WAUFORD
J. R. Wauford & Company, Consulting Engineers, Inc.
www.jrwauford.com

December 15, 2025

Ms. Valerie Hale, City Manager
City of Crossville
392 North Main Street
Crossville, TN 38555

RE: Request for Proposals
7.0 MGD Membrane Filtration System
Meadow Park Lake Water Treatment Plant
City of Crossville, Tennessee
Wauford Project No. 4698

Dear Ms. Hale:

Three proposals were opened for the subject project at 1:00 PM local time Wednesday, November 19, 2025, at City Hall with the scoring results depicted at the attached Evaluation of Proposals Scoring Sheet. The vendors were scored based on the following criteria:

1) Technical Merits of Proposal
2) Proposed Pricing
3) Timelieness of Delivery Schedule
4) Prior Experience

Evaluation of the "Proposed Pricing" was conducted on a "per square foot of media supplied" basis. Purifics-Cuf® proposes to utilize 26,000 square feet of membrane media at a flux rate of 269 gfd with a total price of $12,650,700 which equates to a price of $486.57 per square foot of media supplied as part of the membrane system. The Purifics-Cuf® system is a closed system and does not have provisions to add additional media to the skids for expansion. Both WesTech Engineering and H2O Innovations proposed to utilize the Nanostone CUF/ Flow membrane system with the ability to expand by adding additional membranes to each train. WesTech Engineering proposes to utilize 82,530 square feet of membrane media in Phase 1 at a flux rate of 208 gfd with a total price of $5,569,387 which equates to a price of $67.48 per square foot of media supplied as part of the membrane system for Phase 1. H2O Innovations proposes to utilize 120,780 square feet of membrane media in Phase 1 at a flux rate of 80 gfd with a total price of $6,818,545 which equates to a price of $56.45 per square foot of media supplied as part of the membrane system for Phase 1. H2O Innovations' proposal utilized a lower flux rate of 80 gfd to develop their pricing proposal.. The actual flux rate to be utilized during design will be determined during the pilot testing. For these reasons, scoring of the proposals was based on a "price per square foot of media". H2O Innovations received the highest score for proposed pricing due to the cost per square foot of media supplied being the lowest at $56.45 per square foot.

2835 Lebanon Pike | P.O. Box 140350
Nashville, Tennessee 37214
(615) 883-3243
Fax (615) 391-3710

908 West Broadway Avenue
Maryville, Tennessee 37801
(865) 984-9638
Fax (865) 983-4327

529 Old Hickory Boulevard, Suite A
Jackson, Tennessee 38305
(731) 668-1953
Fax (731) 668-6809

H2O Innovations of Wilmington, Delaware, represented by Guthrie Sales & Service Company, Inc. of Brentwood, Tennessee was prequalified to submit pricing for the subject project and has obtained the highest total score of 93 as shown on the attached scoring summary sheet. As a result, we recommend that the City of Crossville accept their proposal and enter into a purchase agreement in the amount of $50,000 to perform pilot testing for a new membrane filtration system at Meadow Park Lake Water Treatment Plant.

We appreciate the opportunity to provide engineering services for the City of Crossville and look forward to completing the required pilot testing of the membrane equipment and preparing the preliminary engineering report for this project. If you have questions or comments, do not hesitate to contact me.

Yours very truly,

J. R. WAUFORD & COMPANY,
CONSULTING ENGINEERS, INC.

Matthew K. Rice

Matthew K. Rice, P.E.

Enclosures

cc: Joe Kerley, Director of Water Resources, City of Crossville
Tim Begley, Director of Engineering, City of Crossville
Greg Davenport, P.E., President, Wauford Engineering
Work File

EVALUATION OF PROPOSALS
7.0 MGD MEMBRANE FILTRATION SYSTEM
MEADOW PARK LAKE WATER TREATMENT PLANT
CITY OF CROSSVILLE, TENNESSEE
WAUFORD PROJECT NO. 4698

Evaluation Basis (100 Total Points)	**Aqua-Aerobic Systems**	**H2O Innovations** **Nanostone CUF/Flow**	**WesTech Engineering** **Nanostone CUF/ Flow**	**Purifics-Cuf**
Technical Merits of Proposal (20 points available)	No Submittal	18	16	18
Proposed Pricing (50 points available)	No Submittal	45	40	30
Timelieness of Delivery Schedule (10 points available)	No Submittal	10	10	10
Prior Experience (20 points available)	No Submittal	20	20	17
Total Points Scored		93	86	75

H2O Innovations utilizing Nanostone CUF/Flow has obtained the highest score and is the recommended Vendor.

Notes:

WesTech Engineering utilized a flux rate of 121.8 gfd (pdf pg 27); 120.7 (pdf page 31), and a normalized flux rate of 208.5 gfd @ 20 deg C. On pdf pg 47 WesTech's proposal states that a flux rate of 125 gfd was utilized in lieu of the 80 gfd requirement in the proposal based on a recommendation from Nanostone. WesTech's proposal states that the total membrane area in operation is 66,025 FT^2 with 4 units in operations which equates to 16,506 FT^2 of membrane area per train which is 32 percent less membrane surface area than H2O Innovation's proposal. Each skid is proposed to be supplied with 45 modules in Phase 1 with the ability to expand to 64 modules in Phase 2. When fully expanded to 64 modules, each train will contain 23,475 FT^2 of membrane area. WesTech acknowledged Addendum No. 2, but did not utilize the revised Price Proposal Page 5 of 16. A reduction in points was given for the technical merits of the proposal since a flux rate greater than 80 gfd was utilized.

H2O Innovation's base bid utilized nanostone CUF/Flow membrane technology and the total price for a 7.0 MGD membrane filtration system of $6,818,545 was based on an instantaneous flux of 80 gfd (pdf pg 42), which is consistent with the requirements of the RFP. H2O Innovation's design provides for 24,156 FT^2 of membrane area per train in the initial design with space for 33,672 FT^2 per train with a full rack. Alternate proposals for the Ultressa CPM and Toray HFUG-2020AN were submitted with prices for a 7.0 MGD system of $7,480,095 and $5,042,045 respectively.

Purifics-Cuf provided a total membrane technology price of $12,650,700 for a 7.0 MGD system. The system is proposing a guaranteed performance flux rate of 250 gfd (pdf pg 14) utilizing unsettled or raw transmission water. The system proposes to eliminate the need for flocculation and settling basins via their proprietary dynamic shock technology. The vendor claims that their SiC ceramic membrane can operate at 5X the flux of conventional composite ceramic/ polymeric membranes. The vendor claims that their system will result in a reduction of other capital and operation expenses and there is justification for the higher cost. The pricing is based on three (3) DM54-SRU160-DIT platforms utilizing a flux rate of 269 gfd. Each DM54 has a nominal capacity of 2.0 MGD so a higher flux rate would need to be justified to meet the 7.0 MGD expanded capacity with a N+1 design.

Sign in Sheet – Bid Opening

REQUEST FOR PROPOSALS
7.0 MGD MEMBRANE FILTRATION SYSTEM
MEADOW PARK LAKE WATER TREATMENT PLANT
CITY OF CROSSVILLE, TENNESSEE
WAUFORD PROJECT NO. 4698

PROPOSALS RECEIVED: 1:00 p.m. Central Time, Wednesday, November 19, 2025.

Name	Organization	Email
Matt Rice	Wauford Engineers	mrice@ardurra.com
Brian Lowe	City of Crossville	brian.lowe@crossvilletn.gov
Tim Begley	City of Crossville	tim.begley@crossvilletn.gov
Joe Sanford	BAR	jsanford@bar-enviro.com
Don Cole	City of Crossville	don.cole@crossvilletn.gov
JR	City of Crossville	joe.jerley@crossvilletn.gov
Bailey Walker	City of Crossville	bailey.walker@crossvilletn.gov

Short Form Bid Tabulation

REQUEST FOR PROPOSALS
7.0 MGD MEMBRANE FILTRATION SYSTEM
MEADOW PARK LAKE WATER TREATMENT PLANT
CITY OF CROSSVILLE, TENNESSEE
WAUFORD PROJECT NO. 4698

PROPOSALS RECEIVED: 1:00 p.m. Central Time, Wednesday, November 19, 2025.

BIDDER NAME	Phase 1 – Item A Operation of a Pilot Plant	Phase 1 – Item B Consultation with Engineer during Design	Phase 1 – Item C Annual Operation and Maintenance Agreement Cost after Construction	Phase 2 – Item 1 Total Price for Preparation of Approvable Shop Drawings	Phase 2 – Item 2 Total Price (and unit price per skid) for a complete Membrane Filtration System	Phase 2 – Item 3 Lump Sum Price for field services and commissioning of Membrane System.
Aqua-Aerobic Systems, Inc. Vendor: Templeton & Associates, Inc. 4324 Brogdon Exchange NE, Suite 100 Suwanee, Georgia 30024	no bid	no bid	no bid	no bid	no bid	no bid
H2O Innovations Vendor: Guthrie Sales & Service Company, Inc. 7003 Chadwick Drive, Suite 300 Brentwood, TN 37027	50,000	30,000	25,000 per year	250,000	6,818,545.00	175,000
WesTech Engineering, LLC Vendor: The TDH Company LLC 3225 Shallowford Road, Suite 410 Marietta, Georgia 30062	58,000	24,000	15,000 per year	267,489	5,569,387	107,315
Purifics - Cuf® Vendor: Bar Environmental, Inc. 100 Winner's Circle N, Suite 420 Brentwood, TN 37027	15,000	0	0 per year	0	12,650,700	0