CONTRA COSTA WATER DISTRICT

May 18, 2020

Interested Materials Testing Firms
Materials Testing Services
Fiscal Years 2021 and 2022

Subject: **Request for Proposals**
FY21/FY22 On-Call Materials Testing Services
Proposals are due by 4:00 P.M. on Friday, June 5, 2020

The Contra Costa Water District (District) is soliciting a Request for Proposals (RFP) for materials testing services on various capital improvement and developer projects over the next two years. Proposals shall be presented in accordance with the specified RFP requirements set forth in Exhibit 1. Projects will generally consist of the construction or modification of treated and untreated water pipelines, rehabilitation of treated water reservoirs and pump stations, modifications to the untreated water canal, improvements to water treatment facilities, and watershed improvements. Construction sites may be located throughout the District's untreated water and treated water service area, along the Contra Costa Canal right-of-way, and/or at any of the District's untreated water pumping, storage, and transport facilities.

The Proposer shall submit electronic copies of: (1) the Proposal and (2) the Cost Evaluation Form, as two separate files, in accordance with the conditions of this Request for Proposals to Brian Jackson at bjackson@ccwater.com and Abigail Pinedo at apinedo@ccwater.com, and cc: Luis Llamas at lllamas@ccwater.com and shall be transmitted as separate attachments to a single email or via a link to where the files can be downloaded, no later than 4:00 p.m. on Friday, June 5, 2020. The email subject line should include the RFP title and due date, and the body shall include a description of the file being transmitted, including pages of the proposal, size of attachment, and file name. File size shall not exceed 10MB. Proposals will not be accepted after the date and time stated above. Do not include the Cost Evaluation Form in the Proposal. Cost Evaluation Form (Exhibit 3) shall be submitted as described above.

The District anticipates spending approximately $420,000 on materials testing support services for the 24-month period, subject to changes in District needs and availability. Materials testing services may consist of one or more of the following testing areas:

- Aggregate Base
- Asphalt Concrete
- Cathodic Protection

- Cement Treated Base
- Concrete
- Coring Services
- Grout
- Coating
- Reinforcing Steel
- Soil
- Shotcrete
- Structural Masonry
- Structural Steel
- Welding
- Non-destructive Testing (such as dry film thickness, radiographic, ultrasonic, liquid penetrant, and magnetic particle, including the ability to obtain NACE certified inspectors)
- Specialty testing based on the specific needs of the various projects

Selection of the testing firm to perform on-call testing materials services will be based on the criteria outlined in the attached RFP Requirements (Exhibit 1). Quotes and pricing lists shall be fixed for the 24-month duration of the agreement. Refer to Exhibit 1 for a list of projects the District anticipates constructing during the next two years that might require materials testing services. The scope of the work will include the testing services described in Attachment A to the sample agreement. Testing work is expected to begin in July 2020.

Proposals will be evaluated based on cost and experience and qualifications of the key staff, the firm's related experience and performance on similar projects, location of inspectors, responsiveness of inspectors including appropriate communication devices, testing laboratories in proximity to the District's treated and untreated water facilities, standard duration of field inspection, and standard response time to an inspection request. References provided will be contacted.

This solicitation does not commit the District to pay any costs incurred in the preparation and presentation of submittals or to select any interested firms that respond. This solicitation covers only the work described herein and does not commit the District to any fixed amount of work. Brochures or other presentation materials, beyond those requested herein, are not desired and should not be submitted.

When a consulting services agreement is approved for a project by the District's Board of Directors, the agreement will include language that requires payment of Prevailing Wage Rates to its employees and those of subcontractors for work covered by the Prevailing Wage requirements set forth in Section 1770 of the California Labor Code.

The highest scoring proposer shall enter into an agreement with the District, a sample of which is attached as Exhibit 2. If the District and the highest scoring proposer are unable to reach agreement on terms, scope of work and pricing, the District may award the contract to the second highest scoring proposer. Additionally, the successful proposer will be required to comply with the District's Consultant Safe Practices Handbook (Exhibit 4) and complete District Safety training at one of the OSCA training facilities.

Questions should be submitted via email to Abigail Pinedo at apinedo@ccwater.com no later than Friday, May 29, 2018. Answers to questions will be shared with all testing firms listed above.

Sincerely,

Rachel Murphy, P.E.
Assistant General Manager – Engineering and O&M

RM/AP:mc

Attachments: Exhibit 1 – Request for Proposal Requirements
Exhibit 2 – Sample Agreement (includes 2 Attachments):
Attachment A – Scope of Work
Attachment B – Rate and Charges
Exhibit 3 – Cost Evaluation Form
Exhibit 4 – District's Consultant Safe Practices Handbook

cc: Brian Jackson
File: FY21/FY22 Materials Testing Services

EXHIBIT 1

CONTRA COSTA WATER DISTRICT

REQUEST FOR PROPOSAL REQUIREMENTS
FOR MATERIALS TESTING SERVICES
FISCAL YEARS 2021 AND 2022

INTRODUCTION

Proposals should be designed to convey your ability to communicate clearly to the District staff your approach to the scope of work and provide a well-defined basis for negotiating a contract.

Projects scheduled for fiscal years 2021 and 2022, which will typically need material testing services, are as follows:

Treated Water Distribution and Storage Projects

- Pipeline Renewal and Replacement (welding inspection, concrete and compaction testing; approximately 3 miles of small diameter pipeline installation)
- Treated Water Facilities Improvements Program (concrete and compaction testing; miscellaneous civil and mechanical improvements)
- Treated Water Applicant Projects (concrete and compaction testing; pipeline projects)

Untreated Water Supply and Transport Projects

- Shortcut Pipeline Improvements (welding inspection and concrete and compaction testing; tunneling 48-inch diameter pipeline beneath Walnut Creek)
- Untreated Water Facilities Improvements Program (welding inspection and concrete and compaction testing; miscellaneous civil and mechanical improvements)
- Untreated Water Reservoir Rehabilitation (concrete and compaction testing; structure demolition, civil improvements)
- Untreated Water Applicant Projects (concrete and compaction testing; civil improvements and possibly pipeline projects)
- Rock Slough Fish Screen Improvements (AC pavement inspection, concrete and compaction testing; civil and mechanical improvements)

- Watershed Improvements (concrete and compaction testing; roadway and drainage improvements)

Water Treatment Facilities

- Randall-Bold Water Treatment Plant Improvements (concrete and compaction testing; mechanical, electrical and instrumentation improvements to various plant chemical systems)
- Port Chicago Tank Abandonment (concrete and compaction testing, removal of steel tank)
- Chenery Tower Abandonment (concrete and compaction testing; removal of steel structural and filling of concrete pipe with grout)

Proposals will be reviewed by District staff and evaluated based upon the below specified evaluation criteria. A total of 100 points is possible based on the criteria outlined below. Final selection will be based on the proposer which receives the highest overall score. Relative weighting of selection criteria is indicated below.

EVALUATION OF PROPOSALS (100 Points Possible)

The following criteria will be used in evaluating proposals:

- **Cost: 50 points total**

  - Costs will be scored based on the Cost Evaluation Form-Exhibit 3. The costs will be evaluated based on a ratio method with the lowest proposal receiving the maximum points possible of 50 points. This is determined by applying the following formula:

    Lowest Cost / Cost Being Evaluated x Maximum Points Available = Awarded Points

    Example: Consultant A's total cost for the proposal is $105,000. Consultant B's cost is $125,000, Consultant C's cost is $110,000, and Consultant D's cost is $140,000. Total points available for cost are 50 points. Consultant A receives 50 points for cost; Consultant B receives 42 points; Consultant C receives 47.5 points; Consultant D receives 37.5 points.

- **Approach to Work: 30 points total**

  - This includes required tests and inspection, availability and reliability, residing city of inspection staff, daily inspection reports, response time, minimum call-outs, subcontractors, cost control techniques, exception to the standard contract language and conflict of interest statement.

- **Firm Experience and Capabilities: 10 points total**

  - This includes Laboratory address, testing capabilities, list of experience similar to upcoming projects.

- **Staff Experience: 10 points total**

  - This includes past project information for proposed project management, dispatch, laboratory, and field staff.

REQUIRED PROPOSAL FORMAT (9 Pages + Resumes)

- Letter of Transmittal (1 page): Provide a qualifications statement identifying the primary contact person for this contract, proposed inspection staff, and the location of both the inspection staff and the laboratories.

- Cost (2 pages): Provide the following (these documents are in addition to the six pages allowed for your proposal package):

    1. Cost Evaluation Form: This document can be found as Exhibit 3 to the Request for Proposal package and should be completed to be considered.

    2. Pricing Schedule: Please submit your testing firm's pricing schedule for the various materials testing requirements (both standard and optional) listed in the attached scope in the format set forth on Attachment B to the sample agreement. Pricing schedule shall include standard hourly labor rates, laboratory and field testing fees, minimum callout duration, minimum trip charges and/or travel fees, mileage charges, late cancellation fees, special fees, markups, and project management/administration time applied to set-up or monitor each project contractual service order. Attachment B will not be used to determine evaluation.

- Contract and Work Scope Approach (2 pages): Elaboration on how your firm will approach the as needed material testing assignments. At a minimum, please provide the below information:

    1. Required Tests and Inspections: An explanation of how your firm meets the District's testing needs as described in these RFP requirements and the scope of work set forth in Attachment A to the sample agreement.

    2. Availability and Reliability: Describe the required minimum advance notice for requested services and minimum call out durations. Include the minimum notice for an 8 am concrete cylinder test, soil compaction test and weld inspection during the week as well as the weekend.

    3. Location of Inspection Staff: Describe where inspection staff is located and where samples will be transported for laboratory testing. Discuss how travel time and hourly minimum rates will be handled under this contract.

4. Daily Inspection Reports: Discuss how reporting is performed, and how soon reports are provided to the District. Please provide an example of laboratory and field test reports as an attachment along with electronic reporting capability and guaranteed turnaround time for reports.

5. Response Time: Describe the standard laboratory turn-around time for materials testing services provided.

6. Subcontractors: If any portion of the work is to be done by a subcontractor, please attach a list with the subcontractor's business name, address, and phone number, and briefly describe what portion of the work they will do. Additionally, include specialized testing services. All subcontractors must be pre-approved by the District in writing before performing any work.

7. Conflict of Interest: Provide a statement of conflicts your firm may have regarding this work. Statement should not only include actual conflicts, but also any working relationships that may be perceived as a conflict.

- Firm Experience and Capabilities (2 pages): Please demonstrate how your firms experience matches the District's needs for the upcoming projects discussed above. Additionally, please provide the below requested information.

  1. Office and laboratory address(es) in which services are to be performed and percentage of work to be performed in each office or laboratory.

  2. Facilities, manpower, and testing capabilities of office(s) or laboratory(ies) in which work is to be performed.

  3. Listing of experience similar to upcoming projects, including type and size of testing services provided and name, address, and phone number of knowledgeable owner or client representative.

- Staff Experience and Availability (2 pages): Please demonstrate how your proposed project management, dispatch, laboratory, and field staff's experience and capabilities will meet the District's needs for the upcoming projects discussed above. Provide the following information of proposed staff for not more than five projects:

  1. Owner (or client if sub-consultants), project description including size, total construction cost, location of work, testing services provided, and completion date.

  2. Name, address, and phone number of knowledgeable owner or client's representative as a reference.

- Attachments: Under separate cover, or as an appendix, please provide resumes of testing staff.

CONTRACT PROVISIONS

The District utilizes standard contract provisions for all professional and technical services agreements. A sample agreement showing applicable contract provisions is attached as Exhibit 2. Submission of a proposal constitutes acceptance of the agreement format and provisions. Requested exceptions should be flagged. If the District and the highest scoring proposer cannot agree to terms, the District may award the contract to the second highest scoring proposer.

EXHIBIT 2
CONTRA COSTA WATER DISTRICT
Standard Services Agreement

THIS AGREEMENT for services is between Contra Costa Water District ("District") and _____ (the "Consultant"). Consultant's address is _____, telephone _____, and fax number _____. Consultant is a [ ] corporation, [ ] partnership, [ ] sole proprietor, having taxpayer's identification number _____.

1. The Agreement. District and Consultant agree that Consultant shall provide _____ and shall perform these services for District on the terms and conditions herein set forth in connection with District's project number _____ for _____. The specific scope of services, and any special performance conditions are defined in Attachment A - Scope of Work.

The following documents are attached hereto and are a part of this Agreement:

Attachment A - Scope of Work
Attachment B - Consultant's Rates and Charges

This Agreement, including said attachments, constitutes the entire agreement between the parties and supersedes any prior proposals, representations, or understandings. This Agreement may be modified only by a written amendment signed by each party.

2. Time of Performance. Unless otherwise stated in Attachment A, Consultant is authorized to commence performance of this Agreement upon its execution by District. Consultant shall complete all services covered by this Agreement no later than _____, unless this date is extended by District in writing. At the District's discretion, the District may extend the term of the Agreement. Should the District elect to extend this Agreement through _____, there shall be no change to the terms and conditions of this Agreement (other than to the time of performance).

3. Payment. Consultant shall at convenient intervals not more frequent than monthly submit itemized statements of services performed at the rates and charges in Attachment B. District shall pay for work satisfactorily performed within thirty (30) days after receipt of a statement. Without the prior written approval of the District, the total amount payable by District for Consultant's services pursuant to this Agreement shall not exceed $_____ for the period from _____ to _____, and $_____ for the period from _____ to _____ upon extension of the Agreement.

4. Consultant an Independent Contractor. Consultant shall perform the consulting services under the Agreement as an independent contractor and not as an employee of District. Consultant shall be wholly responsible for the methods of performance. District shall have no right to supervise or control Consultant's performance but shall have the right to observe it. Consultant shall work closely with District in performing the services.

5. Insurance.

A. Without in any way limiting Contractor's liability pursuant to the "Indemnification" section of this Agreement, Contractor must maintain in force, during the full term of the Agreement, insurance in the following amounts and coverage:

(1) Workers' Compensation, in not less than statutory amounts, with Employers' Liability Limits not less than $1,000,000 each accident, injury, or illness; and

(2) Commercial General Liability Insurance with limits not less than $1,000,000 each occurrence for Bodily Injury and Property Damage, including Contractual Liability, Personal Injury, Products and Completed Operations; and

(3) Commercial Automobile Liability Insurance with limits not less than $1,000,000 each occurrence for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable; and

(4) Professional liability insurance, applicable to Contractor's profession, with limits not less than $1,000,000 each claim with respect to negligent acts, errors or omissions in connection with professional services to be provided under this Agreement.

B. Commercial General Liability and Commercial Automobile Liability Insurance policies must be endorsed to:

(1) Name as Additional Insureds, Contra Costa Water District and its respective Directors, Officers, Agents, and Employees.

(2) Provide that such policies are primary insurance to any other insurance available to the Additional Insureds, with respect to any claims arising out of this Agreement, and that insurance applies separately to each insured against whom claim is made or suit is brought.

C. Regarding Workers' Compensation, Contractor hereby agrees to waive its rights to subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Contra Costa Water District for all work performed by the Contractor, its employees, agents and subcontractors.

D. All policies shall provide thirty days' advance written notice to Contra Costa Water District of reduction or nonrenewal of coverage or cancellation of coverage for any reason.

E. Should any of the required insurance be provided under a claims-made form, Contractor shall maintain such coverage continuously throughout the term of this Agreement and, without lapse, for a period of four years beyond the expiration of this Agreement, to the effect that, should occurrences during the contract term give rise to claims made after expiration of the Agreement, such claims shall be covered by such claims-made policies.

F. Before commencing any work under this Agreement, Contractor shall furnish to Contra Costa Water District certificates of insurance and additional insured policy endorsements with insurers with ratings comparable to A-, VIII or higher, that are authorized to do business in the State of California, and that are satisfactory to Contra Costa Water District, in form evidencing all coverage set forth above. Failure to maintain insurance shall constitute a material breach of this Agreement.

G. Approval of the insurance by District shall not relieve or decrease the liability of Contractor hereunder.

H. If a subcontractor will be used to complete any portion of this agreement, the Contractor shall ensure that the subcontractor obtains all necessary insurance, which shall name Contra Costa Water District, and its respective directors, officers, agents and employees and the Contractor as Additional Insureds.

6. Payment of Prevailing Wages. If any personnel of Consultant or a subcontractor of Consultant performs work under the Agreement for which a general prevailing wage has been determined by the Director of the Department of Industrial Relations, Consultant or subcontractor shall pay the prevailing wage for such work and shall comply with all applicable provisions of the California Labor Code Section relating to public works (Section 1720 et. seq.). Copies of such wage rates are on file at the District's principal office. For questions regarding this section, Consultant should visit www.dir.ca.gov/oprl/pwd/index.htm or call the Department of Industrial Relations at (415) 703-4774.

The general prevailing wage rates for such work which establish minimum wages for this Agreement shall be posted by Consultant in a prominent place at the site where such work is performed. Consultant shall comply with all of the provisions of Section 1775 of the Labor Code relative to penalties paid to the District regarding wage under- payments to workers employed under this Agreement, and Consultant shall comply with all of the provisions of Section 1776 of the Labor Code regarding payroll records requirements.

7. Abandonment by Consultant. In the event the consultant ceases performing services under this Agreement or otherwise abandons the project prior to completing all of the services described in this Agreement, Consultant shall, without delay, deliver to District all materials and records prepared or obtained in the performance of this Agreement, and shall be paid for the reasonable value of the services performed up to the time of cessation or abandonment, less a deduction for any damages or additional expenses which District incurs as a result of such cessation or abandonment, such as expenses associated with obtaining substitute services.

8. Records and Documents. Upon request, and at no additional charge, Consultant shall deliver to District all records, data, and reports prepared or obtained in the performance of the Agreement, which shall become and remain the property of District. This includes, but is not limited to, all materials and records of a finished nature, such as final plans, specifications, and maps prepared or obtained in the performance of this Agreement, and all materials of a preliminary nature, such as survey notes, sketches, preliminary plans, computations and other data prepared or obtained in the performance of this Agreement.

9. Right to Audit. Consultant shall permit District and its authorized representatives to examine, re-examine, make excerpts, transcribe and copy Consultant's books, documents, papers, materials, payrolls, records, accounts, computer disks, tapes and any and all data relevant to the Agreement at any reasonable time within three years after final payment under the Agreement. Consultant shall also permit District and its authorized representatives to audit and verify statements, invoices, or bills submitted by Consultant pursuant to the Agreement. Consultant shall provide such assistance as may be reasonably required in the course of such examination and audit.

10. Safety and Compliance with Laws and Regulations. In performing this Agreement, Consultant shall comply with all applicable laws, statutes, ordinances, rules and regulations whether federal, state or local in origin.

Consultant shall also comply with the Contra Costa Water District Contractor/Consultant Safe Practices Handbook (Handbook) at all times when present on District property or at the site(s) of public works being installed, altered, repaired or removed for the District. Consultant has been provided a copy of the Handbook

which is also available at https://www.ccwater.com/DocumentCenter/View/124/Contractors-Safe-Practices-Handbook-pdf. Immediate and appropriate corrective action by District, up to and including termination of this Agreement, will be implemented as warranted for any failure to comply with the Handbook. Consultant shall provide copies of the Handbook to all Sub-Consultants/Sub-Contractors.

Pursuant to Contra Costa Water District Administrative Procedure XII-4 entitled Equal Employment Opportunity; Prohibition of Discrimination, Harassment, Retaliation and Abusive Conduct (AP XII-4), the District is an equal employment opportunity employer. The District does not tolerate discrimination, harassment, retaliation, and abusive conduct. Consultant has been provided a copy of AP XII-4 which is also available at: https://www.ccwater.com/DocumentCenter/View/973/XII-4-Equal-Employment-Opportunity-pdf. In performing this Agreement, Consultant shall comply with AP XII-4 and shall not allow its employees and/or agents to discriminate, harass, or allow harassment, retaliation, or abusive conduct by or against any person or persons. Immediate and appropriate corrective action by District, up to and including termination of this Agreement, will be implemented as warranted for any and all such reported misconduct. Consultant shall provide copies of AP XII-4 to all Sub-Consultants/Sub-Contractors.

11. Breach, Error, and Omission. In the event that Consultant fails to perform any of the services described in this Agreement or otherwise breaches this Agreement, District shall have the right to pursue all remedies provided by law or equity. Consultant shall exercise the same degree of care, skill, and diligence in the performance of the Agreement as would be exercised by a reasonable professional performing similar work under similar circumstances, and shall, at no cost to District, re-perform services which fail to satisfy this standard of care. In addition, any costs incurred by the District (including but not limited to additional design and administrative costs, to the extent that such costs are recoverable under California law) and used to correct deficiencies caused by the Consultant's errors and omissions shall be borne solely by the Consultant. The District is relying upon the Consultant's qualifications concerning the services furnished under this agreement, and therefore the fact that the District has accepted or approved the Consultant's work shall in no way relieve the Consultant of these responsibilities.

12. Endorsement on Plans. All work of an engineering nature shall bear the stamp and signature of an engineer registered in the State of California.

13. Indemnification. If an action is filed in which it is claimed or alleged that any damages, injuries, or deaths arose out of, pertained to, or related to negligent acts, errors or omissions, recklessness, or willful misconduct of Consultant (or any person or organization for whom Consultant is legally liable), in the performance of the services for District, Consultant agrees, at its own expense, to defend District and its Directors, officers, employees, and agents; provided, however, that no settlement of a claim shall be made without the consent of District.

To the extent permitted by law, Consultant shall indemnify District and its Directors, officers, employees, and agents from any and against all claims, demands, costs, including reasonable attorney's fees, and liability for any damages, injuries, or deaths arising directly or indirectly from, or connected with, the services provided under this Agreement and due to, or claimed or alleged to be due to, negligence, recklessness, or willful misconduct of Consultant (or any person or organization for whom Consultant is legally liable). Consultant will reimburse District for any expenditures, including reasonable attorney's fees, District may make by reason of such matters and, if requested by District, will defend any such suits at the sole cost and expense of Consultant.

To the extent permitted by law, Consultant shall also indemnify the District and its Directors, officers, employees, and agents, against any and all claims, demands, costs and expenses at law or in equity including reasonable attorney's fees, and liability, suffered or incurred on account of, or that may at any time arise out

of, or are in any way connected with, any breach by Consultant, or its employees, agents, subconsultants, or subcontractors, of the obligations, covenants, or any other provisions of this Agreement.

This Section shall survive any expiration or termination of this Agreement.

14. Confidentiality. Consultant shall treat any information it may come to have relating to the Agreement with confidence, revealing information to third parties only with prior written approval of District.

15. Assignment. The Agreement shall not be assignable or transferable in whole or in part by Consultant, whether voluntarily, by operation of law, or otherwise; provided, however, that Consultant with the prior written consent of District may subcontract that portion of the services for which Consultant does not have the facilities to perform so long as Consultant receives written approval from the District of the qualifications of the subcontractor or sub-consultant qualifications prior to execution of this Agreement. Any other purported assignment, transfer, or subcontracting shall be void. Nothing in the Agreement shall be construed to give any right or benefit to anyone other than District and Consultant.

16. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

17. Termination. District may terminate this Agreement at any time by thirty (30) days prior written notice to Consultant. Upon termination, District shall pay Consultant for all amounts due for services rendered up to the date of termination.

IN WITNESS THEREOF, the parties hereto have made and executed this Agreement as of the day and year written below.

CONTRA COSTA WATER DISTRICT

By: _____ Date: _____

Name: Stephen J. Welch
Title: General Manager

CONSULTANT: _____

By: _____

Name: _____

Title: _____

APPROVED AS TO FORM:

_____
District Legal Counsel

Consulting Services Agreement
Between Contra Costa Water District ("District") and
_____ ("Consultant")

SCOPE OF WORK

Any work or services in addition to the work or services described in this Attachment shall be performed by Consultant according to the rates or charges listed in Attachment B. In the event that no rate or charge is listed for a particular type of extra work, Consultant shall not be entitled to compensation for extra work unless a written authorization or Amendment describing the work and payment terms has been executed by the District prior to the commencement of the extra work.

Consultant shall provide:

- (Briefly describe service or services)

District shall provide the following services and facilities:

- (Describe District obligations, if any)

EXAMPLE

Consultant shall provide financial and banking services, meeting facilitation, and planning study services that may include the following without limitation:

- Provide information on matters concerning urban development in East Contra Costa County, related to the impacts of potential needs for water services.
- Revise and update information in the Draft East County Water Services Status Report.
- Provide information concerning circulation, transmission, and distribution systems

District shall provide the following services and facilities:

- Timely access to land for field work;
- Reports, contracts, maps, and other data in District's possession necessary for completion of the services.

Consulting Services Agreement
Between Contra Costa Water District ("District") and
_____ ("Consultant")

CONSULTANT'S RATES AND CHARGES

Position Title (Additional description, if necessary) $_____ per hour

Position Title (Additional description, if necessary) $_____ per hour

Position Title (Additional description, if necessary) $_____ per hour

* If overtime is anticipated, it is assumed to be at the same hourly rate unless otherwise noted in this Attachment.

EXHIBIT 3

CONTRA COSTA WATER DISTRICT

COST EVALUATION FORM
FOR
CONSTRUCTION MATERIALS TESTING SERVICES FOR
CONSTRUCTION PROJECTS IN FISCAL YEARS 2021 & 2022

NOTE: Tests listed below and the assumed quantities are for evaluation purposes only, and do not represent the actual scope or volume of work. Tests outlines in the Cost Summary below are the tests predominantly requested by the District on most District projects. However, each project is unique, and may not require all or any of the tests listed below. The Proposer shall assume travel or mileage fees from your office(s) to District headquarters in Concord located at 1331 Concord Avenue, Concord, CA, 94520.

COST SUMMARY

BID ITEM	DESCRIPTION	UNITS	ASSUMED QUANTITY	STANDARD RESPONSE UNIT PRICE	STANDARD RESPONSE EXTENDED PRICE
1	Minimum trip charge for concrete field inspection services including air content, slump, and temperature (ASTM C31, C173, & C143), for two hours of field inspection	Trips	50		
2	Minimum trip charge for concrete field inspection services including air content, slump, and temperature (ASTM C31, C173, & C143), for four hours of field inspection	Trips	50		
3	Minimum trip charge for compaction testing includes technician with nuclear density gauge (ASTM D2922 & D3017), for two hours of field inspection	Trips	50		
4	Minimum trip charge for compaction testing includes technician with nuclear density gauge (ASTM D2922 & D3017), for four hours of field inspection	Trips	50		
5	Concrete cylinder or soil sample pick-up (includes no inspection)	Trips	100		
6	Concrete cylinder cured and/or compression tested (ASTM C39)	Cylinder	400		

Total Bid Items 1 through 6 inclusive and all work
Incidental thereto and connected therewith $_____

EXHIBIT 4

CONTRA COSTA WATER DISTRICT

CONTRACTOR/CONSULTANT SAFE PRACTICES HANDBOOK

Fiscal Year 2021

CONTRACTOR/CONSULTANT
SAFE PRACTICES HANDBOOK

Contra Costa Water District's (District) goal is to provide everyone with the benefits of a safe and healthy work environment. The District is committed to maintaining a workplace free from work-related injuries and illnesses, and to complying with applicable laws and regulations governing workplace safety.

To help achieve these goals, the District has developed a Contractor/Consultant Safe Practices Handbook. These safe practices outlined in this handbook are intended to foster a safe and healthful work environment.

It is the responsibility of everyone to work together to identify and eliminate conditions and practices that create an unsafe or unhealthy work environment.

This handbook is to augment the requirements in the safety section of the bid documents in the General Conditions, if applicable, and is to be used by each contractor, consultant, subcontractor, sub-consultant and their employees (herein called Contractor) as the minimum requirements of their safety program. While this handbook provides many of the safe practices the District requires of its contractors, it is not intended to include all required safe practices. The Contractor and its employees are expected to follow all applicable rules and regulations in the performance of their work. District staff may exercise Stop Work Authority if contractors are observed violating District safe work practices while working on District infrastructure, and may shut down a job until the condition or situation creating the hazard has been corrected and District safety procedures are adhered to.

The District's Health and Safety Program's objectives are to:

- Maximize the safety of employees, contractors, and the general public
- Maintain a safe and healthy work environment as free as possible from threat of injury or illness due to unsafe practices or conditions
- Establish safety as a priority in conjunction with efficiency and productivity
- Comply with all federal, state, city, and District safety requirements and guidelines and, where necessary, to implement additional policies to ensure safety

TABLE OF CONTENTS

GENERAL SAFETY PRACTICES 4
SITE SAFETY AND SECURITY 6
CONSTRUCTION AND MAINTENANCE WORK 7
- Asbestos Cement Pipe Work 8
- Silica Safety 8
- Grounds Maintenance 8
- Treatment Plant and Pumping Plant Areas 8
- Oxygen and Ozone Systems Maintenance 9

BOATING SAFETY 10
CONFINED SPACES 11
DIVING OPERATIONS 12
DRIVING SAFETY 12
ELECTRICAL SAFETY 13
FALL PROTECTION 15
FIRE SAFETY 16
HEAT ILLNESS PREVENTION 17
HIGH HAZARD JOB TASKS 18
LADDER SAFETY 19
LOCKOUT, BLOCKOUT AND TAGOUT 20
LOS VAQUEROS WATERSHED 22
PERSONAL PROTECTIVE EQUIPMENT 23
POWERED TOOLS AND EQUIPMENT 25
SOLITARY WORK 26
WELDING, CUTTING AND OTHER HOT WORK 27

The following are safe practices that shall be followed. These safe practices coincide with and/or augment other applicable federal, state and local safety, health and environmental regulations and codes that also shall be followed. The Contractor shall follow the more stringent requirement of this handbook or other federal, state or local regulations.

GENERAL SAFETY PRACTICES

1. Review the requirements set out in this handbook with all employees and subcontractor employees.

2. Obtain appropriate equipment before the start of work to conduct work safely. For example: ladders, lighting, extension cords, direct-read gas monitors, confined space retrieval devices, ventilation fans, lockout/tagout kits, warning signs, as well as personal protective equipment such as respiratory protection, fall protection harnesses, lanyards, hard hats, and safety glasses.

3. Delineate the work zone requiring hard hats using signs, cones, barricades, caution tape, or equivalent warning devices.

4. Use stairs, ladders or ramps to climb up or down work surfaces 4 feet or more in height and/or depth.

5. Ensure there is adequate lighting to perform the job safely.

6. Do not enter confined spaces (vaults, tanks, buried reservoirs, and pipes) unless you are trained, have monitored the atmosphere, and have eliminated or controlled all serious hazards. Notify the District 24 hours before a confined space entry. See Confined Spaces section for other requirements.

7. Keep your work area clean and orderly at all times to prevent slips, trips or falls. Place barriers or warning signs at locations with wet floors.

8. Attend pre-job safety briefings. Conduct tailgate safety meetings at least once every ten days for work involving construction, maintenance or repair work, or any work near water (reservoirs and canals) or in confined spaces.

9. The District water treatment plants and Los Vaqueros Watershed have additional visitor safety rules. Comply with the pertinent visitor safety rules when visiting one of these District locations.

10. Written pre-task plans are required to be completed prior to High Hazard Job Tasks. See High Hazard Job Tasks section for further information. High Hazard Job Tasks are defined as:

    a. Permit-required confined space entry
    b. Maintenance tasks requiring lockout/tagout
    c. Line breaking tasks – Opening of equipment that may carry flammable, corrosive, or toxic material, or an inert gas or any fluid, including water, at a volume, pressure, or temperature capable of causing serious injury
    d. Neutralizing large amounts of spilled corrosive substances at plant process areas
    e. Work requiring the use of cartridge respirators or self-contained breathing apparatus
    f. Use of mobile cranes with persons (other than the crane operator) on foot and in the immediate area of operation

g. High-voltage electrical work above 600 Volts or work on exposed live parts of low voltage (50 - 600V)
h. Work using a personal fall arrest system
i. Excavating with heavy equipment or working in an excavation deeper than 4 feet
j. Work in public roadways with the speed limits of 30 MPH or more and when traffic control measures are needed for a time period of more than 15 minutes
k. Scaffold erection
l. Hot work (welding, cutting, or grinding outside of maintenance shops)
m. Chainsaw operations to remove a branch or tree greater than 8 inches in diameter
n. Work over water at night
o. Any other job task determined as highly hazardous by the lead person or the supervisor in charge.

11. The pre-task plan must cover hazards expected throughout the job task, measures to protect against those hazards, and emergency response planning. Use available safety checklists for the job task (e.g., confined space entry permit), and complete during the tailgate meeting. All employees involved in the High Hazard Job Task must attend the meeting. The pre-task plan and meeting information must be documented. Prior to High Hazard Job Tasks performed at treatment plants or Los Vaqueros Watershed, pre-task plans must be communicated to the District Contract Administrator or Construction Inspector by phone, e-mail or text.

12. Written Procedures: Submit all pertinent written safety plans, programs, and information (written programs on Injury Illness Prevention Plan [IIPP], confined space entry, hot work, diving safety, fall protection, hazardous chemical line breaking, and/or respiratory protection) to the District Contract Administrator before the start of work at the Pre-Construction or Kick-Off meeting. Also submit a written plan for a "critical lift" before performing that lift. A critical lift is a crane lift of more than 75% of crane lift capacity.

13. Training: Submit all current safety certifications and licenses for asbestos work and mobile crane operations to the District Contract Administrator. Before starting work involving asbestos cement pipe, mobile crane and rigging operations, confined space entry, hazardous electrical systems (of 50 or more volts), plant machinery (lockout/tagout), hazardous chemicals, excavations, underwater diving, scaffold erection or the use of fall arrest systems, submit pertinent training records and written descriptions of qualifications to the District Contract Administrator for all staff expected to perform work. All employees and subcontractor employees working at or on District facilities must have received all safety training required by Cal-OSHA regulations. All safety training records must be available to the Contract Administrator upon request.

    a. Project managers, superintendents, foremen or other lead employees that conduct or supervise High Hazard Job Tasks, as defined above, at District project work sites must successfully complete CCWD Contractor Safety Orientation training, and provide proof of completion to the District prior to commencement of any project activities. This training shall be fulfilled at the OSCA Training Center in Martinez, (1805 Arnold Dr., Martinez, CA 94553; phone (866) 699-2727).

14. Ensure availability of adequate shade and water for employees working outdoors at temperatures 80^{O}F and above. At temperatures 95^{O}F and above (i.e. high-heat), observe all employees for alertness and signs of heat illness, and remind employees to drink water throughout the work shift.

    a. High-heat and emergency response procedures must be documented in the employers Injury Illness Prevention Plan, or maintained as a separate document. The Contract Administrator may request to review these procedures prior to or during work.

15. Construction debris shall be kept reasonably cleared from work areas, passageways, and stairs in and around buildings or other structures. Debris shall not be stored or piled in the path of egress. Debris waste must be stored in a waste container before removal. All waste shall be disposed of at intervals determined by the rate of accumulation and capacity of the job site container.

SITE SAFETY AND SECURITY

1. Close gates and entry doors that will be unattended to prevent unauthorized entries.

2. If a rattlesnake is found to obstruct your ability to safely perform your work, contact Contra Costa County Animal Services at 925-335-8300, Antioch Animal Services at 925-779-6989, or Los Vaqueros Watershed staff (when available) to have the snake safely removed from the worksite.

3. Follow posted speed limits. The speed limit at maintenance yards, plant roads, and parking lots is 10 MPH. At Los Vaqueros Watershed, the speed limit is 15 MPH for unpaved roads and 30 MPH for paved roads.

4. Contact Watershed supervisors at 925-240-2360 before driving on unpaved Watershed roads. Watershed supervisors determine when it is safe to drive and what vehicle types may be used during, or shortly after periods of rain.

5. When unaccompanied by District staff, contact District Operations Control at 925-688-8397 when entering and exiting remote District facilities (e.g., reservoirs and pump stations).

CONSTRUCTION AND MAINTENANCE WORK

1. Follow Government Code 4216 (USA North's California Excavation Manual) to prevent potentially catastrophic accidents and damage to underground utilities.

2. Use hand tools to locate the exact location of underground utilities (hand dig or probe). While excavating laterally within 24" of the exterior surface of marked utilities or when all known utilities are not marked, probing or hand digging shall be required prior to mechanical excavation. In areas where buried power lines are suspected or within 24" of electric utility marks, use a non-conducting (fiberglass handle and shaft) probing tool to probe soil. Using a probe with a steel shaft and electrically-rated insulated handle to probe soil further away than 24" from electric utility marks or identified electric utility is permissible. Probes within 24" of these marks shall be constructed of a dielectric material.

3. Install adequate shoring, or bench or slope excavations that have either poor soil conditions or depths in excess of 5 feet prior to entry in the excavations.

4. Keep spoils or heavy equipment at least 2 feet from the edge of excavations to prevent them from falling or rolling into excavations.

5. Use grounded electric-powered tools and ground-fault circuit interrupters (GFCIs) during all construction and maintenance activities.

6. Set barricades, fencing or guard rails around open excavations deeper than 6 feet to prevent falls. Place fencing around or sturdy covers (e.g., road plates or 1 1/8" plywood) over unattended excavations.

7. For excavation work, arrange to have the atmospheric levels checked with an appropriate gas monitor, when there is a strong odor present, or other sign of a nearby release of sewage, fuel, natural gas or other hazardous chemical line.

8. Use a portable exhaust fan when welding, torch cutting, operating equipment with combustion engines, or using chemicals in enclosed spaces.

9. Evaluate the working clearance to overhead high voltage (greater than 600 V) power lines and adjust work practices to provide for adequate (greater than 10 foot) clearances.

10. Place rebar caps that provide impalement protection on all sharp vertical metal projections.

11. Where cranes are used to lift loads, the area beneath the load must be delineated using signs, cones, barricades, caution tape, or equivalent warning devices to keep people, vehicles and other equipment out of the area beneath the load's path of travel. Loads placed on sloped roofs must be secured to ensure there is no potential of the load falling off.

Asbestos Cement Pipe Work

12. Only employees trained to work with asbestos cement (AC) pipe shall disturb, cut, or perform work AC pipe.

13. Only use manual-cutting tools (snap cutter, hammer or knife blade) to cut AC pipe. Use of other cutting tools must be first approved by the District. The use of powered tools to cut AC pipe is prohibited. Continuously wet the area of the pipe being cut with water and surfactant through the use of a sprayer to prevent asbestos fibers from becoming airborne. Wear appropriate respiratory protection as required. Smoking is prohibited when handling asbestos materials.

14. Before AC pipe work begins, place an asbestos danger sign at the excavation as required by CCR, Title 8, Sec. 1529.

15. AC pipe shall be either abandoned in place in the excavation or properly disposed of asbestos-containing materials according to Cal-EPA regulations. Before AC pipe is disposed, double-wrap the pipe in 6-mil polyethylene sheeting and seal with duct tape. Store waste pipe at a secure location. Attach an asbestos warning label to waste pipe as required by CCR, Title 8, Sec. 1529.

Silica Safety

16. A silica exposure control plan must be established for work that could expose Contractor or District employees to respirable crystalline silica at greater than 25 micrograms per cubic meter of air (25 µg/m3) as an 8-hour time-weighted average (TWA) under any foreseeable conditions. Copies of this plan may be requested by the Contract Administrator.

17. In addition to the exposure control plan, control methods for minimizing silica exposure must be developed and utilized at all times during the course of potential silica-exposing work. Copies of this control plan and verification of their effectiveness may be requested by the Contract Administrator.

Grounds Maintenance

18. When feasible, keep at least 50 feet away from other workers operating push mowers or weed eaters to prevent being struck by flying objects.

19. Do not trim tree branches that are within 10 feet of live high voltage power lines.

20. Use a fall protection system when climbing trees.

Treatment Plant and Pumping Plant Areas

21. Unless necessary for troubleshooting, avoid being in the immediate location of industrial equipment when the equipment is remotely started.

22. When opening hazardous material piping or tanks follow the CCWD Operations & Maintenance Standard Operating Procedure (O&M SOP) "Line Breaking Involving Dangerous Materials." Wear self-contained breathing apparatus (SCBAs) when opening systems containing chlorine gas, ozone, or ammonia.

23. Always check atmospheric levels before entering a potentially hazardous atmosphere. Wear appropriate respiratory protection before entering a hazardous atmosphere. Continuously monitor the atmosphere.

24. Wear supplied air respiratory protection when applying urethane or other coatings inside confined spaces that may create a hazardous atmosphere.

25. Check Safety Data Sheets for hazardous chemical permissible exposure limits, especially when using the chemicals inside enclosed spaces.

Oxygen and Ozone Systems Maintenance

26. Wear 100% cotton clothing to minimize the risk of sparks generated by static discharge from clothing.

27. Use spark-resistant tools when working on oxygen and ozone systems.

28. Confirm oxygen levels are in the safe range of 20.9% and 23.5% using a direct-read gas monitor before conducting hot work. Stop work and exit the work area if the direct-read gas monitor indicates oxygen levels outside of the safe range in the work area.

29. Use only intrinsically-safe ventilation equipment (exhaust and blower) prior to and during ozone line breaking activities. Wear self-contained breathing apparatus until ozone levels in the work area are confirmed to be below 0.1 ppm.

BOATING SAFETY

1. Do not operate a boat unless properly trained in a course approved by the National Association of State Boating Law Administrators (NASBLA), the California Department of Boating and Waterways, the US Coast Guard Auxiliary, or US Power Squadrons.

2. Do not operate a boat in inclement weather except when needed to conduct a rescue. Boating at Los Vaqueros Reservoir is prohibited when sustained wind speed is above 16 miles per hour.

3. Each boat occupant must wear a US Coast Guard-approved personal flotation device (PFD). Each occupant must carry a whistle or horn to alert others in case of emergency.

4. Each boat must have the maximum carry capacity marked. Do not exceed the maximum occupancy or carrying capacity.

5. Each boat must have a means of communication (e.g., push-to-talk device or cell phone).

6. Each boat must carry a fire extinguisher and a US Coast Guard-approved throwable rescue device.

7. If the boat operator expects the boating activity to take longer than four hours, a written float plan must be prepared. The float plan must include the following information: names of personnel on board, activity to be performed, expected time of departure, route, time of return and means of communication.

8. A minimum of two trained persons launch or retrieve a boat from a boat ramp.

9. Ensure there is enough fuel and drinking water for the boating activity.

10. Stay seated while the boat is travelling.

CONFINED SPACES

1. Before entering confined spaces:

   a. Remove standing water to less than 3 inches in depth when possible;

   b. Monitor the atmosphere with a calibrated gas monitor device with oxygen, carbon monoxide, hydrogen sulfide, and explosive atmosphere sensors. Where the potential for hazardous atmospheres of ammonia, chlorine, ozone, or volatile organic compounds exists, monitor the atmosphere with sensors that can detect those hazards, or use appropriate respiratory protection equipment during entry;

   c. Use an appropriate ladder;

   d. Where welding and cutting and/or spray coating activities occur or where other serious hazards exist as defined by the California Code of Regulations (CCR), Title 8, Sec. 5157, "Confined Spaces," a "permit" entry procedure is used. A permit procedure includes use of a Confined Space Permit checklist, use of a retrieval and fall protection system (unless the system poses a greater hazard), and attendant(s) or rescue personnel available on-site that are prepared to carry out a confined space rescue plan;

   e. Use mechanical ventilation as needed; use exhaust ventilation to remove welding fumes during welding/cutting activities;

   f. Eliminate chemical or drowning hazards using positive isolation methods as defined by CCR, Title 8, Sec. 5157 and Sec. 1953. If positive isolation to eliminate drowning hazards is not feasible, entry using a single point of isolation may be made only if a written failure analysis using engineering data indicates that risk of engulfment is adequately controlled by the use of the single isolation point;

   g. Ensure that self-contained breathing apparatus (SCBAs) are available for rescue personnel where a potential for a hazardous atmosphere may exist; and

   h. Where access to and from the space is horizontal, fall protection may not be required. However, entrants shall wear harnesses to help assist rescue personnel in retrieval.

2. All confined space entrants, attendants and entry supervisors must be trained on the hazards of confined spaces and safe entry procedures, as well as lockout/tagout procedures when used. Confined space rescue personnel must have participated in a confined space rescue drill within the last 12 months, and be certified in cardiopulmonary resuscitation and first-aid.

DIVING OPERATIONS

Follow these safety procedures during all underwater diving operations:

1. Before diving operations commence, submit a written diving safety manual and dive plan to the Contract Administrator.

2. The diving safety manual shall describe safety, equipment and other operating procedures as well as emergency procedures covering evacuation and medical treatment.

3. The dive plan shall include information for the specific task including identified hazards, team assignments, emergency procedures, a list of nearby medical facilities including recompression chambers, breathing gas supply equipment, and thermal protection and other equipment planned for use.

4. When a diver is submerged without being line-tended from the surface, a stand-by diver or a second diver shall be available to assist in an emergency. Effective communication with the submerged diver such as radio communication shall be in place at all times.

DRIVING SAFETY

1. When driving on District property, a valid driver's license for the type of vehicle being driven, vehicle registration form, and proof of vehicle insurance in required.

2. Ensure that driver and passengers have safety belts fastened while driving at all times. Obey all laws and rules of the road, including speed limits, traffic signal and signs.

3. Park all vehicles in compliance with the California Vehicle Code and local ordinances. Follow the *California Manual on Uniform Traffic Control Devices* whenever work is performed in and adjacent to vehicle traffic.

4. Determine loading restrictions on reservoir roofs prior to driving vehicles or placing other loads on the roof. Do not overload roofs.

5. Before driving heavy equipment or trucks on steeply sloped unpaved paths, inspect the paths with either a light vehicle or on foot. Determine and mark soft areas, sharp turns, slopes and other hazards.

6. When departing vehicles, set all brakes. Turn off the engine (unless required to power axillary equipment). At sloped areas, place a wheel chock on the downhill side of one of the drive wheels or curb wheels. Where possible, park the vehicle’s wheels perpendicular to the slope’s direction.

ELECTRICAL SAFETY

1. Only qualified electricians shall work on electrical conductors, equipment or systems of 480 V or more. Qualified electricians have a minimum of two years of training and experience with high voltage circuits and equipment and have demonstrated by performance familiarity with the work to be performed and the hazards involved.

   a. **Documentation of electrician experience must be submitted to the District Contract Administrator prior to the start of work.**

   Under the supervision or instruction of a qualified electrician, trained persons familiar with the electrical operation to be performed and the electrical hazards involved are permitted to work on electrical equipment or systems of less than 480 V (including throwing switches and using voltage testers to verify proper lockout). No electrical work shall be performed by untrained persons that do not have the demonstrated skills or knowledge in the construction and operation of electric equipment and installations and the hazards involved.

2. Check equipment, cords and attachments before each use to ensure they are safe to use and operate. Remove damaged electrical equipment from service.

3. Use energy control procedures to ensure that power is completely off during maintenance and repairs of hard-wired equipment. Physically lock all isolation devices with a lockout device. Confirm de-energization before handling non-insulated wiring. The exception to this rule is electrical troubleshooting.

4. Stay clear of energized parts whenever possible. If you must work with or near energized parts with voltages exceeding 50 Volts (i.e., electrical troubleshooting):

   a. Use personal protective equipment such as rated flame retardant clothing, rubber insulating gloves, sleeves, hard hats, blankets, mats and nonconducting tools.

   b. Avoid wearing metallic jewelry including watches.

   c. Follow arc flash label requirements to keep safe distances from electrical equipment. Wear appropriate PPE if closer than the safe distance from live electrical parts. Where arc flash labels do not exist, stay at least 10 feet away from where live low voltage (480 V and less) electrical work is being conducted unless you are wearing the appropriate personal protective equipment. Stay outside of the motor control center area (building or room) where live high voltage (more than 480 V) electrical work is being conducted unless you are wearing the appropriate personal protective equipment. Use barricade tape or signs to warn unprotected persons to keep away from the live electrical work area.

   d. Do not use two hands when handling energized parts.

5. Do not work on energized electrical equipment when wet, including heating tape on equipment.

6. Re-install equipment guards that protect electrical equipment after work is completed.

7. Keep electrical panel doors on and closed. Keep access to electrical panels clear with at least a 36” clearance. Do not use motor control center rooms as storage areas.

8. Use equipment designed for use in damp environments when exposed to such environments. All electrical equipment in these areas must be grounded.

9. Use ground fault circuit interrupters (GFCIs) when using electrically-powered tools and equipment during construction and maintenance activities.

10. Only persons who are trained shall access electrical panels and equipment. Before accessing electrical panels, take safe and appropriate actions to check the panel enclosure for hazardous voltage prior to opening.

FALL PROTECTION

1. Install temporary standard 42” guard rails or fencing whenever feasible to provide protection from falls over 6 feet.

   Set barricades, fencing, or guard rails around open excavations with depths in excess of 6 feet to prevent falls into the excavation.

2. Wear proper fall protection equipment (harness with a fall arrest or fall restraint device tied to an anchor point) when working within 6 feet of the leading edge of unprotected work surfaces more than 6 feet in elevation or unprotected sloped work surfaces greater than 40 degrees and more than 6 feet in elevation.

3. For work on sloped roofs greater than 30 degrees (7:12 slope) and more than 6 feet in elevation, use fall protection equipment secured to a suitable anchor point. Install anchor points as needed.

4. For work on flat roofs or roofs less than 30 degrees in slope and more than 6 feet in elevation:

   a. When possible, keep 6 feet from leading edges;

   b. When working within 6 feet of a leading edge and work is expected to be of long duration (more than a week), install temporary guard rails; when work is of short duration (less than a week) wear proper fall protection equipment to work within 6 feet of the edge.

5. Do not use fall protection equipment unless properly trained. Inspect fall protection equipment before use.

6. Anchor points must be capable of supporting 5000 lbs. per attached worker. Do not attach fall protection equipment to guard rails. When practical, secure the anchor end of the fall arrest device at a level not lower than your waist.

7. A fall arrest device can be a shock-absorbing lanyard or a self-retracting lifeline. Lifelines shall be protected against damage.

8. When the use of guard rails or other conventional fall protection is impractical or creates a greater hazard, submit a written fall protection plan that complies with CCR, Title 8, Section 1671.1 to the District Contract Administrator before the start of work.

9. Scaffolds are erected and inspected only by trained competent persons. Inspect the scaffold before use. Stay clear of electrical lines and other equipment. Scaffolds must be level and be set up on firm and solid foundations. Scaffolding over 6 feet must have guard rails and toe-boards on open sides and ends. Scaffolds must not exceed its load capacity. Do not climb on scaffold cross bracing. Do not carry materials when climbing. Riding on rolling scaffolds is prohibited. All wheels’ safety locks and pins must be in place when a person is on the scaffold. Place barricades or cones around the area beneath the scaffold to warn passersby of possible falling objects.

FIRE SAFETY

1. Ensure good housekeeping is maintained, keeping work areas clean and free of debris.

2. Store flammable materials in approved safety cans and/or cabinets. Keep large amounts (more than 10 gallons of flammable liquid) in a flammable liquids cabinet.

   a. Keep smoking, flames/sparks, and other ignition sources at least 35 feet away from areas where flammable fuel is dispensed.

   b. To prevent the buildup of static electricity and prevent sparks from causing a fire, bond dispensing and receiving containers together before dispensing flammable liquid. Additionally, ensure the dispensing container is grounded.

   c. Report all fires.

3. Operate and maintain all electrical circuits so they do not become overloaded.

4. Keep fire exits and escape routes clear.

5. Know the evacuation routes from your work area.

6. Know where alarm boxes are located.

7. Maintain a fire watch when open flames, sparks, or smoke are present. Keep a fire extinguisher available when welding/cutting/brazing, grinding or conducting other hot work.

   Wildfire Prevention: Maintain a fire watch for at least 30 minutes after hot work or weed abatement activities are completed at areas with a high wildfire risk. A fire pump-equipped pickup truck or water truck must be in operation for fire watch duty. At wildfire-prone areas, and when temperatures exceed 80 degrees Fahrenheit, relative humidity is below 30% and sustained winds exceed 10 miles per hour, contact CAL FIRE in Morgan Hill (408) 779-2121 for permission to conduct hot work. Hot work at the Los Vaqueros Watershed must be approved by the District's Watershed management.

   Structural Fire Prevention: Obtain a hot work permit from the District Contract Administrator before performing hot work at CCWD facilities. At CCWD facilities (office buildings/areas, pump stations/plants, and treatment plants), maintain a fire watch for 60 minutes after hot work is completed under a permit. Re-check the work area three hours after hot work is completed under a permit.

   Employees performing welding activities and fire watch duties shall wear 100% cotton clothing or flame-resistant clothing, and have completed fire suppression training within the last 12 months.

   (See also Welding, Cutting and Other Hot Work section for related requirements).

HEAT ILLNESS PREVENTION

1. Water must be located as close as practicable to the areas where employees are working at all times.

2. Employees are encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating or experiencing heat illness.

3. Shade shall be present when the temperature exceeds 80 degrees Fahrenheit. Shade should be less than a 5-minute walk from the work area.

4. Employees shall be closely monitored during a heat wave (any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees higher than the average high daily temperature in the preceding five days), especially if they have been away from the heat for a week or more or are newly assigned to a high-heat area. Newly assigned employees shall be monitored for 14 days.

5. High heat procedures shall be implemented when the temperature equals or exceeds 95 degrees Fahrenheit. This includes:
    a. Daily heat alerts to employees
    b. Ensuring effective communication between employees and supervisors
    c. Observing/checking with employees for alertness and signs/symptoms of heat illness.
    d. When forecasted temperatures exceed 105 degrees Fahrenheit, supervisors must schedule strenuous work activities during cooler times of the day, except for emergency job tasks that are necessary to be completed to avoid major service disruptions or impacts to public safety.

HIGH HAZARD JOB TASKS

Pre-task plans and tailgate meetings are required to be conducted just prior to all high hazard job tasks, in accordance with O&M SOP High Hazard Work. Completed High Hazard Work Plans shall be submitted to the Manager of Health & Safety. High Hazard job tasks include:

High Hazard Task	**Work Planning Form Required**
Permit-required confined space entry	Confined space permit
Maintenance tasks requiring lockout/tagout	Energy Control Procedure (ECP)
Line breaking tasks – Opening of equipment that may carry flammable, corrosive, or toxic material, or an inert gas or any fluid, including water, at a volume, pressure, or temperature capable of causing serious injury	High hazard work plan
Neutralizing large amounts of spilled corrosive substances at plant process areas	High hazard work plan
Work requiring the use of cartridge respirators or self-contained breathing apparatus	High hazard work plan or SCBA form
Use of mobile cranes with persons (other than the crane operator) on foot and in the immediate area of operation	High hazard work plan
High-voltage electrical work above 600 Volts or work on exposed live parts of low voltage (50 - 600V)	High hazard work plan, or energized electrical permit
Work using a personal fall arrest system	High hazard work plan
Excavating with heavy equipment or working in an excavation deeper than 4 feet	Excavation pre-task plan
Work in public roadways with the speed limits of 30 MPH or more and when traffic control measures are needed for a time period of more than 15 minutes	Excavation pre-task plan, or high hazard work plan
Scaffold erection	High hazard work plan
Hot work (welding, cutting, or grinding outside of maintenance shops)	Hot work permit
Chainsaw operations to remove a branch or tree greater than 8 inches in diameter	High hazard work plan, or tree removal form
Work over water at night	High hazard work plan
Any other job task determined as highly hazardous by the lead person or the supervisor in charge	High hazard work plan

1. The tailgate meeting must cover hazards expected throughout the job task, measures to protect against those hazards, and emergency response planning.
2. Use available safety checklists for the job task (e.g., confined space entry permit), and complete during the meeting.
3. All employees involved in the high hazard job task must attend the meeting. Meeting information must be documented. See the table above for the appropriate form for documentation.
4. Before working on high hazard activities that are non-routine and not covered under an existing SOP, complete a High Hazard Work Plan as per the O&M SOP. The High Hazard Work Plan must be approved by a supervisor and the Manager of Health & Safety.
5. Staff shall delineate the work zone using cones, barricades, caution tape, or equivalent warning devices.

LADDER SAFETY

1. Select the right ladder for the job.
   a. The ladder shall be tall enough so that you can safely reach the required objects, and must be on solid footing on the ground or a solid foundation. Do not put the ladder on some other object to reach the required height.
   b. The ladder shall be made of a material that is appropriate for the work to be performed. Do not use metal (electrically conductive) ladders when working around or with electrical equipment.

2. Use ladders for only their intended purpose, i.e., climbing up and down.

3. Always face the ladder when ascending or descending, holding on with both hands.

4. Step Ladders
   a. Make sure the spreaders are locked open before climbing.
   b. Do not climb above second rung from the top.

5. Straight/Extension Ladders
   a. Ensure that the ladder extends at least 3 feet above the elevated surface to which you are climbing.
   b. Secure the ladder at the top to hold it in place. Have a second person hold the ladder in place when ascending or descending until the ladder is secured. The person climbing the ladder and the person holding the ladder shall wear hard hats when an overhead hazard is present.
   c. Keep at or below the third rung from the top on a straight ladder.

6. Fixed Ladders - Use a ladder climbing safety device (LAD-SAF®) when climbing fixed tank ladders that have the device installed.

LOCKOUT, BLOCKOUT AND TAGOUT

Follow the District's Energy Control Procedures, which include these lockout, blockout and tagout procedures during all confined space entries and all construction and maintenance activities on machinery or equipment where a hazardous release of energy is possible including electrical, mechanical, chemical, hydraulic, pneumatic and potential.

1. Notify all affected personnel (including operators of machinery, equipment and facilities) during a hazard analysis tailgate meeting before the activity.

2. Follow the District's Energy Control Procedures (ECP) for the specific District equipment/systems. Coordinate with District staff to identify all hazardous energy sources, their energy isolation devices (e.g., circuit breakers, valves, etc.), control circuit-type devices (e.g., push buttons, selector switches, etc.), block-out points, drain/bleed points and energy indicator devices (e.g., gauges, panel lights). Review and suggest changes to ECPs where needed to ensure proper lockout, blockout and tagout prior to work.

3. Shut down. All operating controls shall be turned off or returned to the neutral position (depress stop button, open switch, close valve, etc.). Deactivate the energy isolation device so that the machine or equipment is isolated from the energy source. Disable motor-operated valves.

4. Lock out. A locking device shall be placed on each energy-isolating device or project lock box to isolate each energy source. Each employee who could be potentially injured by unexpected energy release shall place their own uniquely keyed lock and tag at each isolation point, or at the lock box.

5. Tag out. Do not use tags alone on energy isolation points unless the isolation point is not lockable. The tag must be attached using a zip tie (or equivalent) and have the following information: name, "Danger – Do Not Operate" (or equivalent wording), date, and contact information.

   Machines or equipment not equipped with lockable controls shall be disconnected from their sources of power to prevent inadvertent movement or release of hazardous energy. Tag equipment controls. Implement additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the risk of inadvertent energization.

6. Drain, bleed, and purge any stored energy. Coordinate with District staff to ensure stored or residual energy (such as capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, pressurized air, gas or water systems, chemicals, etc.) are dissipated by methods like grounding, bleeding down, flushing, etc. If necessary, moveable parts shall be mechanically blocked to prevent inadvertent movement.

   Prior to opening a chemical system, depressurize and drain as completely as possible, thoroughly wash, flush, purge and vent (if safe). Some toxic gases may not be safely vented. For more specific guidance, follow the District's O&M Line Breaking Procedure, which requires use of SCBAs when opening aqueous ammonia, ozone or chlorine systems.

7. Verify lockout. First, check that no personnel are exposed, then test and verify isolation of equipment by operating the push buttons, switches or other normal operating controls to make certain the equipment is not energized (voltage tester). Visually inspect to ensure the equipment will not otherwise operate. Return operating controls to neutral or "off" position after verification.

8. Exceptions to the lockout and tagout procedures must be approved by the District and may include the following: electrical troubleshooting performed by qualified electricians and hot tapping of water pipelines.

WORK AT LOS VAQUEROS WATERSHED

1. All contractors, consultants, and CCWD employees must sign-in and sign-out when entering and leaving the Los Vaqueros Watershed or its associated Conservation Properties for safety and security. Sign-in and sign-out will be done at the Watershed Office (100 Walnut Boulevard, Brentwood), or by phone (925-240-2360).

2. Keys for gate access and vehicle tags must be picked up at and returned to the Watershed Office. Vehicle tags must be displayed for identification. Travel only on routes approved by Watershed Resources Staff. Return gates and locks to the configuration they were found.

3. All work outside of normal business hours must be coordinated with Watershed Resources Staff.

4. All work conducted at the Los Vaqueros Watershed and its associated Conservation Properties must be done in accordance with the Los Vaqueros Watershed Programmatic Biological Opinion and its associated permits, unless otherwise noted.

5. All contractors, consultants, and CCWD employees must receive a Sensitive Species Training prior to conducting work at the Los Vaqueros Watershed and its associated Conservation Properties. Depending on the type of work to be conducted, a biological construction monitor may be required.

6. Be advised, rain events stop most types of work and travel throughout the Los Vaqueros Watershed and its associated Conservation Properties from occurring. If a rain event occurs or is predicted to occur, consult with Watershed Resources Staff.

7. Wildfire safety: All contractors, consultants, and CCWD employees are required to follow the Cal Fire Operational Guide for Use of Equipment in Grass, Brush or Forest Covered Areas:

    a. Do not drive, park, or idle over dry grass or brush.

    b. All equipment must be inspected for defects and include a spark arrestor.

    c. Each piece of equipment will carry the following tools: 1 (one) round point shovel not less than 46 inches long, and 1(one) 5-gallon water type fire extinguisher.

    d. Mowing operations should be completed by 10 AM.

    e. No operations shall occur within <u>24 hours</u> of a predicted Red Flag event as determined by the National Weather Service.

    f. Prior to commencement of any operations, a weather sampling will be conducted at the site. Additional weather sampling will be conducted every 2 hours thereafter until completion of the operation. <u>If the ambient temperature reaches 80 degrees Fahrenheit at any time during the operation, weather samplings must be taken hourly. In the event the following readings are noted, OPERATIONS WILL CEASE IMMEDIATELY: The relative humidity is at or below 30%, or sustained wind speeds reach 10 MPH or higher.</u>

PERSONAL PROTECTIVE EQUIPMENT

Head

1. Hard hats are to be worn at all times when any of the following conditions are present:
    a. At work sites where construction and maintenance activities are conducted.
    b. When working on a public street, or walking on paths for construction vehicle traffic.
    c. When climbing ladders.
    d. Vertically entering/exiting confined spaces.
    e. At treatment plant process areas.
    f. At pump stations/plants.
2. When possible, wear hard hats for sun protection.
3. Delineate the work zone requiring hard hats using signs, cones, barricades, caution tape, or equivalent warning devices.
4. Hard hats need not be worn in office environments with no overhead hazards.

Eye/Face

1. Wear the appropriate eye and face protection when you are engaged in metalworking activities, welding and cutting, using powered tools or otherwise exposed to flying particles/objects, injurious light rays, liquid chemicals, or hazardous gases.
2. Eye/face protection is required to be worn at treatment plants (except offices), pump stations/plants, laboratories, maintenance shops, and all areas where there are unshielded pressurized hazardous chemical lines or when hazardous chemicals are being used.
3. Full-face splash shields with safety glasses worn underneath, chemical splash goggles, or full-face respirators are required to be worn in the immediate areas (within 6 feet or inside secondary containment areas) where corrosive chemicals are off-loaded, handled, or leaking from process lines, or where corrosive chemical line breaking activities are conducted.
4. Eye/face protection is required in the immediate areas were construction and maintenance activities are being performed.

Hand and Arm

Wear appropriate protective gloves when you may be exposed to abrasions, hazardous substances, burns, cuts, punctures, live electricity, or other hazards. When welding, wear protective leather gauntlet gloves or leather gloves and sleeves. Appropriate chemical resistant nitrile, latex or rubber gloves, and chemical resistant coveralls must be worn when approaching connected bulk chemical delivery hoses.

Foot

Wear safety shoes/boots that comply with ASTM F2413-05 M I/75 C/75 Standard when exposed to the risk of foot injuries from hot material, corrosive substances, falling objects, and crushing or penetrating activities.

Body and Leg

1. Wear chemical-resistant suits, coveralls or aprons, when working with bulk chemicals or performing line-breaking operations where chemical exposure to the torso is possible.
2. Wear approved personal floatation devices (PFDs) to control drowning hazards when inside the canal liner fence, near or over areas where water depths may exceed 4 feet, or in areas where indicated by posted signs.

   PFDs do not need to be worn when other protective measures are in place, such as:

   a. Keeping a horizontal distance of more than 6 feet from the drowning hazard.

   b. Using fall prevention equipment system (anchor point, harness and connection device) that effectively prevents a fall into the water.

   c. Working behind a proper guardrail or equivalent barrier that is at least 42 inches high.
3. When exposed to traffic, all employees must wear high visibility shirt or vest rated at least Class 2 by ANSI/ISEA 107-2015. During hours of darkness and/or on roads with a speed limit of 45 MPH or above, wear shirts or jackets with rated Class 3 by ANSI/ISEA 107-2015. Wear flame-resistant (FR) high visibility apparel for hot work activities on roads.
4. Wear long pants on all construction project sites. Synthetic fabrics shall not be worn during hot work (welding, cutting) and fire watch activities.
5. Wear leg protection (chaps) when operating chainsaws (excluding pole saws or when climbing trees).
6. Wear leg protection (snake chaps) when working in snake-prone areas.

Hearing

Wear hearing protection when near the operation of the following equipment: pneumatic tools, concrete saws, mowers, weed eaters, leaf blowers, chainsaws, pavement router, cement grinders, welding/cutting equipment, as well as other equipment where one must shout to be heard.

POWERED TOOLS AND EQUIPMENT

All employees shall follow these power tool/equipment safety rules:

1. Use manufacturer-recommended safety devices, guards, and shields on powered equipment.

2. Do not disengage safety devices and guards unless equipment is disabled so that it cannot unexpectedly energize. Exception: A chainsaw's bar nose guard may be removed for certain situations as allowed by the manufacturer's instruction manual.

3. For non-cord and plug-type equipment: isolate, lock and tag out hazardous energy sources (electrical disconnects and valves) before performing service and maintenance. (See Lock and Tag section).

4. Effectively ground all cord-connected, electrically-powered tools and equipment, or use double-insulated type tools.

5. Use grounded electric-powered tools and ground-fault circuit interrupters (GFCIs) during all construction and maintenance activities.

6. Use a fall arrest system (lanyard and harness) when using an aerial boom lift.

7. Secure all compressed gas cylinders during transport, use, or storage to prevent them from toppling over. Place valve protection devices on all stored cylinders.

8. Grinders:

    a. Inspect grinding wheels for cracks or damage before use. Ensure guards are in place. For bench/floor grinders, ensure that the tongue guard is within 1/4" of the wheel, and the tool rest is within 1/8" of the wheel.

    b. Before using a new grinding wheel, make sure the manufacturer's recommended speed, as posted on the wheel, is compatible with your grinder. Perform a "ring" test to ensure the integrity of the wheel.

    c. Don't stand directly in front of a grinding wheel whenever a grinder is started.

    d. Don't grind material for which the wheel is not designed.

    e. Don't force grinding so that motor slows noticeably.

9. Use water other appropriate controls to prevent silica dust from becoming airborne when generating dust from concert, stone, or other silica-containing material. This includes sawing, demoing, crushing, etc.

SOLITARY WORK

Contractors shall not work alone under the following work conditions:

1. Chemicals / Hazardous Materials:
    a. Line breaking activities at treatment plants involving toxic or corrosive substances
    b. Work with open batteries (splash hazard)
2. Confined Space: Permit-required confined space entries
3. Electrical: High-voltage (> 600 Volts) electrical work
4. Equipment and Tools:
    a. Operation of lattice or boom truck crane
    b. Chainsaw operation used for tree work
5. Excavation / Street Work:
    a. Work in excavations more than 4 feet deep
    b. Excavation work when flagging is required (minimum of 4 persons)
    c. Work in public roadways with speed limits of 30 MPH or more and when traffic control measures are needed for an anticipated time period of more than 15 minutes
6. Fall Protection:
    a. Use of personal fall arrest system (not including ladder climbing devices, e.g. Lad-Saf)
    b. Work using an extension ladder when the ladder is not secured
7. Respiratory Protection: Potentially hazardous atmospheres where self-contained breathing apparatus is required (a minimum of four persons required)
8. Water / Drowning:
    a. Repair of the canal liner fence, or other work occurring on the inside of the liner fence
    b. Work during hours of darkness near or over water (when personal floatation devices are required)
    c. When launching or retrieving a boat from a boat ramp
9. Welding: Hot work occurring outside of a maintenance shop (fire watch needed when welding, cutting, or grinding outside of maintenance shop)
10. Workplace Violence: Threat received regarding customer turn-off or any other threat
11. Work at the following facilities and locations, regardless of the type of work:
    a. Mallard Pump Station (PS) – Hourly safety checks shall be conducted by Control
    b. Los Medanos Wasteway
    c. Canal laterals
12. Other work tasks or work locations may also be determined to require two people by the supervisor, superintendent, manager, or Manager of Health & Safety on a case-by-case basis.

WELDING, CUTTING AND OTHER HOT WORK

1. Maintain a fire watch when open flames, sparks, or smoke are present. Keep a fire extinguisher available when welding/cutting, grinding or conducting other hot work.

2. High Wildfire Risk Areas: If grinding or welding near dry (cured) vegetation, always wet down the vegetation at least 35 feet around and 75 feet downwind of the work site. Do not mow, weed-eat, or grind or weld near dry vegetation within 24 hours of a red flag day (temperatures exceed 80 degrees Fahrenheit, sustained wind speeds exceed 10 MPH and humidity is less than 30%). Check the National Weather Service on-line, evaluate weather with a "Kestrel" or contact a supervisor prior to hot work. Hot work at Los Vaqueros Watershed must be approved by the Watershed Superintendent. An employee on fire watch should have on hand: a shovel, and at least 5 gallons of water to spray as extinguishing agent).

3. Obtain a hot work permit before performing hot work outside of maintenance shops at District facilities (office buildings/areas, pump stations/plants, and treatment plants).

4. Maintain a fire watch for 30 minutes after hot work is completed under a permit.

5. Employees performing welding activities and fire watch duties shall wear 100% cotton clothing or flame-resistant clothing and have received fire extinguisher or fire suppression training within the last 12 months.

6. Before attaching a regulator to a cylinder, "crack" the cylinder valve (open the valve for an instant to blow dust or dirt out). Do not stand in front of valves when opening them.

   Stand to one side of the regulator and very slowly open the cylinder valve on the oxygen all the way. Open the acetylene valve no more than ¾ of a turn. Take the T-wrench out of the cylinder and keep it close at hand. Tops of cylinders must be unobstructed at all times so valves may be quickly closed.

7. Use exhaust ventilation when welding or cutting in enclosed spaces. Use a gas monitor to confirm safe atmospheres. Do not place cylinders into confined spaces.

8. To prevent fires from flames, sparks and molten metal, remove combustible materials at least 35 feet around the work area. Cylinders shall be kept far enough away from hot work so that sparks, slag or flame will not reach them. Use fire-resistant shields (plywood) as needed.

9. Close all valves on cylinders when storing and/or transporting in vehicles. For long-term storage in buildings, close all valves, remove regulators and secure valve caps. Before a regulator is removed, close the cylinder valve and release the gas from the regulator.

10. Cylinders shall be used, stored or transported in an upright and secured so they cannot fall over and/or fall out of the truck. Valves of empty cylinders shall be closed, and cylinders marked "Empty" and properly stored.

11. Cylinders shall never be transported by a forklift unless in a secured and approved transportation apparatus.

12. Separate acetylene and oxygen cylinders stored in buildings by 20 feet or a 2-hour fire wall.

13. Shield welding work from others to prevent eye damage.

CONTRA COSTA WATER DISTRICT
CONTRACTOR/CONSULTANT
SAFE PRACTICES HANDBOOK

Fiscal Year 2021

Sign and return this page to the Contract Administrator

I have read and understood the Contractor/Consultant Safe Practices Handbook and I understand it is my responsibility to ensure that every employee from my company and each employee of subcontractors and sub-consultants working at or on Contra Costa Water District facilities has been briefed on the requirements contained in this handbook and has received a copy of the handbook.

_____ _____

Print Name Company Name

_____

Position

_____ _____

Signature Date