

COACHELLA VALLEY WATER DISTRICT
PROFESSIONAL SERVICES AGREEMENT
TASK ORDER NO. 4

This Task Order No. 4 ("Task Order") is entered into this ____ day of _____ 2025 by and between Coachella Valley Water District ("CVWD") and West Yost & Associates, Inc. ("Consultant").

RECITALS

A. On or about January 29, 2024, CVWD and Consultant executed that certain Professional Services Agreement ("Agreement").

B. The Agreement provides that the parties would enter into a Task Order to make changes to or authorize certain work set forth in the Scope of Services (as defined in the Agreement). The purpose of this Task Order is to make changes to or authorize work on the terms and conditions set forth herein.

NOW, THEREFORE, the parties hereto hereby agree:

1. Section 1.1 of the Agreement is hereby amended to include those services listed on Exhibit "1" attached hereto and by this reference incorporated herein.

2. Section 2.1 of the Agreement is hereby amended to confirm the amount to be paid by CVWD to Consultant as more particularly set forth on Exhibit "1."

3. In the event this Task Order authorizes additional work or confirms work set forth in the Task Order but not authorized, Consultant shall perform the services listed in Paragraph 1 above pursuant to the schedule set forth on Exhibit "1."

4. Consultant acknowledges that the compensation (time and cost) set forth herein comprises the total compensation due for the work defined in this Task Order. The signing of this Task Order acknowledges full mutual accord and satisfaction for the work and that the stated time and/or cost constitute the total equitable adjustment owed the Consultant as a result of the authorized work.

5. Except as amended or supplemented herein or in previous task orders, the terms and conditions of the Agreement shall remain in full force and effect. Notwithstanding the immediately preceding sentence, the Agreement shall be interpreted in a manner consistent with the intent of this Task Order.

IN WITNESS WHEREOF, CVWD and Consultant have caused this Task Order No. 4 to be executed as of the day and year first above written.

"CONSULTANT"

WEST YOST & ASSOCIATES, INC., a
California Corporation

By: _____

Name: Greg Chung

Its: Vice President

"CVWD"

COACHELLA VALLEY WATER DISTRICT, a
public agency

By: _____

Name: J. M. Barrett

Its: General Manager

EXHIBIT "1"

TO

TASK ORDER NO. 4

A. Description of Services Included, Deleted or Authorized.

The Services to be provided by Consultant shall be revised to include the Services set forth in Consultant's proposal dated May 13, 2025, attached hereto and incorporated herein by this reference. Consultant shall provide additional engineering services to perform additional RFC bench-scale testing for the Hexavalent Chromium Treatment Evaluation Project.

B. Increase, Decrease, or Confirmation of Amount to be Paid to Consultant.

The total compensation shall increase by the amount of \$58,995. Services shall be billed as stated in Consultant's attached Proposed Budget and 2025 Billing Rate Schedule.

C. Time to Perform Services Listed Herein.

Services shall commence immediately upon execution of this task order by both parties and conclude as stated in the attached proposal.

May 13, 2025

SENT VIA: EMAIL

Carrie Oliphant, P.E.
Director of Engineering
Coachella Valley Water District
75-515 Hovley Lane East
Palm Desert, California 92211

**SUBJECT: Proposal for Engineering Services – Hexavalent Chromium RCF Treatment
Bench-Scale Testing**

Dear Carrie:

The purpose of this letter is to summarize the required scope, budget and schedule for additional RCF bench scale testing. This scope proposes to evaluate the efficacy of the reduction coagulation filtration (RCF) chemistry and kinetics with a ferrous reductant at a bench-scale level. This additional scope will further inform the next phases of the hexavalent chromium implementation plan. This work is a continuation of the work authorized in Task Order Agreement between Coachella Valley Water District (District) and West Yost Associates, Inc. (West Yost), dated August 20, 2024.

SCOPE OF SERVICES

The following is a list of tasks to perform the necessary scope of services:

- **Task 1. Project Management.** This task is for West Yost to manage the project and coordinate with Corona Environmental Consulting (Corona) for the duration of the project.
- **Task 2. Technical Support Services.** This task is reserved for Corona to conduct the RCF bench-scale testing, including:
 - Developing a Test Plan
 - Conducting the bench-scale jar testing
 - Conducting data analysis and preparing a report

A detailed scope of work for Task 2 prepared by Corona is included as Attachment A.

PROJECT BUDGET

The proposed budget for the tasks described in the scope of services is shown in Table 1. West Yost and Corona will perform the scope of services described above on a time-and-expenses basis, at the billing rates set forth in the Agreement, with a not-to-exceed budget as shown on Table 1. Any additional services not included in this scope of services will be performed only after receiving written authorization and a corresponding budget augmentation.

Table 1. Budget for RCF Bench Scale Testing	
Task	Estimated Budget, dollars
Task 1. Project Management (West Yost)	5,130
Task 2. Technical Support Services (Corona) ^(a)	53,865
Total Project Hours and Budget	\$58,995
(a) Includes a subconsultant markup of five percent.	

SCHEDULE

The deliverable will be submitted two months after receiving the water samples from the District.

Thank you for providing West Yost the opportunity to be of continued service to the District. We look forward to working with you on this important project. Please call if you have any questions or require additional information.

Sincerely,
WEST YOST



Carolina Sanchez, PE
Senior Engineer II
RCE #85598

Attachments: A. Corona Environmental Consulting Proposal

B. West Yost 2025 Billing Rate Schedule

Attachment A

Corona Environmental Consulting Proposal

Re: Coachella Valley Water District Hexavalent Chromium Contaminant Level Evaluation Project
Bench-scale and Pilot-scale RCF with Ferrous Reductant Testing Scope of Work (Rev 1)

Date: May 12, 2025
To: Carolina Sanchez, West Yost
From: Craig Gorman, Corona Environmental Consulting

Carolina,

Corona Environmental Consulting, LLC (Corona) appreciates the opportunity to continue to work with West Yost to evaluate the efficacy of the reduction coagulation filtration (RCF) chemistry and kinetics with a ferrous reductant at bench-scale. The proposed bench-scale testing will further the project team's understanding of the reduction times and ferrous doses required for CVWD waters to achieve compliance with for the California State Water Resources Control Board Division of Drinking Water's hexavalent chromium (Cr6) maximum contaminant level (MCL) of 10 µg/L. The results from this testing will be used to inform initial RCF pilot testing conditions, where operational impacts on filter performance, and backwash characterization will be assessed, along with opportunities for improved operational efficiency such as treatment bypass, backwash recycle, and hydraulic loading rates.

The bench-scale testing scope of work described here-in, assumes each of the 10 wells that are expected to treat Cr(VI) through RCF will be included in the analysis. This will provide validation of the ferrous dose and reduction times required for each well to achieve CVWD's water quality objectives and provide insight the most representative well for subsequent pilot-scale testing. Additionally, testing all wells will inform if wells within a given cluster yield similar results or will require changes in operations (e.g. adjusting ferrous dose) when specific wells are brought online. Furthermore, these results will allow for more confidence in applying the pilot-scale testing results to other wellsites.

Finally, this scope of work also includes the additional testing of arsenic removal through the ferrous the coagulation filtration process for a representative well from each of the IX-TP systems currently under consideration for strong-base anion exchange treatment upgrades. If arsenic removal to below CVWD's water quality objectives can be achieved with ferrous iron, this approach could provide consistency amongst the future groundwater treatment systems. Water will be reserved to complete this testing with the more conventional ferric iron chemical addition, if necessary.

Bench-scale Testing Objectives

The purpose of this testing is to identify ferrous doses and reduction times that can achieve CVWD's finished water Cr(VI) goals. The initial pilot conditions will be selected based on these test results. It is assumed that bench-scale testing will be completed with all 10 source waters under consideration for RCF Cr(VI) treatment. This testing also includes ferrous based coagulation filtration validation testing for a representative well supplying each of the IX-TP systems. A summary of the wells that will be tested for bench-scale RCF testing is provided in Table 1.

Table 1 Summary of wells to be tested at bench-scale for RCF treatment

Water Treatment Plant	Wellsite ID(s)	Treatment Testing
Sun City	4720-1, 4722-1	Cr(VI) RCF
Desert Hot Springs	3405-1, 3408-01, 3409-1, 3410-1	Cr(VI) RCF
La Quinta #1	5711-2, 5725-1, 5727-1	Cr(VI) RCF
La Quinta #2	5718-1, 5717-1	Cr(VI) RCF
ID-17	7802-1	Arsenic and Cr(VI) RCF
ID-10	6806-1	

If bench-scale results indicate that the source waters behave differently to RCF treatment than expected, additional bench-scale testing may be considered. This may include a different ferrous iron doses and contact times for Cr(VI) removal, or the use of the more traditionally used chemical, ferric iron, for arsenic removal. At this time, it is assumed that CVWD will collect representative raw water for each of the wells summarized in Table 1 and ship the samples to Corona's Louisville, Colorado laboratory facilities for the testing by Corona staff. Results from the bench-scale testing will be presented to CVWD and summarized in a brief technical memorandum.

A summary of the operational conditions that will be tested at bench-scale is provided in Table 2, and have been informed by bench- and pilot-scale results obtained from similar Cr(VI) impacted waters in the Coachella Valley.

Table 2 Summary of bench-scale testing conditions for RCF with ferrous reductant

Reduction Time / Ferrous Dose :	1 minutes	2 minutes	3 minutes
0.3 mg/L as Fe		x	x
0.5 mg/L as Fe	x	x	x
0.8 mg/L as Fe	x	x	
1.0 mg/L as Fe	x	x	
Water quality samples	raw water, iron dose confirmation, finished water		
Field Samples	pH, turbidity, iron, free chlorine		
Analytical Laboratory	total iron, total chromium, hexavalent chromium		

Budget and Schedule

Corona is prepared to begin work on this scope of work upon notice to proceed. Bench-scale testing will be completed first to inform the pilot's initial operating conditions and allow time for pilot planning and coordination to be conducted in tandem. Bench-scale testing outcomes will be presented to CVWD staff and summarized in a brief technical memorandum within two weeks of receiving the analytical data. The proposed budget for this scope of work is \$51,300 inclusive of labor and other direct costs (ODCs) to be billed monthly on a time and materials basis (Table 3). The following budget assumes that analytical laboratory analysis will be performed by CVWD or outsourced to CVWD's preferred commercial laboratory, billed directly to CVWD.

Table 3 Proposed budget

Task	Task Description	Principal	Senior	Associate	Professional	Subtotal Hours	Subtotal Costs
		\$355	\$255	\$220	\$190		
1	Test Plan Development	2	2	8		12	\$2,940
2	Bench-scale Jar Testing	2	8	52	104	166	\$33,910
3	Data Analysis and Reporting	2	8	24		42	\$9,750
Labor Total		6	18	80	96	220	\$46,600
ODC Bench-scale Testing							\$4,700
Proposed Total							\$51,300

Please do not hesitate to reach out if you should have any question or wish to discuss this proposed scope further (Office: 303.317.5823; Cell: 720.626.4706; Email: cgorman@coronaenv.com).

Thank you for the continued collaboration,



Craig Gorman
Corona Environmental Consulting, LLC



Attachment B

West Yost 2025 Billing Rate Schedule

2025 Billing Rate Schedule

(Effective January 1, 2025, through December 31, 2025)*

POSITIONS	LABOR CHARGES (DOLLARS PER HOUR)
ENGINEERING	
Principal/Vice President	\$373
Engineer/Scientist/Geologist Manager I / II	\$352 / \$369
Principal Engineer/Scientist/Geologist I / II	\$317 / \$338
Senior Engineer/Scientist/Geologist I / II	\$286 / \$300
Associate Engineer/Scientist/Geologist I / II	\$237 / \$255
Engineer/Scientist/Geologist I / II / III	\$185 / \$215 / \$224
Engineering Aide	\$111
Field Monitoring Services	\$138
Administrative I / II / III / IV	\$102 / \$127 / \$152 / \$168
ENGINEERING TECHNOLOGY	
Engineering Tech Manager I / II	\$366 / \$369
Principal Tech Specialist I / II	\$336 / \$348
Senior Tech Specialist I / II	\$308 / \$321
Senior GIS Analyst	\$278
GIS Analyst	\$264
Technical Specialist I / II / III / IV	\$196 / \$224 / \$251 / \$280
Technical Analyst I / II	\$141 / \$168
Technical Analyst Intern	\$113
Cross-Connection Control Specialist I / II / III / IV	\$147 / \$159 / \$179 / \$198
CAD Manager	\$222
CAD Designer I / II	\$172 / \$194
CONSTRUCTION MANAGEMENT	
Senior Construction Manager	\$355
Construction Manager I / II / III / IV	\$211 / \$226 / \$239 / \$303
Resident Inspector (Prevailing Wage Groups 4 / 3 / 2 / 1)	\$190 / \$211 / \$235 / \$244
Apprentice Inspector	\$172
CM Administrative I / II	\$91 / \$124
Field Services	\$244

- Hourly rates include charges for technology and communication, such as general and CAD computer software, telephone calls, routine in-house copies/prints, postage, miscellaneous supplies, and other incidental project expenses.
- Outside services, such as vendor reproductions, prints, and shipping; major West Yost reproduction efforts; as well as engineering supplies, etc., will be billed at the actual cost plus 15%.
- The Federal Mileage Rate will be used for mileage charges and will be based on the Federal Mileage Rate applicable to when the mileage costs were incurred. Travel other than mileage will be billed at cost.
- Subconsultants will be billed at actual cost plus 10%.
- Expert witness services, research, technical review, analysis, preparation, and meetings will be billed at 150% of standard hourly rates. Expert witness testimony and depositions will be billed at 200% of standard hourly rates.
- A finance charge of 1.5% per month (an annual rate of 18%) on the unpaid balance will be added to invoice amounts if not paid within 45 days from the date of the invoice.

2025 Billing Rate Schedule

(Effective January 1, 2025, through December 31, 2025)*

Equipment Charges

EQUIPMENT	BILLING RATES
2" Purge Pump & Control Box	\$300 / day
Aquacalc / Pygmy or AA Flow Meter	\$28 / day
Emergency SCADA System	\$35 / day
Field Vehicles (Groundwater)	\$1.02 / mile
Gas Detector	\$80 / day
Generator	\$60 / day
Hydrant Pressure Gauge	\$10 / day
Hydrant Pressure Recorder, Impulse (Transient)	\$55 / day
Hydrant Pressure Recorder, Standard	\$40 / day
Low Flow Pump Back Pack	\$135 / day
Low Flow Pump Controller	\$200 / day
Powers Water Level Meter	\$32 / day
Precision Water Level Meter 300ft	\$30 / day
Precision Water Level Meter 500ft	\$40 / day
Precision Water Level Meter 700ft	\$45 / day
QED Sample Pro Bladder Pump	\$65 / day
Skydio 2+ Drone (2 hour minimum)	\$100 / hour
Storage Tank	\$20 / day
Sump Pump	\$24 / day
Transducer Communications Cable	\$10 / day
Transducer Components (per installation)	\$23 / day
Trimble GPS – Geo 7x	\$220 / day
Tube Length Counter	\$22 / day
Turbidity Meter	\$30 / day
Turbidity Meter (2100Q Portable)	\$35 / day
Vehicle (Construction Management)	\$10 / hour
Water Flow Probe Meter	\$20 / day
Water Quality Meter	\$50 / day
Water Quality Multimeter	\$185 / day
Well Sounder	\$30 / day