WaterOne
Water District No. 1 of Johnson County

Bob Reese, Chair
Kay Heley, Member
Melanie Kraft, Member

AGENDA

Operations Committee Meeting
Water District No. 1 of Johnson County
January 9, 2026
7:30 AM

1. **Call to Order**

2. **Approval of Minutes**
   Minutes of December 5, 2025

3. **Discuss Approval of Contract for 2026 Water Main Extension Services** – Michelle Wirth P.E. & Matt Carter, P.E.

4. **Discuss Approval of Change Order No. 1 for Project MP-25009 O&M Building Roof Replacement** – Michelle Wirth P.E. & Hanley Barker, P.E.

5. **Discuss Approval of Contract for Project MP-25004 Hansen Phase IV Basin Painting and Project AC-26750 Facility 2 South Wash Water Interior Painting** – Michelle Wirth P.E. & Hanley Barker, P.E.

6. **Discuss Approval of Amendment No. 17 to the Black & Veatch Agreement for Engineering Services for the 2026 Master Plan** – Michelle Wirth P.E. & Hanley Barker, P.E.

7. **General Questions & Comments**

8. **New Business**

9. **Adjournment**

If you require any accommodation (e.g. hearing assistance) to attend this meeting, please notify Candace Golubski at (913) 895-5506 no later than 24 hours prior to the scheduled commencement of the meeting.

MINUTES
WATER DISTRICT NO. 1 OF JOHNSON COUNTY, KANSAS
OPERATIONS COMMITTEE
December 5, 2025

Operations Committee Members in Attendance
Bob Reese, Chair
Kay Heley, Member
Dr. Melanie Kraft, Member

Board Members

Staff
Shaun Pietig, General Manager
Cody Ellett, Director – Distribution
Darin Kamradt, Director – Finance
Eric Arner, Director – Legal & Auditing
Greg Totzke, Director – Production
Jim Trimble, Director – Information Technology
Michelle Wirth, Director – Engineering
Candace Golubski, Executive Assistant – Assistant to the Board
Cassandra Gunther, Manager - Accounting
Ellen Parker, Associate Attorney – Legal & Government Relations
Hanley Barker, Manager – Facilities Engineering
Jason Kesinger, Acting Manager - Distribution
Jessica Hardy, Security Coordinator – Audit & Risk Management
Shane Hoffman, Supervisor – Financial Planning & Analysis
Kiel Johnson, Supervisor – Facilities Engineering
Lori Schlegel, Manager – Audit & Risk Mitigation
Mason Floyd, Financial Analyst II - Finance
Matt Carter, Manager – Distribution Engineering
Melinda Croft, Administrative Assistant – Legal & Auditing
Michelle Anderson, Manager – Water Quality Laboratory
Natalie Morrison, Manager – Financial Planning & Analysis
Robert Hook, Supervisor – Service Desk/Enterprise Solutions
Shane Hoffman, Supervisor – Financial Planning & Analysis
Stephanie McAvoy, Administrative Assistant – Engineering
Takako Herndon, Senior Auditor – Audit & Risk Management

Consultants
Jim Winger, Black & Veatch

1. Call To Order

The December 5, 2025, Operations Committee Meeting of Water District No. 1 of Johnson County was called to order at 7:30 a.m. by Committee Chair Mr. Reese, who announced that a quorum was present.

2. Approval Of Minutes

Ms. Heley made the following motion:

That the Committee approve the minutes of the Operations Committee meeting held November 7, 2025.

Dr. Kraft seconded the motion. The Chair asked if there were any questions or comments. Hearing none, the Chair called for a vote. Upon a vote, the motion carried unanimously.

3. Discuss Approval of Change Order No. 2 for Project MP-24002 Hansen Basin Painting Phase II

Ms. Wirth provided a brief update on both Change Orders, explaining that each originated from the Omissions and Contingencies (O&C) budget as part of the annual budgeting process, and noted that throughout the year, contingency items may arise that require attention; both of these items fall into that category. Ms. Wirth explained that O&C items do not typically come before the Board, but in this instance, the work required leveraging contractors already on site. Because this work could not be completed in-house, staff utilized existing contractors already under contract, which allowed the work to be completed more efficiently and effectively.

Ms. Wirth stated that any change order exceeding $25,000 must be brought to the Board for approval. In this case, the work has already been completed, and it is not uncommon for confirming change orders to be presented to the Board after completion. Ms. Wirth explained that the decision to proceed was driven by timing, particularly temperature constraints, and the need to complete the work in an efficient, effective, and timely manner. Ms. Wirth added that Mr. Hanley Barker would explain the details of each change order and clarified that this is why there are two project numbers associated with the items, then concluded by asking whether there were any questions regarding the budget process or the decision to move forward.

Ms. Heley asked whether there was a dollar threshold at which staff would not proceed with a project prior to Board approval, noting that while these amounts were relatively small, and questioned whether a higher amount would require waiting for Board approval. Ms. Wirth responded that the decision was primarily based on timing and temperature and reiterated that contingency funds are included as part of the annual budget process, and when necessary, staff has the ability to move forward with those items, emphasizing that these items are budgeted and can proceed if needed.

Ms. Heley followed up, asking whether there was an informal higher threshold, such as $100,000, that would require waiting for Board approval. Mr. Eric Arner stated that this is a good question and explained that there is no formal policy establishing such a threshold. In the past, when costs were significant enough that staff believed the Board needed to be informed, a Work Change Directive (WCD) would be issued. This would include a memo explaining the issue, how it would be handled, and an estimated cost, followed by a confirming change order. Mr. Arner noted that this particular situation did not rise to that level, which is why a memo may not have been issued. Historically, when costs have become significant, staff ensured the Board was notified. Mr. Reese confirmed, adding that the Chair is involved in those discussions, even when the amounts are smaller. Ms. Wirth agreed and reiterated that this flexibility allows staff to respond quickly in ways that ultimately save money by using vendors already under contract and on-site.

Mr. Barker explained that the 67th Street Reservoir, shown on the screen, was built in 1975, and structures from the early to mid-1970s commonly develop cracking over time. Mr. Barker pointed out that the gray areas shown in the photo represent surface repairs that were made, noting that the reservoir’s exterior is concrete, applied by spraying concrete onto the surface,

which naturally develops cracks over time. Similar repairs were performed approximately 25 years ago, including repainting the reservoir.

Mr. Barker stated that over the past couple of years, staff observed cracking reappearing. As Ms. Wirth mentioned earlier, staff had a trusted contractor already under contract and determined that the timing was appropriate, so a quote was requested, and the work was completed during the summer. Mr. Barker added that the contractor returned to perform paint touch-ups and noted that modern paint-matching technology has improved significantly. Mr. Barker concluded by stating that staff plans to add a project within the next year or two to repaint the entire reservoir.

Dr. Kraft made the following motion:

I move that the Committee approve and forward to the Board for approval, Change Order No. 2 for Project MP-24002 Hansen Basin Painting – Phase II for $35,829.82 to Mongan Painting and Sandblasting, LLC, and authorize the General Manager to execute the Change Order.

Ms. Heley seconded the motion. The Chair asked if there were any questions or comments. Hearing none, the Chair called for a vote. Upon a vote, the motion carried unanimously.

4. Discuss Approval of Change Order No. 1 for Project AC-25008 Kansas and Missouri Presed Pavement Replacement

Mr. Barker explained that the project involved an expansion of the parking lot at the laboratory. An aerial image shown on the screen illustrated the patched area where the lot was expanded, followed by an image showing the near-final condition of the project, noting that striping had not yet been completed at the time of the presentation.

Mr. Barker acknowledged that parking capacity is regularly exceeded, particularly on days when visitors are on site and when multiple projects are active at the plant. A review of the total number of employees who regularly report to the plant confirmed that a parking deficiency exists. In addition, several trucks are currently parked outside, which staff would prefer to accommodate inside during the winter months.

Mr. Barker noted that the project does not resolve all parking challenges but does address a portion of the need. The expansion added ten parking spaces and corrected a grading issue at the corner and within the existing lot. That area previously experienced soft, low spots, and the expansion allowed staff to correct drainage and properly direct runoff into the inlet.

Once that work is finished, the contract should close out by year-end. The contractor performed high-quality work and assisted with additional efforts, including work at the Missouri Presed location, where most of the project occurred, as well as some patching at the Hansen Treatment Plant.

Ms. Heley made the following motion:

I move that the Committee approve and forward to the Board for approval, Change Order No. 1 for Project AC-25008 Kansas and Missouri Presed Pavement Replacement for $52,810.25 to J.M. Fahey Construction Company, and authorize the General Manager to execute the Change Order.

Dr. Kraft seconded the motion. The Chair asked if there were any questions or comments. Hearing none, the Chair called for a vote. Upon a vote, the motion carried unanimously.

5. New Business

None.

6. General Questions & Comments

Mr. Reese recognized the passing of former Board member Mr. Jim Vader and read the following tribute honoring his service:

> On behalf of the WaterOne Board and the entire organization, I am deeply honored to speak today in remembrance of our colleague and friend, Jim Vader.
>
> Jim dedicated his time, his talent, and his heart to this committee, the board, and to the mission of WaterOne. His service was guided by integrity, foresight, and an unwavering commitment to the public good. He understood that our work - ensuring safe and reliable water for every home and business - is a foundation for community life. And he lived that commitment every day he served.
>
> As a board member, Jim brought wisdom, balance, and respect to every discussion. He approached even the most complex challenges with thoughtful insight and a steady hand. His voice carried both reason and compassion, and his leadership helped shape policies that strengthened WaterOne for years to come.
>
> Under his guidance and influence, we advanced projects that will serve future generations, expanded our focus on sustainability, and reaffirmed our responsibility as careful stewards of a vital resource. His work helped build a stronger, more resilient organization - one that continues to reflect his values and his vision.
>
> Jim was more than a colleague. He was a friend, a mentor, and an inspiring example of what it means to lead with humility and purpose. He listened before he spoke, and when he did speak, his words carried weight because they came from a place of genuine care.
>
> Today, as we honor his memory, we also celebrate the tremendous positive impact he left behind. His legacy flows through every decision we make, and every drop of water delivered to the community he loved so deeply.
>
> On behalf of the entire WaterOne family, we extend our deepest gratitude to Jim's family, for sharing him with us, for supporting his service, and for allowing us to be part of his life's work. His influence endures here, and his spirit will always remain a guiding presence in all that we do.

7. Adjournment

Dr. Kraft moved that the meeting be adjourned. Ms. Heley seconded the motion. Upon a vote the motion passed unanimously.

The meeting was adjourned at 7:44 a.m.

Stephanie McAvoy, Operations Committee Secretary

ACTION ITEM SUMMARY

ITEM NUMBER: 3

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Matt Carter, P.E.

SUBJECT:

Discuss Approval of Contract for 2026 Water Main Extension Services

RECOMMENDED MOTION:

I move that the Committee approve and forward to the Board for approval the award of the 2026 Water Main Extension Services Contract to Hettinger Excavating, Inc, the lowest, qualified, responsible, and responsive bidder in the estimated amount of $3,660,249 and authorize the General Manager to execute the contract.

DETAILS:

Pursuant to Kansas Statute 19-3516, this contract requires Board approval for the installation of water mains necessary for replacements, relocations, and general improvements in WaterOne's service territory. This contract is primarily for the installation of water mains necessary for new development. Occasionally, WaterOne will also use this contract to install general improvement mains. No actual work is guaranteed by this contract. For evaluation purposes, bidders are asked to provide unit prices on estimated quantities. These unit prices are then applied to actual quantities when work is assigned to the successful bidder.

This contract strives to minimize the cost of water main installations for the development community while still meeting WaterOne's standards. To encourage the best possible unit pricing, this contract could be extended annually for up to four additional years beyond the first year. It includes provisions for an annual unit price adjustment based on the Kansas City area Engineering News Record (ENR) Construction Cost Index. Either party may terminate the contract if the index does not reflect a fair market adjustment or either party is dissatisfied.

This project was advertised on October 31, 2025, in the Kansas City Star and with QuestCDN. Eight contractors obtained Bidding Documents. Three contractors attended the pre-bid meeting. On December 4, 2025, two bids were received via QuestCDN VirtuBid. The bids were publicly opened and read during a virtual meeting environment. The bid results and the Engineer's Estimate are provided below.

Bidders:	Bid Amount
Hettinger Excavating, LLC	$3,660,249
Infrastructure Solutions, LLC	$4,863,215
Engineer's Estimate	$4,088,853

ACTION ITEM SUMMARY

ITEM NUMBER: 3

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Matt Carter, P.E.

DETAILS (cont'd):

Staff have evaluated all the bids and reviewed the qualifications and references provided by the lowest, qualified, responsible, and responsive bidder. The bid by Hettinger Excavating is 6.6% higher than their bid two years prior and is 14.79% higher than the pricing of our current main extension contractor. Hettinger Excavating, Inc. was previously WaterOne's main extension contractor from 2021 to 2023 and meets or exceeds WaterOne's project requirements. Based on this evaluation, staff recommend award of the 2026 Main Extension Services Contract to Hettinger Excavating, Inc. in the estimated amount of $3,660,249. The notice to proceed is expected to be issued on February 14, 2026, for the first year of the annual contract.

Funding for this contract is from developer/builder contributions for main extensions in new development and from the Transmission & Distribution Capital Fund for WaterOne General Improvement Projects, which is funded by the Water System General Fund.

ACTION ITEM SUMMARY

ITEM NUMBER: 4

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Hanley Barker, P.E.

SUBJECT:

Discuss Approval of Change Order No. 1 for Project MP-25009

RECOMMENDED MOTION:

I move that the Committee approve and forward to the Board for approval Change Order No. 1 for Project MP-25009 O&M Building Roof Replacement for $75,080.50 to Delta Innovative Services, Inc. and authorize the General Manager to execute the Change Order.

DETAILS:

This Action Item requires Board approval due to the disbursement of Master Plan Funds and pursuant to Kansas Statute 19-3516. Board Policy 11 requires any Change Order for a construction project exceeding $25,000 to be approved by the Board.

Change Order No. 1 includes the removal and replacement of the entire roofing, metal decking, and flashing system on the Hansen Plant Analyzer Building, located near the plant entrance. The roof and decking have exceeded their expected life. This facility was constructed in the early 1970's and has had various roof repairs completed over time.

The replacement of the roofing membrane was part of the original scope. However, as the contractor removed the existing ballast and roofing material layers, it was discovered that the underlying metal decking and perimeter supports also required replacement. The metal decking had corroded to the point where it no longer provided sufficient support for personnel who may need to be on the roof for maintenance activities. The contractor applied for a temporary membrane until a proposal for complete replacement could be provided.

Additionally, as a part of this work, the existing lighting fixtures and conduits will be replaced with upgraded LED fixtures. This is necessary as the conduit and fixtures are attached to the underside of the metal decking and the support structure that will be impacted during the work.

The contractor is currently scheduled, weather permitting, to begin this work in mid-January and should be completed within a few weeks of the start date.

This work is to be charged to Project MP-25009, which is a Master Plan project and funded from the Master Plan Capital Fund, which includes Bond Proceeds, System Development Charges, and Water System General Funds.

ACTION ITEM SUMMARY

ITEM NUMBER: 5

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Hanley Barker, P.E.

SUBJECT:

Discuss Approval of Contract for Projects MP-25004 and AC-26750

RECOMMENDED MOTION:

I move that the Committee approve and forward to the Board for approval the Contract for Project MP-25004 Hansen Phase IV Basin Painting, and Project AC-26750 Facility 2 South Wash Water Interior Painting to Envirologics, LLC., the lowest, qualified, responsible, and responsive bidder, in the amount of $1,031,395 and authorize the General Manager to execute the Contract; and to authorize the approval of funds to support project delivery in the not to exceed amount of $10,000.

DETAILS:

This Action Item requires Board approval due to the disbursement of Master Plan Funds and pursuant to Kansas Statute.

This bid includes two projects, MP-25004 and AC-26750, which were combined into one contract due to their similar scope.

The purpose of Project MP-25004 is to remove and replace the existing coating system on the submerged steel surfaces of Primary Basin No. 8 and Final Basin No. 5. The existing coating system was applied in 2012 and has reached its expected 15-year service life. Minor structural repairs will be completed before the new coating application.

The purpose of Project AC-26750 is to remove and replace the existing interior coating of the Facility 2 South Wash Water Tank. The existing coating system was applied in 2005 and has surpassed its expected 15-year service life.

The project was advertised on November 21, 2025, with the Kansas City Star and with QuestCDN. Site visits were conducted with four potential bidders. On December 18, 2025, three bids were received via QuestCDN VirtuBid. The bids were publicly opened and read during a virtual meeting environment. The bid results and Engineer's Estimate are provided below.

Bidders:	Bid Amount
Envirologics, Inc., Kansas City, MO	$ 1,031,395
Mongan Painting & Sandblasting, Ft. Scott, KS	$ 1,635,715
TMI Coatings, LLC, St. Paul, MN	$ 4,360,000
Engineer's Estimate	$ 1,625,000

The total combined budget for both projects is $2,368,730 and includes the inspection services described below.

ACTION ITEM SUMMARY

ITEM NUMBER: 3

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Hanley Barker, P.E.

DETAILS (cont'd):

As a part of the quality control efforts required to ensure the contractor is properly fulfilling the requirements of the contract, WaterOne intends to hire a specialized consultant to provide onsite inspection services. A Request for Proposal will be issued in 2026, prior to the work starting in the Fall, to secure the services. The cost for these services is estimated to be $250,000 or less.

Staff have reviewed the qualifications and references provided by the low bidder. Based on this evaluation, staff recommends award of contract to Envirologics, Inc.

The tentative construction schedule for the basin painting allows for the work to occur over the fall/winter period in 2026/2027 and 2027/2028. The work related to the wash water tank is scheduled to occur in the spring of 2026.

Annual Capital projects are funded by the Water System General Fund. Master Plan projects are funded from the Master Plan Capital Fund which includes Bond Proceeds, System Development Charges, and Water System General Funds.

ACTION ITEM SUMMARY

ITEM NUMBER: 6

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Hanley Barker, P.E.

SUBJECT:

Discuss Approval of Amendment No. 17 to the Black & Veatch Agreement

RECOMMENDED MOTION:

I move that the Committee approve and forward to the Board for approval Amendment No. 17 to the Black & Veatch Agreement for Engineering Services for the 2026 Master Plan and authorize the General Manager to execute the Amendment. The estimated cost to perform these additional services is $723,000 and the total combined billing limit will be increased by this amount.

DETAILS:

Board Policy #11 requires Board approval of any amendments to contracts previously approved by the Board.

A Master Plan is a comprehensive, long-term strategy that guides the future growth, development, and management of WaterOne's infrastructure. Several factors can influence the Master Plan, most notably population trends, economic growth projections, emergency operations considerations, and environmental impacts.

WaterOne typically reviews and updates the Master Plan every five years to ensure it remains current and responsive to evolving conditions. This cyclical process has served WaterOne well, providing flexibility and adaptability as conditions change. The most recent Master Plan update began in late 2021 and was approved by the Board in January 2023.

The WaterOne Sustainability Assessment conducted in 2025 established a Roadmap outlining pathways to achieve sustainability goals. Key Roadmap goals related to annual water use, fleet infrastructure, onsite renewable energy, greenhouse gas emissions, and climate resiliency will be integrated into the Master Plan to advance WaterOne's sustainability initiatives.

The Master Plan will identify necessary modifications to existing facilities, evaluate the need for additional facilities, and determine the appropriate timing for future construction based on the most current data. As a result, some projects may be delayed, while others may be accelerated to best align with updated priorities and conditions.

The description of engineering services in Amendment No. 17 for the 2026 Master Plan includes the following:

- Project meetings between Staff and B&V
- Preparation of Data Request Memorandum
- Project initiation meeting
- Monthly project status meetings - (10) anticipated
- Evaluate the Water Treatment Facilities and Distribution System

ACTION ITEM SUMMARY

ITEM NUMBER: 6

DATE: January 9, 2026

FROM: Bob Reese
Michelle Wirth, P.E.
Hanley Barker, P.E.

DETAILS (cont'd):

- Update the Distribution System Hydraulic Model
- Evaluate On-Site Renewable Energy and Greenhouse Gas Emissions
- Prepare Integrated Water & Sustainability Master Plan Recommendations and Report
- Operations Committee and/or Board Presentations

This update starts in January 2026 and is currently planned to be presented to the Board for acceptance in May 2027.

It is recommended that Amendment No. 17, a copy of which is attached, be approved. The Amendment estimates the costs to perform these services at $723,000. Staff have reviewed the cost estimates for the various activities provided by Black & Veatch and find them reasonable. A summary of past amendments and this proposed Amendment No. 17 to the 2023 Agreement for Engineering Services and General Engineering Services, reflecting a running total of the combined billing limit, is attached.

The 2026 Master Plan will be funded from water rates, and the cost will be amortized to operating expenses over the next five years.

Master Plan projects are funded from the Master Plan Capital Fund, which includes Bond Proceeds, System Development Charges, and Water System General Funds.

JIM WINGER
BLACK & VEATCH CORPORATON
Associate Vice President, Governments & Communities
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January 13, 2025

Water District No. 1 of Johnson County
2023 Agreement for Engineering Services

B&V Project 909547.0022

Amendment No. 17 – 2026 Master Plan

Ms. Shaun Pietig
General Manager
Water District No. 1 of Johnson County
10747 Renner Boulevard
Lenexa, Kansas 66219-9624

Ms. Pietig,

We are submitting this Amendment No. 17 in accordance with the terms of our Agreement for Engineering Services (2023 Agreement for Engineering Services and General Engineering Services) dated May 11, 2023. This Amendment No. 17 includes the development of the 2026 Master Plan.

The general description of the services to be provided under this Amendment No. 17 for the 2026 Master Plan is as follows:

General

1. Project Management & Administration. Conduct project management and administration services including regular communications with WaterOne; supervision and coordination of the services; the development and implementation of a work plan; the development and execution of a quality control/quality assurance plan; and the preparation of monthly invoices, project status reports and supporting documentation.

2. Preparation of Data Request Memorandum. Prepare a data request memorandum that summarizes the information and data required to perform the services. Transmit a copy of the data request memorandum to WaterOne. Review and compile the information and data received.

3. Project Initiation Meeting. Conduct a project initiation meeting to review the data request memorandum and the available data/information; discuss the project execution plan (schedule) and the staffing plan; and discuss project success factors.

4. Monthly Project Status Meetings. Conduct monthly project status meetings with WaterOne to exchange information; provide progress updates; and address questions that arise. Prepare and distribute meeting notes. It is anticipated that a total of ten (10) project status meetings will be conducted. Additional meetings and workshops will be conducted as identified in the tasks associated with each chapter of the Master Plan.

5. Prepare Master Plan Report. A Master Plan Report will be prepared to provide WaterOne with a comprehensive long-range plan for capital improvements to ensure demands are met with a safe, reliable and high quality water supply through 2066 (40 year planning horizon) and to ensure that WaterOne's sustainability goals are met through 2050. The proposed Master Plan chapters and the tasks associated with each chapter are identified herein. An executive summary will be incorporated into the final Master Plan Report.

6. Distribution System Hydraulic Model. The distribution system hydraulic model will be transmitted to WaterOne at the completion of primary Master Plan milestones (ie: following completion of the model calibration activities and other milestones as requested by WaterOne). The final distribution system hydraulic model and all supporting documentation will be provided to WaterOne immediately following the completion and submittal of the final Master Plan Report.

7. Operations Committee and/or Board Presentations. Present the preliminary conclusions and recommendations of the Master Plan to the Operations Committee and the Board at major milestones selected by WaterOne staff and at the completion of the project. It is anticipated that three (3) presentations to the Operations Committee and/or Board will be conducted.

Study Area Characteristics (Chapter 1)

The characteristics of WaterOne's service area will be established and documented including the expanded service area limits (incorporation of the City of Spring Hill), the limits of each service level (pressure zone), the limits of U.S. Census tracts, historical population, population projections by planning area and the identification of areas with a high potential for rapid growth.

1. Review Mid-America Regional Council (MARC) data, Wichita State University Center for Economic Development and Business Research (CEDBR) data, 2025 U.S. Census tract and block data (as available) and new customer service connection data. The purpose of this task will be to review and adjust MARC population projections, if

deemed appropriate, and to subdivide tract population projections into more discrete areas, such as block groups or blocks. This process will involve the following tasks:

a. Contact the Mid-America Regional Council (MARC) and the Wichita State University Center for Economic Development and Business Research (CEDBR) and obtain the most recent population and employment projections for Johnson County.

b. Compare the historic and current population projections based on the following information:

- U.S. Census block spatial data (2025 as available).
- Intermediate Census estimates for Johnson county.
- CEDBR population projections.
- Service connection information by user-class.

Develop a breakdown of the historic annual customer service connections, by user-class, for Census blocks, block-groups or tracts as deemed appropriate. Compare the past projections developed by MARC and the CEDBR with the estimated population served based on the number of service connections. Conduct a meeting with WaterOne to review the data and collaborate on the approach for establishing population projections within the Master Plan planning horizon (2026 to 2066).

2. Obtain and review the most recent Comprehensive Land Use Plans developed by developing Cities within WaterOne' service area to establish an understanding of planned future development.

3. Based on the information obtained and evaluated in Task Nos. 1 & 2, establish population projections by planning area (service level) that will be used to develop demand projections from 2026 to 2066.

4. Prepare and transmit a draft of Chapter 1 – Study Area Characteristics. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

5. Prepare a final version of Chapter 1 – Study Area Characteristics that incorporates the comments received at the review meeting.

Water Requirements (Chapter 2)

Demand projections (average day, maximum day and maximum hour) will be developed based on two alternative scenarios including: 1) Long-term and near-term water use characteristic trends remain unchanged and 2) The implementation of water conservation programs and actions result in a reduction in total annual per capita consumption to meet the water conservation goals and a reduction in average day to maximum day and average day to maximum hour peaking factors.

The water conservation sustainability goals are as follows:

- Maintain current average annual water usage (gallons per capita per day) through 2035.

- Achieve a 10% reduction in the average annual water usage 2050.

1. Update and evaluate water use characteristic trends (long-term and short-term) for each service level and for the system overall based on metered sales data. Perform a statistical analysis of the water use characteristic trends. The following peaking factors and hourly peaking characteristics will be established:

    a. Residential unit average day usage.

    b. Maximum day to average day peaking factor.

    c. Maximum hour to average day peaking factor.

    d. Diurnal hourly peaking characteristics by service level for average day and maximum day.

2. Review the process that has been developed by WaterOne staff to evaluate the system's peaking characteristics in discrete areas across the system. Evaluate the process used to disaggregate indoor usage vs. outdoor usage and to capture this trend year-over-year for future planning efforts. This task will include a workshop with WaterOne staff to determine the appropriate method to classify and delineate usage characteristics by service type, meter size, and planning area.

   Obtain and evaluate AMI data to develop hourly peaking characteristics from 2025 for a three day period for the following demand conditions:

a. Minimum demand conditions (dates to be established in collaboration with WaterOne for the period of November through March)

b. Average demand conditions (dates to be established in collaboration with WaterOne for the months of April, May, and October)

c. Maximum demand conditions (dates to be established in collaboration with WaterOne for the period of July through September).

3. Contact peer utilities/cities in the mid-west to gain insight on non-potable water reuse financial programs that have been implemented and the success of the programs. Identify and document alternative non-potable water reuse programs for consideration to enhance water conservation.

4. Evaluate the potential impact (reduction) in the average day to maximum hour peaking factor in the South Booster Serh Service Level resulting from a slight reduction in system pressure during peak hour demand periods. In collaboration with the Operations staff, the assessment will include the development of an operational protocol and implementation of a full-scale test. The opportunities, risks, feasibility, results and conclusions will be documented.

5. Based on water production and metered sales data, update the non-revenue water characteristic trend.

6. Based on metered sales data, update historic ratios for residential demand to total demand.

7. Review and discuss the wholesale agreement with Rural Water District No. 7 to establish supply rates. Discuss the near-term and long-term potential for the wholesale supply to be increased. The wholesale supply will be represented in the hydraulic distribution model as a point-load.

8. Conduct a meeting to collaborate and select the appropriate values to be used for establishing demand projections from 2026 through 2066 including residential per capita consumption; the percentage for residential vs. non-residential demand; the non-revenue water percentage; maximum day to average day peaking factor; maximum hour to average day peaking factor; and the diurnal hourly peaking characteristics.

9. Develop the demand projections. As stated herein, demand projections (average day, maximum day and maximum hour) will be developed based on two

alternative scenarios including: 1) Long-term and near-term water use characteristic trends remain unchanged and 2) The implementation of water conservation programs and actions result in a reduction in total annual per capita consumption to meet the water conservation goals and a reduction in average day to maximum day and average day to maximum hour peaking factors. Water demand projections for a design (hot-dry) year will be determined for the current year and for 5-year increments through 2066.

10. Develop an order-of-magnitude projection for the build-out demands for the current service area. The order-of-magnitude projection will be based on available developable land and an assumed development type and density.

11. Based on the updated maximum day demand projections, develop an implementation schedule using the standard engineering analysis for water supply and treatment facility expansions.

12. Based on the updated maximum day demand projections, perform a statistical analysis to quantify the risk associated with demands exceeding the supply and treatment capacity. The analysis will include two levels of risk as follows: 1) Level 1 is the risk that the unrestricted water demands will exceed the supply and treatment capacity and, therefore, WaterOne will need to impose partial water use restrictions, most likely an odd-even house number restriction and 2) the risk that even after implementing partial water use restrictions, WaterOne is still not able to meet water demands and it becomes necessary to impose total outdoor water restrictions.

13. To facilitate the establishment of system development charges (SDCs) by WaterOne's Finance staff using the Equity Method as described in AWWA's M1 Manual (Principles of Water Rates, Fees and Charges), develop 5/8" meter equivalents for the maximum day and maximum hour projections.

14. Prepare and transmit a draft of Chapter 2 – Water Requirements. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

15. Present the population and water demand projections to the Operations Committee and/or the Board.

16. Prepare a final version of Chapter 2 – Water Requirements that incorporates the comments received at the review meeting or from the Operations Committee and/or Board.

Existing Water Supply and Treatment Facilities (Chapter No. 3)

The water supply and treatment facilities which are existing, under construction or currently being designed will be documented.

1. Update the written description, figures and tables that document all water supply and treatment facilities. The update will incorporate capital improvements that have been completed following the 2021 Master Plan (Hansen Water Treatment Plant Facility 1 – Phase I Improvements and the Missouri River Intake HVAC Improvements); capital improvements that are currently being implemented (Wolcott Horizontal Collector Well No. 2, Lime Residuals Treatment Facility No. 10, Missouri River Settled Water Pumping Unit and Hansen Water Treatment Plant - Facility 2 North and South High Service Pumping Unit Adjustable Frequency Drive Replacement, and the Missouri River Intake Copper Ion Generator System); and capital improvements that are in the design phase (Hansen Water Treatment Plant Facility 1 & 2 Chemical Storage & Feed System Improvements – Phase II and the Kansas River Wellfield - Vertical Wells project).

2. Provide a summary of the Hansen Water Treatment Plant – Facility 1 Assessment of Rated Capacity that was performed as part of the 2023 Water System Master Plan and the conclusion to de-rate the capacity of Facility 1. The plan to expand the Wolcott Water Treatment Plant (Phase VB) to off-set the derating of the Hansen Water Treatment Plant – Facility 1 will be addressed in Chapter 4 – Water Supply and Treatment Facility Recommended Improvements.

3. Prepare and transmit a draft of Chapter 3 – Existing Water Supply and Treatment Facilities. Conduct a meeting to review Chapter 3 and address questions that arise.

4. Prepare a final version of Chapter 3 – Existing Water Supply and Treatment Facilities that incorporates the comments received at the review meeting.

Water Supply & Treatment Facility Recommended Improvements (Chapter 4)

1. Establish a phasing plan (schedule) for all water supply & treatment facility improvements required to meet projected demands. As stated herein, demand projections (average day, maximum day and maximum hour) will be developed based on two alternative scenarios including: 1) Long-term and near-term water use characteristic trends remain unchanged and 2) The implementation of water conservation programs and actions resulting in a reduction in total annual per capita

consumption to meet the water conservation goals. Two separate capital improvement programs (schedules) will be developed for the alternative scenarios.

2. Conduct a workshop to discuss opportunities to enhance the resiliency of the water supply, treatment and distribution facilities. Identify and document capital improvements that will result in a more resilient system. Establish a phasing plan (schedule) for all water supply, treatment and distribution facility improvements to enhance resiliency. The description of the improvements and the phasing plan for distribution facility capital improvements will be incorporated into Chapter 7 – Distribution System Improvements.

3. Develop a conceptual opinion of probable project cost for the recommended water supply and treatment facilities to meet projected demands. Develop a conceptual opinion of probable project cost for all recommended water supply, treatment and distribution facility improvements to enhance system resiliency. The conceptual opinion of probable project cost for distribution facility capital improvements will be incorporated into Chapter 7 – Distribution System Improvements.

4. Establish a phasing plan (schedule) for lime residuals treatment facilities (monofills) required to accommodate the water treatment facility residuals. As stated herein, demand projections (average day, maximum day and maximum hour) will be developed based on two alternative scenarios including: 1) Long-term and near-term water use characteristic trends remain unchanged and 2) The implementation of water conservation programs and actions resulting in a reduction in total annual per capita consumption to meet the water conservation goals. Two separate capital improvement programs (schedules) for additional lime residuals treatment facilities will be developed for the alternative scenarios.

5. Develop a conceptual opinion of probable project cost for the lime residuals treatment facilities (monofills).

6. Prepare and transmit a draft of Chapter 4 – Water Supply & Treatment Facility Recommended Improvements. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

7. Prepare a final version of Chapter 4 – Water Supply & Treatment Facility Recommended Improvements that incorporates the comments received at the review meeting.

Existing Distribution System Facilities (Chapter 5)

The water distribution system facilities which are existing or currently under construction will be documented.

1. Update the written description, figures and tables that document all water distribution facilities. The update will incorporate capital improvements that have been completed following the 2021 Master Plan (Wyss Pumping Station and Reservoir Engine Generator Facility); and capital improvements that are currently being implemented (Wyss Pumping Station & Reservoir Expansion).

2. Prepare and transmit a draft of Chapter 5 – Existing Distribution System Facilities. Conduct a meeting to review Chapter 5 and address questions that arise.

3. Prepare a final version of Chapter 5 – Existing Distribution System Facilities that incorporates the comments received at the review meeting.

Distribution System Evaluation (Chapter 6)

Evaluations (desk-top assessments and distribution system hydraulic model extended period simulations) will be performed to assess the schedule for capital improvements to meet demands.

1. Conduct a desk-top assessment of the pumping and storage capacity requirements to establish potential phasing of facilities through 2066. The desktop assessment will include the following:

    - Required storage volume for the overall system within each service level for equalization, emergency storage and fire protection.

    - Required pumping capacity for the overall system and by service level for equalization, emergencies and fire protection.

    - Assess the impact on the capital improvements schedule based on a reduction in the peaking factors (maximum day to average day and maximum hour to average day) for the South Booster and Northwest RPA Service Levels. Collaborate with WaterOne on an attainable reduction in the peaking factors.

2. Update the hydraulic distribution system model to current year demand conditions and current system settings for PRVs. It is anticipated that the current system infrastructure is already represented in the model since the model has been maintained and frequently updated by WaterOne staff. Based on the AMI data analysis described in Water

Requirements (Chapter 2) Task 2, perform updates to the model demand allocation to represent conditions for a spatial distribution of demand during minimum demand conditions, average day demand conditions, and maximum day demand conditions.

Develop base year (2026) extended period simulation (EPS) scenarios for the following conditions:

- Maximum Day (includes maximum hour)
- Average Day
- Low/Minimum Demand Day (winter demand)

Update future hydraulic distribution system modeling scenarios with preliminary phasing of storage and pumping capacity improvements established in Task 1.

Water age modeling for the base year (2026) will also be conducted for the low/minimum day demand, the average day demand and the maximum day demand.

3. Perform a 24-hour model calibration from the same period that demand conditions are evaluated from the AMI data for maximum day demands in 2025. Gather all hourly SCADA data for distribution system flows, tank levels, pressures, valve status, and pump on/off/speed plus any remote monitoring pressures (referred to previously as Radcom data) or AMI master meter flows (i.e. PRV flows into reduced pressure areas or to large use/wholesale customers) from this 24-hour period. Elevation datum for all pressure monitoring locations to convert system pressures to a hydraulic grade line will be requested from WaterOne. Provide comparison figures of model results against the observed results and develop a write-up of the calibration process and results. Any large deviations between the observed data and the model results will be identified and presented to WaterOne. Follow-up field testing or any additional work to resolve model discrepancies is not included in the level of effort for this task.

4. Conduct EPS distribution system modeling for maximum day demand for year 2026, 2035, and 2045 to evaluate system operation and performance (average day and minimum day scenarios will not be developed for 2035 and 2045 modeling scenarios but only for the base year). Based on the model results, refine the phasing for storage and pumping capacity improvements and determine the distribution system pipeline improvements, improvement trigger category (i.e. low pressure, development in area, conveyance) and phasing.

5. Identify the capital improvements plan (schedule) for all recommended distribution facilities and pipelines from 2026 through 2066.

6. Develop a conceptual opinion of probable project cost for all recommend distribution facilities and pipelines.

7. Prepare comprehensive descriptions, figures and data tables related to all recommended distribution facility and pipeline capital improvements and service level boundary changes from 2027 through 2031 (5-year period prior to completion of next Master Plan) and any significant projects recommended through 2037 (10-year period). The descriptions will include the project driver and the benefit associated with each improvement to facilitate the development of Action Item Summaries (AIS).

8. Prepare and transmit a draft of Chapter 6 – Distribution System Evaluation. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

9. Prepare a final version of Chapter 6 – Distribution System Evaluation that incorporates the comments received at the review meeting.

Distribution System Improvements (Chapter 7)

1. Establish a phasing plan (schedule) for all water distribution facilities and transmission and distribution main improvements. As stated herein, demand projections (average day, maximum day and maximum hour) will be developed based on two alternative scenarios including: 1) Long-term and near-term water use characteristic trends remain unchanged and 2) The implementation of water conservation programs and actions resulting in a reduction in total annual per capita consumption to meet the water conservation goals. Two separate capital improvement programs (schedules) will be developed for the alternative scenarios.

2. Develop a conceptual opinion of probable project cost for the recommended water distribution facilities and transmission and distribution main improvements.

3. Prepare and transmit a draft of Chapter 7 – Distribution System Improvements. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

4. Prepare a final version of Chapter 7 – Distribution System Improvements that incorporates the comments received at the review meeting.

South Booster Service Level – Booster Pump Operational Assessment (Chapter 8)

The Wyss and Nall Pumping Stations are equipped with pumping units (Booster Pumps) that are able to directly transfer water from the Crouthers System into the South Booster System. The facilities were designed to use the Reservoir Pumps in combination with the Booster Pumps to meet maximum day and maximum hour demands within the South Booster Service Level. The Booster Pumps were also intended to be used to meet winter day and average annual day demands within the South Booster Service Level. The use of the Booster Pumps at these pumping stations to meet winter day and average annual day demands will reduce power consumption, reduce greenhouse gas emissions and reduce electric utility costs. However, it is imperative that water quality within the reservoirs be maintained. Water quality degradation can occur with water age. This activity establishes the framework for an operational plan that maximizes the use of the Booster Pumps at the Nall and Wyss Pumping Stations while ensuring that the water quality is maintained.

1. Conduct two meetings with the Operations staff to discuss the current standard operating procedure (seasonal) for meeting the demands within the South Booster Service Level using the Nall, Quivira, 211th Street and Wyss Pumping Station and Reservoirs.

2. Collaborate with WaterOne to develop a finished water quality testing protocol for the Hansen Water Treatment Plant – Facility 1 & 2 and the Wolcott Water Treatment Plant. The finished water quality testing, which will be performed by WaterOne, would establish a general understanding of the chloramine residual decay rates and disinfection byproduct (TTHM and HAA5) formation rates on a seasonal basis accounting for changes in finished water quality and temperature. The actual chloramine residual decay rates and disinfection by-product formation rates can be influenced by other factors within the distribution system. The results of this testing will be used as a basis for establishing a reasonable seasonal water age and subsequently, allow for the establishment of the frequency in which the water within the Nall, Quivira, 211th Street and Wyss Reservoirs needs to be refreshed.

3. In collaboration with WaterOne, develop diurnal demand conditions for conducting source trace modeling and water age modeling. It is anticipated that the modeling will occur during the fall, winter and spring periods when there is not a need to use the Reservoir Pumps to meet demands in the South Booster Service Level.

4. Consult with WaterOne's Operations staff to establish a set of controls for the Nall, Quivira, 211th Street and Wyss Pumping Station system operating conditions (pumps, control valves, tank levels).

5. Using the hydraulic distribution system model, perform a source trace analysis of the supply from the Hansen Water Treatment Plant – Facility 1 & 2 and the Wolcott Water Treatment Plant to ascertain the typical blend within the Nall, Quivira, 211th Street and Wyss Reservoirs.

6. Using the hydraulic distribution system model and the operating parameters established in Task 4, perform water age modeling.

7. Conduct a meeting with WaterOne to review the results of the source trace modeling and water age modeling.

8. If the water age is not less than or equal to the reasonable water age values established in Task 2, collaborate with WaterOne's Operations staff on adjusting the set of controls established in Task 4 and conduct additional water age modeling. This process will be iterative until the water age is less than or equal to the reasonable water age values established in Task 2.

9. Prepare and transmit a draft of Chapter 8 – South Booster Service Level - Booster Pump Operational Assessment. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

10. Prepare a final version of Chapter 8 – South Booster Service Level – Booster Pump Operational Assessment that incorporates the comments received at the review meeting.

Transportation & Fleet – EV Charging Infrastructure (Chapter 9)

A capital improvements program will be developed for the installation of electric vehicle (EV) charging infrastructure at the Administrative Office/Administrative Warehouse and at the Hansen Water Treatment Plant to meet the following goals related to fleet conversion to ZEVs:

- Achieve 100% of light-duty vehicles in the fleet being hybrid or zero-emission vehicles (ZEV) by 2040.

- Achieve 100% of all light-duty and medium-duty vehicles in the fleet being ZEV by 2050.

    1. Conduct a meeting to review the anticipated fleet conversion plan and schedule developed by WaterOne from 2026 to 2050. The anticipated fleet conversion plan will be based on the EV charging infrastructure being in-place to support the

anticipated number of EV vehicles purchased. Discuss the required/desired charger types and the practices for charging the EV vehicles.

2. Based on the fleet conversion plan and the established practice for charging EV vehicles, develop a plan to install EV charging infrastructure at the two facilities. The plan will identify the location and number of EV charging stations, the type of EV charging station and the implementation schedule.

3. Based on the EV charger infrastructure plan (Task 2), evaluate the electrical improvements required at each facility. Develop a conceptual site plan (aerial) for the EV charging stations and a power distribution functional diagram. Develop a conceptual opinion of probable project cost for the capital improvements.

4. Prepare and transmit a draft of Chapter 9 – Transportation and Fleet EV Charging Infrastructure. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

5. Prepare a final version of Chapter 9 – Transportation and Fleet EV Charging Infrastructure that incorporates the comments received at the review meeting.

<u>On-Site Renewable Energy (Chapter 10)</u>

An evaluation will be performed to identify and evaluate alternatives to meet the following goals related to renewable on-site energy:

- Produce 20% of the electrical demand with on-site renewable energy by 2035 (within limitations of electric utility and/or regulatory restrictions).

- Produce 40% of electrical demand with on-site renewable energy by 2050 (within limitations of electric utility and/or regulatory restrictions).

Evaluation criteria will be established (financial & non-financial) and the rating and ranking of alternatives will be performed based on a triple bottom line assessment. A conceptual opinion of probable project cost will be developed for each alternative. A capital improvements plan (schedule) will be established.

1. Based on the demand projections developed in Chapter 2 – Water Requirements, develop an estimate of the total power consumption (kWh per year) for the water supply, treatment and distribution facilities for years 2030, 2035 and 2050. In addition to the total power consumption related to water supply, treatment and distribution facilities, an estimate of the power consumption (kWh per year) for the

administrative office, the administrative warehouse, fleet buildings and electric vehicle (EV) charging stations will be developed for years 2030, 2035 and 2050.

2. Based on the total estimated power consumption in 2030, 2035 and 2050, identify the generation capacity (kWh per year) for on-site renewable energy (solar and hydroelectric power) required to meet the goals.

3. Prepare a tabulation of the estimated annual average day power demand (kW) and annual power consumption (kWh per year) for the Hansen Water Treatment Plant, the Wolcott Water Treatment Plant and the Administrative Office/Administrative Warehouse) in 2030, 2035 and 2050.

4. Identify alternatives for on-site renewable power generation to meet the goals. A total of two (2) alternatives are anticipated. For each alternative, develop a conceptual aerial site plan (solar arrays), an operating floor plan depicting the location of equipment and systems (batteries, control panels, in-line hydroelectric turbines, transformers and paralleling switchgear) and power distribution functional diagram. Develop a conceptual opinion of probable project cost for each alternative.

5. Establish non-economic evaluation criteria and level of importance factors (weighting factor) for each criteria. Conduct a collaborative workshop to perform a triple bottom line analysis to rate and rank each alternative.

6. Based on the results (ranking and subsequently the prioritization of the alternatives) of the triple bottom line analysis, establish an implementation schedule for the on-site renewable energy capital improvements to meet the goals.

7. Prepare and transmit a draft of Chapter 10 – On-Site Renewable Energy. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

8. Prepare a final version of Chapter 10 – On-Site Renewable Energy that incorporates the comments received at the review meeting.

Greenhouse Gas Emissions (Chapter 11)

An evaluation will be performed to identify and evaluate alternatives to ensure the following sustainability goals are met:

- Net-zero emissions from electrical power demand by 2030.
- Net-zero emissions (organization wide) by 2050.

Evaluation criteria will be established (financial & non-financial) and the rating and ranking of alternatives will be based on a triple bottom line assessment. The cost to obtain Renewable Energy Credits (RECs) and a conceptual opinion of probable project cost for capital improvements will be developed for each alternative. A capital improvements plan (schedule) will be established.

1. Based on the year 2030 estimated annual electrical power consumption (Reference On-Site Renewable Energy – Chapter 10, Task 1) and the on-site renewable energy capital improvements program (Reference On-Site Renewable Energy – Chapter 10, Task 6), identify the Renewable Energy Certificates (RECs) that will need to be purchased to meet the year 2030 goal if the implementation of additional on-site renewable energy facilities is not deemed feasible within the limited timeframe.

2. Based on the year 2050 estimated annual electrical power consumption (Reference On-Site Renewable Energy – Chapter 10, Task 1) and the on-site renewable energy capital improvements program (Reference On-Site Renewable Energy – Chapter 10, Task 6), identify alternatives that may include additional on-site renewable energy capital improvements, the purchase of RECs or a combination of additional on-site renewable energy capital improvements and the purchase of RECs. The purchase of RECs to meet the goals will likely be required to comply with the electric utility's requirements related to the Renewables Direct Program and on-site renewable power generation.

3. Identify additional alternatives for on-site renewable power generation at the Hansen Water Treatment Plant and the Wolcott Water Treatment Plant to meet the 2050 GHG emissions goal. A total of two (2) additional alternatives are anticipated. For each alternative, develop a conceptual aerial site plan (solar arrays), an operating floor plan depicting the location of equipment and systems (batteries, control panels, transformers and paralleling switchgear) and power distribution functional diagram. Develop a conceptual opinion of probable

project cost for each alternative. The alternatives may include a combination of on-site renewable power generation capital improvements and purchasing RECs.

4. Establish non-economic evaluation criteria and level of importance factors (weighting factor) for the economic and non-economic criteria. Conduct a collaborative workshop to perform a triple bottom line analysis to rate and rank each alternative.

5. Based on the results (ranking and prioritization of the alternatives) of the triple bottom line analysis, establish an action plan (purchasing RECs) and an implementation schedule for the on-site renewable energy capital improvements to meet the 2050 GHG emissions goal.

6. Prepare and transmit a draft of Chapter 11 – Greenhouse Gas Emissions. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

7. Prepare a final version of Chapter 11 – Greenhouse Gas Emissions that incorporates the comments received at the review meeting.

Climate Change Resiliency (Chapter 12)

WaterOne has taken a proactive approach to the planning, design, and implementation of water supply, treatment and distribution facilities, and buried infrastructure (transmission and distribution mains) over the past 50 years to ensure system resilience. However, with disruptions predicted to occur more frequently stemming from climate change, supply chain disruptions and other global challenges, it is imperative that WaterOne continue to monitor the ongoing climate change/disruptions; identify potential short-term and long-term risks (vulnerabilities); and identify, evaluate, and implement adaptive and mitigative actions to minimize impacts and further enhance system resilience. The tasks identified below will provide valuable insight to make informed Master Plan and design decisions to enable the successful adaptation and the mitigation of future consequences related to climate change.

1. Document current global climate model projections and provide a summary of the regional impacts including drought, floods, extreme temperature variations, tornados, and other inclement weather events.

2. Document the potential impacts related to water supply, raw water quality, system demands, utility service interruptions, and supply chain interruptions.

3. Based on the American Water Works Association (AWWA) M71 Climate Action Plans – Adaptive Management Strategies for Utilities Manual and the Environmental Protection Agency (EPA) resources, document planning and design concepts for consideration on current and future capital improvement projects.

4. Conduct a meeting to review and discuss planning and design concepts (Task 3) to enhance resiliency from the impacts of climate change and collaborate with staff on potential capital improvements to existing facilities to enhance resiliency.

5. Develop a description and supporting documents and conceptual opinion of probable project cost for capital improvements identified in Task 4 to enhance system resiliency.

6. Prepare and transmit a draft of Chapter 13 – Climate Change Resiliency for review. Conduct a meeting to review the results, conclusions and recommendations and address questions that arise.

7. Prepare a final version of Chapter 13 – Climate Change Resiliency that incorporates the comments received at the review meeting.

The cost for our services will be determined on the basis of the direct salary cost of the personnel engaged in the work times a salary multiplier, plus reimbursement of expenses, plus the cost of outside services all in accordance with the provisions of Attachment B (Compensation) of the Agreement.

The estimated fee associated with developing the 2026 Master Plan is $723,000.

As a result of this Amendment No. 17, the total combined billing limit for the original Agreement shall be increased by $723,000. If WaterOne approves this Amendment No. 17, please sign this letter and return a copy to us for our files.

Ms. Shaun Pietig

B&V Project 909547.0022
January 13, 2026

We appreciate the opportunity to provide additional engineering services to WaterOne. If there are any questions regarding this Amendment No. 17, please contact us.

Very truly yours,

BLACK & VEATCH CORPORATION

Jim Winger
Associate Vice President

On this _____ day of January 2026 WATER DISTRICT NO. 1 OF JOHNSON COUNTY, KANSAS, agrees to and accepts the terms of this Amendment No. 17 as outlined herein, and authorizes BLACK & VEATCH CORPORATION to proceed with this work.

WATER DISTRICT NO. 1
OF JOHNSON COUNTY, KANSAS

By _____
Shaun Pietig
General Manager

Summary of Amendments for 2023 Agreement for Engineering Services

Amendment No.	Date Signed	Description	Contract/ Amendment Amount	Accumulative Total Combined Billing Limit	B&V Billing Per Amendment To Date	% B&V Fee of Est. Const. Cost
Original Contract	1-May-23	Original Agreement for 2023 Engineering Services				
		MP-23008 - MO River Intake Copper Ion Generator System, Design and Bidding	$123,995	$123,995	$115,734	10.4%
		MP-22401 - Hansen WTP F1 Chemical Storage & Feed System Improvements, Design and Bidding	$774,200	$898,195	$837,191	21.7%
1	24-Jul-23	MP-18003 Hansen WTP Lime Residuals Treatment Facility No. 10, Design Services	$68,960	$967,155	$60,742	13.8%
2	14-Aug-23	MP-45001 191st & Hedge Lane and MP-60001 170th & Metcalf PS&R Site Selection Study	$214,000	$1,181,155	$6,368	NA
3	12-Sep-23	MP-21121 Wolcott Membrane Controls Replacement CP & RES	$201,250	$1,382,405	$60,423	25%
4	12-Sep-23	MP-17002 Wolcott Horizontal Collector Well No. 2 - Caisson & Laterals CON & RES	$456,225	$1,838,630	$323,617	7%
5	12-Sep-23	MP-22001 Wyss Pump Station and Reservoir – Phase II & III	$1,248,570	$3,087,200	$646,522	6.2%
6	17-Nov-23	MP-26007 MO River Presed Settled Water Pump Replacement & MP-26008 Hansen WTP F2 HSP Replacement, Design & Pre-Award	$240,630	$3,327,830	$159,745	4.9%
7	14-May-24	MP-22401 Hansen WTP F1 & 2 Chemical Storage & Feed System Impvmts	$490,840	$3,818,670	$546,958	9.0%
8	14-May-24	MP-20008 KS River Wellfield Vertical Wells	$638,250	$4,456,920	$386,997	13.9%
9	13-Sep-24	SRF Funding for MP-17002, MP-17003, MP-20008	$0	$4,456,920	$0	0%
10	16-Oct-24	MP-17003 WHC No. 2 Pump House	$1,310,000	$5,766,920	$299,596	6.6%
11	20-Nov-24	MP-26007 MO River Presed Settled Water Pump Replacement & MP-26008 Hansen WTP F2 HSP Replacement, CON & RES	$310,900	$6,077,820	$38,711	11.4%
12	13-Dec-24	MP-25015 Hansen WTP & Wyss Pump Station Inline Hydroelectric Power Generation Study	$136,995	$6,214,815	$69,579	NA
13	8-Apr-25	MP-18003 Hansen WTP Lime Residuals Treatment Facility No. 10, Construction Phase and Part-Time Resident Engineering Services	$73,675	$6,288,490	$17,900	9.6%
14	20-May-25	MP-19773 SCADA Network Integrator	$296,100	$6,584,590	$0	5.6%
15	9-Jun-25	MP-23008 MO River Intake Copper Ion Generator System, CON & RES	$135,430	$6,720,020	$6,096	7.2%
16	14-Oct-25	MP-22001 Wyss Pump Station and Reservoir – Phase II, CON & RES	$1,738,745	$8,458,765	$0	6.8%
17		2026 Master Plan	$723,000	$9,181,765	$0	NA
			TOTAL Billed to Date		$3,576,179	

*** Complete**