



January 20, 2025

Ms. Marchelle Sossong
Henrico County
Department of Public Utilities
4301 East Parham Road
Richmond, VA 23273

Re: East Side Water Supply Report
County Contract: #2471D

Dear Ms. Sossong:

Whitman, Requardt & Associates, LLP (WRA) is pleased to provide our proposal for engineering services review current and future potential supply options for the GEU pressure zone which is located in the eastern side of the County's distribution system (herein referred to as the project area). The proposal has been developed in accordance with all requirements of WRA's Annual Contract for Engineering Services Contract No. 2471D. Under this proposal, WRA will perform the tasks outlined in the following Scope of Services.

PROJECT UNDERSTANDING

As a result of water outages in Richmond City's system during the week of January 6, 2025 and the resultant service disruptions experienced in Henrico County, the County is reviewing options for increasing water supply and distribution to the County's GEU pressure zone. A presentation will be given to the Henrico County Board of Supervisors to outline the County's response to the recent Richmond water crisis as well as to discuss how the County can become more self-reliant for its water system. WRA will be supporting the County in reviewing short-term, mid-term, and long-term options as well as preparing information for the Board of Supervisors (BOS) meeting.

SCOPE OF WORK

Part 1: PROJECT MANAGEMENT

This part of the Scope of Services includes project management and meetings during the term of the task. A description of the tasks included in Part 1 are summarized as follows:

Project Management and coordination of technical team, in house meetings, County meetings and correspondence throughout the project. For the project, WRA has assumed the following:

1. Collect and assemble resource data related to the following:
 - Plans from the County's existing pump stations impacting the project area
 - SCADA information from the County's system in connection with the water outage
 - Water quality data and construction plans from the current well system.
 - Copies of expired well permits
 - Previous County reports on future planned improvements impacting the project area
2. Project Coordination: 6 weeks at 4 hours/week
3. Meetings: 2 progress/coordination meetings prior to BOS meeting, attendance of the BOS Meeting and 1 follow up meeting after BOS meeting
 - Progress meetings will discuss project progress, coordinate with the County on work items for the meeting and assist in reviewing next steps after the BOS meeting

Part 2: INCREASED WATER SUPPLY REVIEW

WRA will review options to increase water supply to the GEU pressure zone. Improvements will be broken down into short-term, mid-term and long-term time frames. Master plan level cost estimates will be provided for supply alternatives.

1. Available Options: Short-term (less than 6 months)
 - Utilize water model to identify both limitations in the existing water transmission system and potential improvements required to supply the East End from the Henrico Water Treatment Facility (HWTF).
 - Identify short term solutions such as system valving and pipeline improvements to maximum the existing water transmission system.
2. Available Options: Mid-term (6 months to 2 years)

Review the following items to evaluate the ability to increase the available water on an interim basis without significant regional transmission main improvements or major pump station upgrades. This review will include the following:

 - Review existing pump station plans to identify potential upgrades.
 - Review existing construction drawings and water quality data from the County's three existing 1,000 gpm wells to identify any improvements that could be made to allow the well system to be brought back online.
 - Utilize hydraulic model to identify intermediate pipeline improvements.
3. Available Options: Long-term (greater than 2 years)

Review the following items to evaluate the ability to increase the available water on a permanent basis to meet the long-term needs for the project area.

 - Review previous reports and document future design flows for the project area.
 - Review long-term options included extension of a regional transmission main, construction of a new package plant, new water treatment plant or expansion of the existing well system.

PART 3: SUMMARY REPORT

1. Prepare Draft Summary Report that outlines all available short, mid-term and long-term options, with description of all information reviewed, potential alternatives for improvement, potential costs, timeline for development and relative benefits of each option.
2. QA/QC – Perform QA/QC of Draft Summary Report.
3. Submit Draft Summary Report to County for review and comment.
4. Address County comments on the Draft Summary Report and submit Final Summary Report

PART 4: BOARD OF SUPERVISORS MEETING

1. Assist the County in preparing for the meeting by developing schematics, summaries, slides etc. for the public presentation. Overall preparation of presentation for BOS meeting will be by Henrico County staff.
2. Attendance at 1 Board of Supervisors meeting.

ASSUMPTIONS

In addition to the items summarized in the Project Understanding and Scope of Work, the following assumptions have been used to develop the scope and fee for this project:

1. Detailed comparison analysis of each alternative is not required.

2. Long term options will be conceptual in nature. No impacts regarding potential easement acquisition or permitting will be identified or included.
3. All cost estimates will be ASCE Class 5.
4. No design services are included.

SCHEDULE

WRA proposes the following schedule for the project:

- Project kick-off meeting – at NTP
- Draft report – Week of February 4, 2025
- Final Report and Presentation: February 11, 2025

ITEMS FURNISHED BY HENRICO COUNTY AT NO COST TO THE ENGINEER

1. Participation and input from key County personnel.
2. Information for the report regarding event timeline for the water crisis and the County response.
3. Information from data request (PS plans, applicable reports, well data, SCADA data)
4. Contact person with the County and access to County utilities and facilities.
5. Timely review of all documents.

LIST OF DELIVERABLES

WRA will provide the following items to the County:

- Draft Report – PDF
- Final Report - PDF

COMPENSATION

The estimated fee for the services summarized in this proposal is \$89,777.00 Project fees are based on the authorized rates included in WRA's contract 2471D with the County for engineering services dated February 26, 2024. The estimated fee will not be exceeded without Henrico County's approval. Work will not begin on tasks until authorization is received from the County. Estimated manhours are shown in **Attachment 1**.

ADDITIONAL SERVICES

Additional services will be provided, if requested by Henrico County. If any improvements or services are desired by the County which are outside of the scope of work identified in this proposal, a scope amendment will be prepared in writing to identify the additional services and associated fee for this work will be submitted to the County for approval.

WRA is available at your convenience to discuss this proposal. It is a great pleasure to work for the County of Henrico we look forward to the successful completion of this project.

Very truly yours,

Whitman, Requardt & Associates, LLP

Daniel Seli, P.E.
Senior Vice President

cc:

Enclosure
File 46530-000

ATTACHMENT 1
MANHOUR WORKSHEET



Whitman, Requardt & Associates, LLP

Engineers · Architects · Environmental Planners Est. 1915

WRA Labor Cost Rate Year: 2025

Profit on Subconsultant: 5%

Project Name: East Side Water Supply Report
 Client: Henrico County DPU
 Date: 1/20/2025
 Prepared By: WFH

		Senior Vice President	Associate	Sr. Project Engineer	Design Engineer	WRA Total Hours	WRA Total Payroll	WRA Expense Type (See Legend)	WRA Expense	Subconsultant Total Hours	Subconsultant Total Payroll	Subconsultant Expense Type (See Legend)	Subconsultant Expense
Task	Task Description	\$233.76	\$209.00	\$175.00	\$124.00	WRA Services	WRA Expenses	Sub Services	Sub Expenses				
1	Project Management	32	8			40	\$9,152	-	\$0	-	\$	-	\$
2	Increased Water Supply Review	20	100	100	8	228	\$44,067	-	\$0	-	\$10,000	-	\$
3	Summary Report	20	40	40	8	108	\$21,027	-	\$	-	\$	-	\$
4	Board of Supervisors Meeting	8	8		12	28	\$5,030	-	\$	-	\$	-	\$
<i>DESIGN PHASE SUBTOTAL HOURS =</i>		<i>80</i>	<i>156</i>	<i>140</i>	<i>28</i>	<i>404</i>				<i>-</i>			
<i>DESIGN PHASE SUBTOTAL DOLLARS =</i>		<i>\$18,701</i>	<i>\$32,604</i>	<i>\$24,500</i>	<i>\$3,472</i>		<i>\$79,277</i>		<i>\$0</i>		<i>\$10,000</i>		<i>\$0</i>
<i>WRA Total</i>								<i>\$79,277</i>	<i>Subcontractor Total</i>		<i>\$10,000</i>		
<i>TASK Total</i>										<i>=</i>	<i>\$89,777</i>		

TOTAL PROJECT COST \$89,777

Expense Type
 R = Reproduction L = Laboratory Cost
 S = Subcontractor T = Travel
 E = Equipment