidelines.

This change will increase the total revenue to the Company as shown in the rate model. In 2022, a revenue model was set up to evaluate the proposed impacts of the rate structure changes. The model used the historic volumes of water used per tier from 2021 data. The top two tables of Appendix H show the water use per tier and the expected revenue per tier based on the existing rates. The bottom two tables show the estimated redistribution of water use per tier with the proposed tier cutoff changes and the expected revenue based on the redistributed use per tier. It will be noted that all unit rates remain unchanged from existing with the exception of a proposed unit price reduction of Tier 2 water to be better in line with AWWA cost-of-service.

As shown those tables, the recommended culinary rate structure changes are projected to increase water sales revenue by approximately $470,000 during the first year of implementation based on historic water usage per customer. However, for planning purposes, it was assumed there would only be approximately $376,000 in actual additional revenue. This is a result of price elasticity. Price elasticity is an economic concept that predicts that sales of most commodities will decrease as costs increase. The price elasticity of water will vary depending on how it is used. For essential indoor use, price elasticity is nearly zero (i.e. people will continue to buy the same amount regardless of cost). For optional outdoor use, price elasticity will vary depending on several factors (tiered costs of water, climate/drought, overall economy, community ethics, etc.). For the purposes of this evaluation, it has been estimated that the price elasticity associated with this change will be 0.20. This means that any increase in rate will be partially offset by a

reduction in demand equal to 20 percent of the rate increase (e.g. a 10% increase in rates will result in a 2 percent reduction in water use).

With all factors considered, the financial impacts of the proposed changes to tier volumes are expected to result in an approximate overall revenue increase of approximately 5.4% (after accounting for system growth) as shown in the rate model of Appendix H.

Q. Does this conclude your direct testimony?

A. Yes.