

Third Amended Agreement for Engineering and Design Services for Dry Creek Habitat Enhancement Projects, Phase VI

This second amended agreement ("Second Amended Agreement" or "Agreement") is by and between **Sonoma County Water Agency**, ("Sonoma Water") and **Cardno, Inc.**, a Delaware corporation ("Consultant"). The Effective Date of this Agreement is the date the Agreement is last signed by the parties to the Agreement, unless otherwise specified in Article 5 (Term of Agreement)

RECITALS

- A. Consultant certifies that it is a Delaware corporation duly authorized to do business in the State of California, registered with the Secretary of State of California, and represents that it is a duly qualified and licensed engineering and environmental services firm experienced in the preparation of engineering documents and related services.
- B. In September, 2008, the National Marine Fisheries Service (NMFS) issued the Biological Opinion (BO) on the water supply, flood control, and channel maintenance operations conducted by Sonoma Water, the United States Army Corps of Engineers (USACE), and the Mendocino County Russian River Flood Control District in the Russian River watershed. The BO is a 15 year recovery plan based on the results of a Section 7 consultation under the federal Endangered Species Act with NMFS.
- C. One of the recommended Reasonable and Prudent Alternatives (RPA) contained in the BO requires habitat enhancement of six miles of Dry Creek to provide near ideal summer rearing conditions for coho and steelhead while maintaining operational steady state discharge for water supply purposes. The proposed Dry Creek Habitat Enhancement Project (Project) is being developed in accordance with the RPA and will be an important component of a larger effort to improve conditions for salmonid species in the Dry Creek and Russian River watersheds.
- D. Phase I of the Project, the Demonstration Project, was a one mile long reach and was intended to provide an opportunity for stakeholders to evaluate the proposed habitat enhancement approach. Phase I was completed during summer of 2014.
- E. The Design of Phases II and III of the Project are currently underway.
- F. Phases IV, V, and VI of the Project are now being planned by Sonoma Water in coordination with USACE; USACE may construct portions of the Project.
- G. Resolution No. 04-0557, adopted by Sonoma Water's Board of Directors on June 8, 2004, authorizes Sonoma Water's General Manager to execute amendments to agreements related to the construction of projects (e.g., architectural design, engineering, inspection, etc.) so long as certain conditions are met, up to a maximum of \$50,000.
- H. Sonoma Water and Consultant first entered into this Agreement on February 2, 2016. The First Amended Agreement updated Exhibit E (Insurance Requirements). There were no other changes to the terms of the Agreement or the cost.

- I. The Second Amended Agreement extended the term six months to May 30, 2020, at no additional cost.
- J. In addition, the Second Amended Agreement changed occurrences of “Water Agency” to “Sonoma Water.”
- K. This Third Amended Agreement extends the term to December 31, 2024, at no additional cost.
- L. This Third Amended Agreement supersedes all previous agreements and amendments between the parties.

In consideration of the foregoing recitals and the mutual covenants contained herein, the parties hereto agree as follows:

AGREEMENT

1. RECITALS

- 1.1. The above recitals are true and correct.

2. LIST OF EXHIBITS

- 2.1. The following exhibits are attached hereto and incorporated herein:
 - a. Exhibit A: Scope of Work
 - b. Exhibit B: Schedule and Submittals
 - c. Exhibit C: Schedule of Costs
 - d. Exhibit D: Estimated Breakdown of Costs
 - e. Exhibit E: Insurance Requirements

3. SCOPE OF SERVICES

- 3.1. *Consultant's Specified Services:* Consultant shall perform the services described in Exhibit A (Scope of Work), within the times or by the dates provided for in Exhibit A and pursuant to Article 9 (Prosecution of Work). In the event of a conflict between the body of this Agreement and Exhibit A, the provisions in the body of this Agreement shall control.
- 3.2. *Cooperation with Sonoma Water:* Consultant shall cooperate with Sonoma Water in the performance of all work hereunder. Consultant shall also cooperate with USACE as requested by Sonoma Water. Work product under this agreement is subject to review and modification by USACE as determined by Sonoma Water Project Manager. Consultant shall coordinate the work with Sonoma Water's Project Manager. Contact information and mailing addresses:

Sonoma Water	Consultant
Project Manager: Greg Guensch 404 Aviation Boulevard Santa Rosa, CA 95403-9019 Phone: 707-547-1972 Email: Gregory.Guensch@scwa.ca.gov	Contact: Mitch Katzel P.O. Box 41 Kenwood, CA 95452 Phone: 707-484-2149 Email: mitchell.katzel@cardno.com
Remit invoices to:	Remit payments to:
Accounts Payable Same address as above or Email: ap_agreements@scwa.ca.gov	Attn: Accounts Receivable Cardno, Inc. PO Box 123422 Dallas, TX 75312-3422

3.3. *Performance Standard and Standard of Care:* Consultant hereby agrees that all its work will be performed and that its operations shall be conducted in accordance with the standards of a reasonable professional having specialized knowledge and expertise in the services provided under this Agreement and in accordance with all applicable federal, state and local laws, it being understood that acceptance of Consultant's work by Sonoma Water shall not operate as a waiver or release. Sonoma Water has relied upon the professional ability and training of Consultant as a material inducement to enter into this Agreement. If Sonoma Water determines that any of Consultant's work is not in accordance with such level of competency and standard of care, Sonoma Water, in its sole discretion, shall have the right to do any or all of the following: (a) require Consultant to meet with Sonoma Water to review the quality of the work and resolve matters of concern; (b) require Consultant to repeat the work at no additional charge until it is satisfactory; (c) terminate this Agreement pursuant to the provisions of Article 6 (Termination); or (d) pursue any and all other remedies at law or in equity.

3.4. *Assigned Personnel:*

- a. Consultant shall assign only competent personnel to perform work hereunder. In the event that at any time Sonoma Water, in its sole discretion, desires the removal of any person or persons assigned by Consultant to perform work hereunder, Consultant shall remove such person or persons immediately upon receiving written notice from Sonoma Water.
- b. Any and all persons identified in this Agreement or any exhibit hereto as the project manager, project team, or other professional performing work hereunder are deemed by Sonoma Water to be key personnel whose services were a material inducement to Sonoma Water to enter into this Agreement, and without whose services Sonoma Water would not have entered into this Agreement. Consultant shall not remove, replace, substitute, or otherwise change any key personnel without the prior written consent of Sonoma Water.

- c. With respect to performance under this Agreement, Consultant shall employ the following key personnel:

<i>Title</i>	<i>Name</i>
Project Manager	Mitchell Katzell
Deputy Project Manager	Michael Rudd

- d. In the event that any of Consultant's personnel assigned to perform services under this Agreement become unavailable due to resignation, sickness, or other factors outside of Consultant's control, Consultant shall be responsible for timely provision of adequately qualified replacements.

4. PAYMENT

- 4.1. *Total Costs:* Total costs under this Agreement shall not exceed **\$1,493,398**.
- 4.2. *Method of Payment:* Consultant shall be paid in accordance with the following terms:
- a. Consultant shall be paid in accordance with the hourly rates and expenses set forth in Exhibit C. Markup, if any, shall not exceed the percentage amounts set forth in Exhibit C. Expenses not expressly authorized by the Agreement shall not be reimbursed.
- 4.3. *Invoices:* Consultant shall submit its bills in arrears on a monthly basis, based on work completed for the period, in a form approved by Sonoma Water's Project Manager. The bills shall show or include:
- a. Consultant name
- b. Name of Agreement
- c. Sonoma Water's Project-Activity Code # T0408C001
- d. Task performed with an itemized description of services rendered by date
- e. Summary of work performed by subconsultants, as described in Paragraph 15.4
- f. Time in quarter hours devoted to the task
- g. Hourly rate or rates of the persons performing the task
- h. List of reimbursable materials and expenses
- i. Copies of receipts for reimbursable materials and expenses
- 4.4. *Monthly Progress Reports with Invoices:* Payment of invoices is subject to receipt of the monthly reports required under Task 5(Project Management) of Exhibit A (Scope of Work).
- 4.5. *Cost Tracking:* Consultant has provided an estimated breakdown of costs, included in Exhibit D. Exhibit D will only be used as a tool to monitor progress of work and the project budget. Actual payment will be made as specified in Paragraph 4.2 (Method of Payment) above.

5. **TERM OF AGREEMENT**

- 5.1. The term of this Agreement shall be from April 21, 2016 ("Effective Date") to December 31, 2024, unless terminated earlier in accordance with the provisions of Article 6 (Termination).

6. **TERMINATION**

- 6.1. *Authority to Terminate:* Sonoma Water's right to terminate may be exercised by Sonoma Water's General Manager.
- 6.2. *Termination Without Cause:* Notwithstanding any other provision of this Agreement, at any time and without cause, Sonoma Water shall have the right, in its sole discretion, to terminate this Agreement by giving 5 days written notice to Consultant.
- 6.3. *Termination for Cause:* Notwithstanding any other provision of this Agreement, should Consultant fail to perform any of its obligations hereunder, within the time and in the manner herein provided, or otherwise violate any of the terms of this Agreement, Sonoma Water may immediately terminate this Agreement by giving Consultant written notice of such termination, stating the reason for termination.
- 6.4. *Delivery of Work Product and Final Payment Upon Termination:* In the event of termination, Consultant, within 14 days following the date of termination, shall deliver to Sonoma Water all materials and work product subject to Paragraph 12.10 and shall submit to Sonoma Water an invoice showing the services performed, hours worked, and copies of receipts for reimbursable expenses up to the date of termination.
- 6.5. *Payment Upon Termination:* Upon termination of this Agreement by Sonoma Water, Consultant shall be entitled to receive as full payment for all services satisfactorily rendered and expenses incurred hereunder, an amount which bears the same ratio to the total payment specified in the Agreement as the services satisfactorily rendered hereunder by Consultant bear to the total services otherwise required to be performed for such total payment; provided, however, that if services are to be paid on a per-hour or per-day basis, then Consultant shall be entitled to receive as full payment an amount equal to the number of hours or days actually worked prior to termination times the applicable hourly or daily rate; and further provided, however, that if Sonoma Water terminates the Agreement for cause pursuant to Paragraph 6.3, Sonoma Water shall deduct from such amounts the amount of damage, if any, sustained by Sonoma Water by virtue of the breach of the Agreement by Consultant.
- 6.6. *Change in Funding:* Consultant understands and agrees that Sonoma Water shall have the right to terminate this Agreement immediately upon written notice to Consultant in the event that (1) any state or federal agency or other funder

reduces, withholds or terminates funding which Sonoma Water anticipated using to pay Consultant for services provided under this Agreement or (2) Sonoma Water has exhausted all funds legally available for payments due under this Agreement.

7. INDEMNIFICATION

7.1. Consultant agrees to accept responsibility for loss or damage to any person or entity, including Sonoma County Water Agency, and to defend, indemnify, hold harmless, and release Sonoma County Water Agency, its officers, agents, and employees, from and against any actions, claims, damages, liabilities, disabilities, or expenses, that may be asserted by any person or entity, including Consultant, that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of Consultant or its agents, employees, contractors, subcontractors, or invitees hereunder, whether or not there is concurrent negligence on Sonoma County Water Agency's part, but, to the extent required by law, excluding liability due to Sonoma County Water Agency's conduct. This indemnification obligation is not limited in any way by any limitation on the amount or type of damages or compensation payable to or for Consultant or its agents, employees, contractors, subcontractors, or invitees under workers' compensation acts, disability benefits acts, or other employee benefit acts. This indemnity provision survives the Agreement.

8. INSURANCE

8.1. With respect to performance of work under this Agreement, Consultant shall maintain and shall require all of its subcontractors, consultants, and other agents to maintain, insurance as described in Exhibit E (Insurance Requirements).

9. PROSECUTION OF WORK

9.1. Performance of the services hereunder shall be completed within the time required herein, provided, however, that if the performance is delayed by earthquake, flood, high water, or other Act of God or by strike, lockout, or similar labor disturbances, the time for Consultant's performance of this Agreement shall be extended by a number of days equal to the number of days Consultant has been delayed.

10. EXTRA OR CHANGED WORK

10.1. Extra or changed work or other changes to the Agreement may be authorized only by written amendment to this Agreement, signed by both parties. Minor changes, which do not increase the amount paid under the Agreement, and which do not significantly change the scope of work or significantly lengthen time schedules may be executed by Sonoma Water's General Manager in a form approved by County Counsel. The parties expressly recognize that Sonoma Water personnel are without authorization to order all other extra or changed

work or waive Agreement requirements. Failure of Consultant to secure such written authorization for extra or changed work shall constitute a waiver of any and all right to adjustment in the Agreement price or Agreement time due to such unauthorized work and thereafter Consultant shall be entitled to no compensation whatsoever for the performance of such work. Consultant further expressly waives any and all right or remedy by way of restitution and quantum meruit for any and all extra work performed without such express and prior written authorization of Sonoma Water.

11. CONTENT ONLINE ACCESSIBILITY

- 11.1. *Accessibility:* Sonoma Water policy requires that all documents that may be published to the Web meet accessibility standards to the greatest extent possible, and utilizing available existing technologies.
- 11.2. *Standards:* All consultants responsible for preparing content intended for use or publication on a Sonoma Water/County-managed or Sonoma Water/County-funded web site must comply with applicable federal accessibility standards established by 36 C.F.R. Section 1194, pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. Section 794(d)), and Sonoma Water's Web Site Accessibility Policy located at <http://webstandards.sonoma-county.org>.
- 11.3. *Certification:* With each final receivable intended for public distribution (report, presentations posted to the Internet, public outreach materials), Consultant shall include a descriptive summary describing how all deliverable documents were assessed for accessibility (e.g., Microsoft Word accessibility check; Adobe Acrobat accessibility check, or other commonly accepted compliance check).
- 11.4. *Alternate Format:* When it is strictly impossible due to the unavailability of technologies required to produce an accessible document, Consultant shall identify the anticipated accessibility deficiency prior to commencement of any work to produce such deliverables. Consultant agrees to cooperate with Sonoma Water staff in the development of alternate document formats to maximize the facilitative features of the impacted document(s); e.g., embedding the document with alt-tags that describe complex data/tables.
- 11.5. *Noncompliant Materials; Obligation to Cure:* Remediation of any materials that do not comply with Sonoma Water's Web Site Accessibility Policy shall be the responsibility of Consultant. If Sonoma Water, in its sole and absolute discretion, determines that any deliverable intended for use or publication on any Sonoma Water/County-managed or Sonoma Water/County-funded Web site does not comply with Sonoma Water Accessibility Standards, Sonoma Water will promptly inform Consultant in writing. Upon such notice, Consultant shall, without charge to Sonoma Water, repair or replace the non-compliant materials within such period of time as specified by Sonoma Water in writing. If the required repair or replacement is not completed within the time specified, Sonoma Water shall

have the right to do any or all of the following, without prejudice to Sonoma Water's right to pursue any and all other remedies at law or in equity:

- a. Cancel any delivery or task order
- b. Terminate this Agreement pursuant to the provisions of Article 6 (Termination); and/or
- c. In the case of custom Electronic and Information Technology (EIT) developed by Consultant for Sonoma Water, Sonoma Water may have any necessary changes or repairs performed by itself or by another contractor. In such event, Consultant shall be liable for all expenses incurred by Sonoma Water in connection with such changes or repairs.

11.6. *Sonoma Water's Rights Reserved:* Notwithstanding the foregoing, Sonoma Water may accept deliverables that are not strictly compliant with Sonoma Water Accessibility Standards if Sonoma Water, in its sole and absolute discretion, determines that acceptance of such products or services is in Sonoma Water's best interest.

12. REPRESENTATIONS OF CONSULTANT

- 12.1. *Status of Consultant:* The parties intend that Consultant, in performing the services specified herein, shall act as an independent contractor and shall control the work and the manner in which it is performed. Consultant is not to be considered an agent or employee of Sonoma Water and is not entitled to participate in any pension plan, worker's compensation plan, insurance, bonus, or similar benefits Sonoma Water provides its employees. In the event Sonoma Water exercises its right to terminate this Agreement pursuant to Article 6 (Termination), Consultant expressly agrees that it shall have no recourse or right of appeal under rules, regulations, ordinances, or laws applicable to employees.
- 12.2. *Communication with Sonoma Water's Contractor:* All communication shall be between Consultant and Sonoma Water. Consultant shall have no authority to act on behalf of Sonoma Water, to stop work, to interpret conditions of the construction contract, or to give direction to Sonoma Water's contractor.
- 12.3. *No Suspension or Debarment:* Consultant warrants that it is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in covered transactions by any federal department or agency. Consultant also warrants that it is not suspended or debarred from receiving federal funds as listed in the List of Parties Excluded from Federal Procurement or Non-procurement Programs issued by the General Services Administration.
- 12.4. *Taxes:* Consultant agrees to file federal and state tax returns and pay all applicable taxes on amounts paid pursuant to this Agreement and shall be solely liable and responsible to pay such taxes and other obligations, including, but not limited to, state and federal income and FICA taxes. Consultant agrees to

indemnify and hold Sonoma Water harmless from any liability which it may incur to the United States or to the State of California or to any other public entity as a consequence of Consultant's failure to pay, when due, all such taxes and obligations. In case Sonoma Water is audited for compliance regarding any withholding or other applicable taxes, Consultant agrees to furnish Sonoma Water with proof of payment of taxes on these earnings.

- 12.5. *Records Maintenance:* Consultant shall keep and maintain full and complete documentation and accounting records concerning all services performed that are compensable under this Agreement and shall make such documents and records available to Sonoma Water for inspection at any reasonable time. Consultant shall maintain such records for a period of four (4) years following completion of work hereunder.
- 12.6. *Conflict of Interest:* Consultant covenants that it presently has no interest and that it will not acquire any interest, direct or indirect, that represents a financial conflict of interest under state law or that would otherwise conflict in any manner or degree with the performance of its services hereunder. Consultant further covenants that in the performance of this Agreement no person having any such interests shall be employed. In addition, if required by law or requested to do so by Sonoma Water, Consultant shall submit a completed Fair Political Practices Commission Statement of Economic Interests (Form 700) with Sonoma Water within 30 calendar days after the Effective Date of this Agreement and each year thereafter during the term of this Agreement, or as required by state law.
- 12.7. *Statutory Compliance/Living Wage Ordinance:* Consultant agrees to comply, and to ensure compliance by its subconsultants or subcontractors, with all applicable federal, state and local laws, regulations, statutes and policies, including but not limited to the County of Sonoma Living Wage Ordinance, applicable to the services provided under this Agreement as they exist now and as they are changed, amended or modified during the term of this Agreement. Without limiting the generality of the foregoing, Consultant expressly acknowledges and agrees that this Agreement is subject to the provisions of Article XXVI of Chapter 2 of the Sonoma County Code, requiring payment of a living wage to covered employees. Noncompliance during the term of the Agreement will be considered a material breach and may result in termination of the Agreement or pursuit of other legal or administrative remedies.
- 12.8. *Nondiscrimination:* Consultant shall comply with all applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition, pregnancy, disability, sexual orientation or other prohibited basis. All nondiscrimination rules or regulations required by law to be included in this Agreement are incorporated herein by this reference.

- 12.9. *Assignment of Rights:* Consultant assigns to Sonoma Water all rights throughout the world in perpetuity in the nature of copyright, trademark, patent, right to ideas, in and to all versions of the plans and specifications, if any, now or later prepared by Consultant in connection with this Agreement. Consultant agrees to take such actions as are necessary to protect the rights assigned to Sonoma Water in this Agreement, and to refrain from taking any action which would impair those rights. Consultant's responsibilities under this provision include, but are not limited to, placing proper notice of copyright on all versions of the plans and specifications as Sonoma Water may direct, and refraining from disclosing any versions of the plans and specifications to any third party without first obtaining written permission of Sonoma Water. Consultant shall not use or permit another to use the plans and specifications in connection with this or any other project without first obtaining written permission of Sonoma Water.
- 12.10. *Ownership and Disclosure of Work Product:* All reports, original drawings, graphics, plans, studies, and other data or documents ("documents"), in whatever form or format, assembled or prepared by Consultant or Consultant's subcontractors, consultants, and other agents in connection with this Agreement shall be the property of Sonoma Water. Sonoma Water shall be entitled to immediate possession of such documents upon completion of the work pursuant to this Agreement. Upon expiration or termination of this Agreement, Consultant shall promptly deliver to Sonoma Water all such documents, which have not already been provided to Sonoma Water in such form or format as Sonoma Water deems appropriate. Such documents shall be and will remain the property of Sonoma Water without restriction or limitation. Consultant may retain copies of the above described documents but agrees not to disclose or discuss any information gathered, discovered, or generated in any way through this Agreement without the express written permission of Sonoma Water.

13. PREVAILING WAGES

- 13.1. *General:* Consultant shall pay to any worker on the job for whom prevailing wages have been established, including but not limited to geotechnical subsurface investigation work, an amount equal to or more than the general prevailing rate of per diem wages for (1) work of a similar character in the locality in which the work is performed and (2) legal holiday and overtime work in said locality. The per diem wages shall be an amount equal to or more than the stipulated rates contained in a schedule that has been ascertained and determined by the Director of the State Department of Industrial Relations and Sonoma Water to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this Agreement. Consultant shall also cause a copy of this determination of the prevailing rate of per diem wages to be posted at each site work is being performed, in addition to all other job site notices prescribed by regulation. Copies of the prevailing wage rate of per diem wages are on file at Sonoma Water and will be made available to any person upon request.

- 13.2. *Compliance Monitoring and Registration:* This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Consultant shall furnish and shall require all subcontractors to furnish the records specified in Labor Code section 1776 (e.g. electronic certified payroll records) directly to the Labor Commissioner in a format prescribed by the Labor Commissioner at least monthly (Labor Code section 1771.4(a)(3)). Consultant and all subcontractors performing work that requires payment of prevailing wages shall be registered and qualified to perform public work pursuant to Labor Code section 1725.5 as a condition to engage in the performance of any services under this Agreement.
- 13.3. *Subcontracts:* Consultant shall insert in every subcontract or other arrangement which Consultant may make for performance of such work or labor on work provided for in the Agreement, provision that Subcontractor shall pay persons performing labor or rendering service under subcontract or other arrangement not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed in the Labor Code. Pursuant to Labor Code Section 1775(b)(1), Consultant shall provide to each Subcontractor a copy of Sections 1771, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code.
- 13.4. *Compliance with Law:* Consultant stipulates that it shall comply with all applicable wage and hour laws, including without limitation Labor Code Sections 1725.5, 1775, 1776, 1777.5, 1813, and 1815 and California Code of Regulations, Title 8, Section 16000, et seq.

14. DEMAND FOR ASSURANCE

- 14.1. Each party to this Agreement undertakes the obligation that the other's expectation of receiving due performance will not be impaired. When reasonable grounds for insecurity arise with respect to the performance of either party, the other may in writing demand adequate assurance of due performance and until such assurance is received may, if commercially reasonable, suspend any performance for which the agreed return has not been received. "Commercially reasonable" includes not only the conduct of a party with respect to performance under this Agreement, but also conduct with respect to other agreements with parties to this Agreement or others. After receipt of a justified demand, failure to provide within a reasonable time, but not exceeding thirty (30) days, such assurance of due performance as is adequate under the circumstances of the particular case is a repudiation of this Agreement. Acceptance of any improper delivery, service, or payment does not prejudice the aggrieved party's right to demand adequate assurance of future performance. Nothing in this Article 14 limits Sonoma Water's right to terminate this Agreement pursuant to Article 6 (Termination).

15. **ASSIGNMENT AND DELEGATION**

- 15.1. *Consent:* Neither party hereto shall assign, delegate, sublet, or transfer any interest in or duty under this Agreement without the prior written consent of the other, and no such transfer shall be of any force or effect whatsoever unless and until the other party shall have so consented.
- 15.2. *Subcontracts:* Notwithstanding the foregoing, Consultant may enter into subcontracts with the subconsultants specifically identified herein. McBain and Associates is an approved subconsultant for Restoration Design services. Doble Thomas and Associates is an approved subconsultant for Land Surveying services. HDR is an approved subconsultant for hydraulic modeling and construction support services. Norcal Geophysical Consultants Inc. is an approved subconsultant for geotechnical services. If no subconsultants are listed, then no subconsultants will be utilized in the performance of the work specified in this Agreement.
- 15.3. *Change of Subcontractors or Subconsultants:* If, after execution of the Agreement, parties agree that subconsultants not listed in Paragraph 15.2 will be utilized, Consultant may enter into subcontracts with subconsultants to perform other specific duties pursuant to the provisions of this Paragraph 15.3. The following provisions apply to any subcontract entered into by Consultant other than those listed in Paragraph 15.2 above:
- a. Prior to entering into any contract with subconsultant, Consultant shall obtain Sonoma Water approval of subconsultant. Sonoma Water's Board of Directors must approve the selection of any subconsultant if the amount payable to subconsultant under the agreement exceeds \$25,000. In connection with such approval, Consultant shall provide Sonoma Water with copies of the responses to Consultant's Request for Proposals (RFP) to subconsultants, the names of key personnel who will be performing work under the agreement, and an explanation of Consultant's reasons for choosing the recommended subconsultant based upon the criteria in the RFP.
 - b. All agreements with subconsultants shall (a) contain indemnity requirements in favor of Sonoma Water in substantially the same form as that contained in Article 7, (b) contain language that the subconsultant may be terminated with or without cause upon reasonable written notice, and (c) prohibit the assignment or delegation of work under the agreement to any third party.
- 15.4. *Summary of Subconsultants' Work:* Consultant shall provide Sonoma Water with a summary of work performed by subconsultants with each invoice submitted under Paragraph 4.3. Such summary shall identify the individuals performing work on behalf of subconsultants and the total amount paid to subconsultant, broken down by the tasks listed in the Scope of Work.

16. MEDIATION OF DISPUTES

- 16.1. If a dispute arises out of or relates to this Agreement, or an alleged breach thereof, and if the dispute cannot be settled through negotiation, before resorting to litigation, Sonoma Water and Consultant agree first to try in good faith to settle the dispute by mediation. Mediation shall be non-binding and utilize the services of a mediator mutually acceptable to the parties and, if the parties cannot agree, a mediator selected by the American Arbitration Association from its panel of approved mediators trained in construction industry mediation. All statutes of limitation shall be tolled from the date of the demand for mediation until a date two weeks following the mediation's conclusion. If the dispute also involves claims against or by a construction contractor who has used or otherwise relied on any work product of Consultant, the Parties agree that the mediation required by this paragraph will include the construction contractor as a participant. The cost of mediation shall be equally shared by the participating parties. Unless the participation of a construction contractor is required and that indispensable contractor is subject to an incompatible stipulation with Sonoma Water with regard to the same matters, the parties further agree that:
- a. The mediation shall be conducted in Santa Rosa, California.
 - b. Unless otherwise agreed to in writing by the parties participating in the mediation, the mediation shall be concluded no later than sixty (60) days after the first mediation session. If the dispute has not been resolved at that time, any party may elect at that time to pursue litigation.
 - c. The parties agree to exchange all relevant non-privileged documents before the first scheduled mediation session.

17. METHOD AND PLACE OF GIVING NOTICE, SUBMITTING BILLS, AND MAKING PAYMENTS

- 17.1. *Method of Delivery:* All notices, bills, and payments shall be made in writing and shall be given by personal delivery, U.S. Mail, courier service, or electronic means. Notices, bills, and payments shall be addressed as specified in Paragraph 3.2.
- 17.2. *Receipt:* When a notice, bill, or payment is given by a generally recognized overnight courier service, the notice, bill, or payment shall be deemed received on the next business day. When a copy of a notice, bill, or payment is sent by electronic means, the notice, bill, or payment shall be deemed received upon transmission as long as (1) the original copy of the notice, bill, or payment is deposited in the U.S. mail and postmarked on the date of the electronic transmission (for a payment, on or before the due date), (2) the sender has a written confirmation of the electronic transmission, and (3) the electronic transmission is transmitted before 5 p.m. (recipient's time). In all other instances, notices, bills, and payments shall be effective upon receipt by the

recipient. Changes may be made in the names and addresses of the person to whom notices are to be given by giving notice pursuant to this Article 17.

18. MISCELLANEOUS PROVISIONS

- 18.1. *No Bottled Water:* In accordance with Sonoma Water Board of Directors Resolution No. 09-0920, dated September 29, 2009, no Sonoma Water funding shall be used to purchase single-serving, disposable water bottles for use in Sonoma Water facilities or at Sonoma Water-sponsored events. This restriction shall not apply when potable water is not available.
- 18.2. *No Waiver of Breach:* The waiver by Sonoma Water of any breach of any term or promise contained in this Agreement shall not be deemed to be a waiver of such term or promise or any subsequent breach of the same or any other term or promise contained in this Agreement.
- 18.3. *Construction:* To the fullest extent allowed by law, the provisions of this Agreement shall be construed and given effect in a manner that avoids any violation of statute, ordinance, regulation, or law. The parties covenant and agree that in the event that any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions hereof shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby. Consultant and Sonoma Water acknowledge that they have each contributed to the making of this Agreement and that, in the event of a dispute over the interpretation of this Agreement, the language of the Agreement will not be construed against one party in favor of the other. Consultant and Sonoma Water acknowledge that they have each had an adequate opportunity to consult with counsel in the negotiation and preparation of this Agreement.
- 18.4. *Consent:* Wherever in this Agreement the consent or approval of one party is required to an act of the other party, such consent or approval shall not be unreasonably withheld or delayed.
- 18.5. *No Third-Party Beneficiaries:* Except as provided in Article 7 (Indemnification), nothing contained in this Agreement shall be construed to create and the parties do not intend to create any rights in third parties.
- 18.6. *Applicable Law and Forum:* This Agreement shall be construed and interpreted according to the substantive law of California, regardless of the law of conflicts to the contrary in any jurisdiction. Any action to enforce the terms of this Agreement or for the breach thereof shall be brought and tried in Santa Rosa or in the forum nearest to the city of Santa Rosa, in the County of Sonoma.
- 18.7. *Captions:* The captions in this Agreement are solely for convenience of reference. They are not a part of this Agreement and shall have no effect on its construction or interpretation.

18.8. *Merger:* This writing is intended both as the final expression of the Agreement between the parties hereto with respect to the included terms and as a complete and exclusive statement of the terms of the Agreement, pursuant to Code of Civil Procedure Section 1856. No modification of this Agreement shall be effective unless and until such modification is evidenced by a writing signed by both parties.

18.9. *Survival of Terms:* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

18.10. *Time of Essence:* Time is and shall be of the essence of this Agreement and every provision hereof.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date last signed by the parties to the Agreement.

TW 14/15-158B

Approved as to form:

By: _____
Adam Brand, Deputy County Counsel

Insurance Documentation is on file with
Sonoma Water

Date/TW Initials: 4/23/20 crt

Sonoma County Water Agency

Cardno, Inc., a Delaware corporation

By: _____
Grant Davis
General Manager
Authorized per Sonoma County Water
Board of Directors Action on July 7, 2020

By: _____

(Please print name here)

Title: _____

Date: _____

Date: _____

DIR Registration #: 1000007288

Exhibit A

Scope of Work

1. COMMENCEMENT OF WORK

- 1.1. Consultant is authorized to proceed immediately with the performance of this Agreement upon the Effective Date of this Agreement.

2. GENERAL

- 2.1. Consultant agrees to perform obligations described in this Agreement and to furnish necessary engineering skills, services, labor, supplies, supervision, and material required to perform and complete the Project.
- 2.2. By execution of this Agreement, Consultant warrants that it has carefully examined available information and has satisfied itself of local and any special conditions affecting the proposed Scope of Work. Tests, survey results, geotechnical reports, or other data or information, whether furnished by Sonoma Water, or referenced in this Agreement, are for the Consultant's convenience. Sonoma Water does not guarantee that such tests or preliminary investigations or other data and information are accurate and assumes no responsibility whatsoever as to their accuracy or interpretation. Consultant shall satisfy itself as to the accuracy or interpretation of such tests or survey results or other information or data.
- 2.3. Detailed final design is approximately 0.75 to 1.25 miles of discontinuous channel corridor (To be determined based on right-of-way outcomes).

3. COORDINATION WITH USACE

- 3.1. Attend workshops and meetings
 - a. Attend up to 9 technical USACE project team meetings via conference call, and up to 4 workshops in person when required. If Consultant is unable to attend the meeting, follow up with appropriate Project Design Team (PDT) discipline to review meeting outcomes and answer PDT questions.
- 3.2. Provide requested items
- 3.3. Provide shapefiles of conceptual, 30% and 60% alternatives designs when available. Ensure consistent layer types across Consultant's submittals. For example, include staging areas, permanent and temporary access roads, grading topography, and similar symbols for measures like LWD, riffles, etc. These submittals should meet USACE Real Estate requirements for assessors mapping.
- 3.4. USACE reviews will occur periodically during the review process, including, the 30%, 60%, 90%, and 99% design milestones. Reviews will be managed using the online USACE application ProjNet, also known as DrChecks. All comments must

be closed by the reviewer prior to completion of the 30% design milestone. Comments after 30% may be addressed at the next design phase.

3.5. Use USACE-approved software.

3.6. Refer to USACE publications/guidance as indicated in scope (Engineer Manuals “EM,” Engineer Regulations “ER,” and other).

4. PERMITTING SUPPORT

4.1. Do not proceed with this task unless requested in writing by Sonoma Water.

4.2. Perform additional services as requested by Sonoma Water to support the permitting effort. The additional services will be agreed to by Consultant and Sonoma Water and described in writing by Sonoma Water. This support may include:

- a. Providing estimates of material quantities
- b. Providing narrative describing the proposed enhancement design and preparation of selected figures to support permit applications
- c. Attending a one-day permitting coordination meeting in Santa Rosa
- d. Other support activities

4.3. Deliverables and due dates to be determined.

5. PROJECT MANAGEMENT

5.1. Provide Project planning, routine communications, and response to the priority needs of Sonoma Water. Includes managing the Project budget and preparing invoices and activity summary and monthly progress reports for compensation of Project fees and expenses for the duration of this Agreement as stated in Section 5.1 (Term of the Agreement)

6. HAZARDOUS WASTE

6.1. Services relating to the identification, investigation, or remediation of hazardous waste contamination are not included within the Scope of Work; should such services be required, the cost of such services and the party to perform the services will be negotiated separately by Sonoma Water. Consultant shall inform Sonoma Water immediately if any waste or hazardous materials are discovered on the Project sites or the surrounding areas.

7. RIGHT-OF-WAY

7.1. Sonoma Water will acquire such permissions or rights necessary for Consultant to gain lawful entry into, across, over or upon property not owned by Sonoma Water, which are necessary for investigations, surveys, studies, or construction required for Consultant to provide the services described in this Scope of Work. The acquisition of permissions and rights typically required for projects similar to

that which Consultant's services will be provided under this Scope of Work, and the activities that are occasionally desirable and necessary to facilitate those acquisitions, can be time consuming and lengthy processes. At the Project Kick-off meeting and thereafter, Consultant shall identify the property or areas that need right-of-way obtained. Coordinate with Sonoma Water in a timely manner as necessary for Sonoma Water to obtain the permission or legal rights required for Sonoma Water to accommodate those activities and to set and adjust the schedule and timing of Consultant's services and activities required under this Scope of Work as necessary to manage and address the uncertainties involved with these processes.

8. COST ESTIMATES

- 8.1. Prepare a Statement of Probable Construction Costs and revise as required herein. Coordinate with USACE by providing data for 2nd Generation Microcomputer Aided Cost Estimating System (MCACES MII) estimates.
 - a. Submit cost estimates for review at each stage of the design process (30%, 60%, 90% and 100%). The cost estimate submittal shall include as a minimum: quantity calculations; quotes from material suppliers and subcontractors; a narrative defining the parameters upon which the cost estimate has been prepared to support the Project scope and schedule.
 - b. Cost estimates shall include descriptive statements regarding methods of construction, material sources and prices, type of equipment required, access, haul distances, estimated production rates, placement procedures, environmental restrictions, crew sizes and labor rates, dewatering, job conditions, and other assumptions as appropriate.
 - c. Provide detail quantities in support of details such as flow calculations for dewatering and formwork for concrete structures. Quantity "take-off" must be as accurate as possible and based on all available engineering and design data.
 - d. Costs shall be developed based on labor, equipment, materials and durations. Data shall be refined to reflect site-specific situations and costs. Material unit costs shall be justified with various pricing sources and quotes.
 - e. Submit quotes obtained and used for cost estimation.
- 8.2. Submit Quality Control Plan (QCP) for the Cost Estimates, the QCP certification, and the Cost Review Checklist to Sonoma Water and USACE Project Engineer. QCP template will be provided by Sonoma Water.

9. DESIGN SERVICES

- 9.1. Preliminary Design:
 - a. Consult with Sonoma Water to define and clarify Sonoma Water's requirements, goals, objectives, and constraints for the Project and obtain available data.

- b. Coordinate with Sonoma Water and the USACE to define and clarify the USACE's requirements, goals, objectives and constraints for the project, including specific objectives for Ecosystem Restoration.
 - c. Coordinate with Sonoma Water to identify, consult with, and analyze requirements, goals, objectives, and constraints of governmental authorities having jurisdiction to approve the portions of the Project designed or specified by Consultant.
 - d. Complete field review of the concept designs in the Conceptual Design Report (Inter-Fluve, 2012) for approximately 1.75 miles of creek channel to be identified for enhancement by Sonoma Water. Conduct preliminary site investigations as necessary to characterize site conditions and to support preliminary design.
 - e. Review individual USACE design measures (eg riffle, LWD, alcoves, gravel augmentation, etc.) and evaluate applicability of each measure reaches of creek identified for enhancement.
 - f. Identify key utility locations and identify utility conflicts, if any.
 - g. Complete Preliminary Statement of Probable Construction Costs.
 - h. Develop preliminary design for the reaches identified for enhancement by Sonoma Water above. The total estimated length for the enhancement reaches to be taken to the preliminary design stage is approximately 1.75 miles as measured along the main channel.
 - i. Preliminary designs shall include updates of the previously-prepared concept designs in the Conceptual Design Report or approved alternatives, based on field reconnaissance and ground truthing, updated information regarding landowner feedback and likely participation, Sonoma Water and stakeholder feedback, and updated planning level hydraulic modeling.
 - ii. Preliminary design alternatives shall be designed/formulated based in part on the USACE planning objectives for ecosystem restoration, and shall be incorporate the results of the Alternatives Formulation Workshop to be held by the USACE on August 13, 2015 (to be provided by Sonoma Water).
 - iii. Preliminary designs shall consider up to 3 alternatives at a range of cost/complexity scales to help the USACE and Sonoma Water Project Design Teams identify the design that maximizes ecosystem restoration benefits in the most cost efficient manner.
- 9.2. Preliminary Design Booklet: Provide the preliminary design in a Design Booklet for ease of understanding by lay readers. Communicate concepts via a masterplan-type document using narrative, illustrative figures, and renderings. The final format of the Preliminary Design Booklet shall be approved by Sonoma Water.

9.3. Design Documentation Report (DDR):

- a. Prepare a DDR for the Project that summarizes site hydrology, hydraulics, geomorphology, biology, and other relevant characteristics. Sonoma Water will advise on which enhancements Consultant shall advance into next design phase. Technical analyses and the basis of design for the enhancements shall be compiled in the DDR and advanced progressively over the design period, with relevant sections added with each design submittal. The DDR shall conform to Appendix D of USACE ER 1110-2-1150 and include, but not be limited to, the following:
 - i. Title page with name of Project, name of preparer, preparer's company name and address, and date
 - ii. Table of Contents
 - iii. Executive Summary
 - iv. A location map of proposed Project
 - v. Conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, goals, objectives, considerations, and constraints involved, and those alternative solutions available to Sonoma Water which Consultant recommends
 - vi. A description of the work performed, including methodology, a detailed description of the inspections performed, literature reviewed, documents and records reviewed, and individuals and agencies contacted
 - vii. Description of existing conditions
 - viii. Description of designs and explanation of design basis including interim documentation detailing decision making process for reaching conceptual and alternative designs and screening methodologies; how alternatives meet one or more of Sonoma Water and the USACE project objectives and avoid identified constraints; and documentation of why measures were screened out of an alternative.
 - ix. Summary of methodologies and results of field and site investigations, including geotechnical information
 - x. Summary of methodologies and results of analyses conducted to support project design (including, but not limited to hydraulic, geomorphic, and biological analyses, large wood ballast sizing, rip-rap or riffle material sizing, and bed mobility estimates)
 - xi. Statement of Probable Cost (construction cost estimate itemized by bid item per Section 8)
 - xii. Constructability analysis (evaluation/verification that proposed features can be constructed and identification of potential construction challenges)
 - xiii. Schematic drawings, sketches, and exhibits as necessary to illustrate the recommended Project

- xiv. Other information to support the recommendations
 - b. Incorporate Sonoma Water comments on DDR at each design phase.
- 9.4. Detailed Design:
- a. Proceed with detailed Project design for alternatives selected from the preliminary design submittal, as recommended in Sonoma Water-approved Preliminary DDR. The total length of alternatives selected for advancement will be up to 1.25 miles of habitat enhancements.
 - b. Identify and perform sufficient detailed field investigation(s) for purpose of developing Project design.
 - c. Prepare a Design Notebook. The Design Notebook shall be a notebook containing detailed information to supplement the DDR. The Design Notebook shall contain, as appropriate, supplemental material pertaining to the Project design, including, but not limited to stamped and signed design calculations, conceptual design criteria with appropriate exhibits to indicate the agreed-to requirements, engineering sketches, schematic layouts, product and material selection evaluation, alternate solutions available to Sonoma Water that Consultant recommends, and other supporting information pertaining to the design of the Project. The design calculations and engineering sketches shall be in sufficient detail to design the Project with its appurtenances.
 - d. Prepare a detailed Statement of Probable Cost (construction cost estimate itemized by bid item). Provide estimated quantities for unit priced items.
 - e. Prepare a construction schedule showing the anticipated timeframe for completing construction of major units. Use a simple bar chart approach for each item and indicate the anticipated critical path of construction.
- 9.5. Detailed hydraulic, geomorphic, and engineering analyses:
- a. Prepare a planning-level hydraulic model based on existing HEC-RAS model provided by Sonoma Water.
 - b. Conduct detailed analyses necessary for Project design, including, but not limited to:
 - i. Determination of shape and dimensions of geomorphic features
 - ii. Substrate sizing
 - iii. Stability of large wood structures
 - iv. Stability of bank protection measures
 - v. Temperature and bioenergetics
 - vi. Subsurface inflow (if there is no surface water connection at baseflow)
 - c. Prepare detailed hydraulic analyses using most current version of HEC-RAS 2D to evaluate habitat, hydraulic, and geomorphic performance
- 9.6. Vegetation Inventory, Design and Management Plan:
- a. Conduct survey of existing conditions

- b. Develop existing vegetation map
- c. Prepare stand-alone revegetation plans
- d. Develop vegetation management plan
- e. Submit to Sonoma Water for review and comment and incorporate Sonoma Water comments into final versions

9.7. Additional Requirements:

- a. Inform Sonoma Water of requirements, if any, which may not have identified. Applicable requirements include, but are not limited to provisions in the environmental documents, including the Mitigation Monitoring Plan (if applicable), permits (if applicable), right-of-way agreements, and local ordinances.
- b. Incorporate known applicable requirements into Project.
- c. Elements involving slope stabilization shall conform to applicable guidelines and requirements outlined in EM 1110-2-1902.

9.8. Design Stages:

- a. Progress with design in the following stages and ensure that each stage includes the listed elements per the QCP:
 - i. Kick Off Meeting: Attend a kick-off meeting with Sonoma Water, and others as determined by Sonoma Water, to review Project goals and objectives, review design approach, facilitate data transfer, and discuss coordination of work with Sonoma Water's other design consultant(s). Also, coordinate with Sonoma Water to define the 1.75 miles of sites to be included in the field assessments and Preliminary Design Booklet. This meeting shall immediately precede the field reconnaissance during the same field trip.
 - ii. Field Reconnaissance: Complete field review of the concept designs on the reaches identified in the Concept Design Report and prioritized by Sonoma Water for enhancement.
 - iii. Design Workshop: Present assumptions and preliminary conclusions to be included in the draft DDR. Sonoma Water may direct the Consultant regarding the assumptions made that may alter the conclusions.
 - iv. Preliminary Design Booklet: Following preliminary field investigations, design discussions with Sonoma Water, and possibly input from property owners, develop the Design Booklet and an outline draft of the DDR.. Materials generated at this stage will be used by Sonoma Water and Consultant to discuss the Project with property owners.
 - v. 30% Design: Definition of the Project features should be nearly finalized and Project parameters, location, and general sizing well resolved. Drawings shall describe the size, nature, and complexity of the Project and show the temporary construction and permanent footprint of the

Project for right-of-way appraisals. Existing features and trees shall also be included.

- vi. 60% Design: The 60% design shall advance design details, such as sizing, footprint, alignment, facility locations, and materials and include edits and comments received from stakeholders on the 30% design submittal. Draft drawings shall develop site specific details, indicate right-of-way and alignment and location of facilities should be final. Draft specifications shall be included with sufficient detail to allow Sonoma Water review and comment. Refine technical analyses conducted as part of the development of the 30% design and summarized in DDR.
- vii. 90% Design: Split the design drawings into two separate bid packages at the 90% stage; one package for Project sites to be constructed by USACE, another for Project sites Sonoma Water will let for bid. The 90% design shall incorporate edits and comments received on the 60% submittal, including, but not limited to landowner needs, construction access adjustments, and construction phasing and implementation.
- viii. 99% Design: The 99% design shall incorporate edits and comments received on the 90% submittal for both bid packages.
- ix. Final Design 100%: Incorporate comments received on the 99% design submittal for both bid packages. Final drawings and specifications shall be stamped and signed by the appropriate registered professionals.

9.9. Meeting Information:

- a. Arrange, attend, prepare agendas for, and conduct meetings at each design stage.
- b. Prepare technical memorandum summarizing design parameters.
- c. At meetings, discuss the progress and direction of the design. Advise Sonoma Water in writing how Sonoma Water comments impact Project scheduling and cost.
- d. Prepare meeting minutes for each meeting.
- e. Meetings shall be held at Sonoma Water's Office, 404 Aviation Boulevard, Santa Rosa, California.

10. PUBLIC OUTREACH SUPPORT

- 10.1. Do not proceed with this task unless requested in writing by Sonoma Water.
- 10.2. Perform additional services as requested by Sonoma Water for public outreach support. The additional services will be agreed to by Consultant and Sonoma Water and described in writing by Sonoma Water , performed on a time and materials basis up to the Task budget amount, and may include the following:
 - a. Prepare renderings, drawings, posters, presentations, information packets, simplified analysis results and other materials suitable for conveying the details of the Project components to the lay public.

- b. Participate in up to 2 face-to-face meetings with individuals or groups of property owners.
- c. Outreach activities with landowners.
- d. Attendance and presentations at Dry Creek Advisory Group not required.
- e. Attendance at up to 2 Dry Creek community or other public meetings.
- f. Attendance at up to two Coordination meetings with NMFS or California Department of Fish and Wildlife.
- g. Coordination with Sonoma Water's other design consultants; up to two meetings at Sonoma Water office.

10.3. Deliverables and due dates to be determined.

11. SURVEYING SERVICES

- 11.1. Consultant shall provide all surveying and mapping services required for Consultant to provide the services described herein. Perform selected ground and bathymetric survey of the stream channel and riparian corridor to support preliminary design and detailed design analyses.
- 11.2. General:
 - a. Services and data provided by Consultant shall meet the following requirements.
 - i. Horizontal Datum for surveying and mapping services and data shall be the North American Datum of 1983 (NAD83).
 - ii. Vertical Datum of surveying and mapping services and data shall be the North American Vertical Datum of 1988 (NAVD88) and shall conform to applicable guidelines and requirements outlined in EM 1110-2-6056 Project surveys and mapping upon the California Coordinate System of 1983 (CCS83), Zone 2 in US Survey feet (Coordinates and Elevations), unless directed otherwise by Sonoma Water.
 - iii. Provide research and other due diligence required to comply with the requirements outlined herein.
- 11.3. Project Survey Control:
 - a. Sonoma Water will establish primary Project survey control (reference monuments/points) necessary to provide Project coordinate system and vertical datum reference marks to support Design Surveys (Preliminary and Detailed Design efforts) and other Surveying Services to be provided by Consultant under this Agreement.
 - b. The locations of Sonoma Water-established control will be coordinated with Consultant in advance.
 - c. Criteria for primary Project survey control to be provided by Sonoma Water include the following:

- i. Reference monuments/points will be placed along the edges of the riparian vegetation of the creek, adjacent to vineyard roads.
- ii. Reference monuments/points will be set inter-visibly not more than 500 feet apart within properties that Sonoma Water is able to obtain permission to enter.
- iii. Reference monuments/points will consist of 3-foot long (if possible) pieces of #5 rebar driven flush with the ground, affixed with a red plastic cap stamped "S.C.W.A. Control." Points will be marked with a flagged witness stake indicating the point ID.
- iv. Sonoma Water will provide a comma delimited ASCII text file with Point Numbers, Northing, easting, elevations, and description/alpha-numeric point IDs.
- v. The control established by Sonoma Water will meet or exceed the 2-Centimeter Accuracy Classification as defined by the Federal Geographic Data Committee Geospatial Positioning Accuracy Standards (Part 2), in terms of positional accuracy (horizontal position, ellipsoidal and orthometric heights).
- d. Consultant is responsible for extending the control as necessary to provide the services described in this Agreement.
- e. Reference monuments for extended or supplemental control points consist of 3-foot long (if possible) pieces of #5 rebar driven flush with the ground, affixed with a red plastic cap stamped with Consultant's name, and marked with a flagged witness stake indicating the point ID.

11.4. Design Surveys:

- a. Provide all surveys and mapping services necessary to identify, represent and depict existing conditions, which in the judgment of Consultant are material to and/or required for design and construction of the Project.
- b. Representations of existing property or parcel boundaries, easements and right-of-way shall be referenced to the source maps/documents/information they were derived from and identified in the resulting mapping and the Construction Documents.
- c. Provide the survey data in AutoCAD Civil3D format, as well as a comma delimited ASCII text file with Point Numbers, Northing, easting, elevations, and description/alpha-numeric point IDs, and any relevant notes or documentation.
- d. Identify existing utilities or infrastructure material to the design, construction, or right-of-way negotiations of the Project.
- e. Survey, as necessary, the location of all existing utilities identified, discovered, disclosed, or located (including details to the extent that they can be reasonably determined, including, but not limited to pipe diameter and invert elevations, rim elevations of man holes, grate and flow-line elevations

of catch basins or drop inlet structures, and location of pumps and pump intakes).

- f. Appropriately identify, depict, label, layer, and/or otherwise represent on the Construction Documents the location, reference source (e.g., direct observation, landowner inquiry, utility mapping services, or other), and pertinent information on the existing utilities identified, discovered, or disclosed.
- g. Clearly depict and identify on the Construction Documents any features that present a possible clearance limitation, right-of-way consideration, or accessibility or other physical constraint to constructing the proposed works, and that are not being relocated, temporarily removed, diverted, or otherwise modified as part of proposed work.
- h. Survey trees greater than 12" diameter at breast height (DBH) that are within the potential Project footprint, could affect the size and shape of a feature, could be incorporated into a feature, or must be removed in connection with the Project near the transitions between existing and design grades, and represent surveyed trees in the resulting mapping and Construction Documents (shall be included in 30% design stage). Clusters of trees that are found clearly in the middle of the area to be graded shall be identified within polygons, which shall be labeled with the number and size range of the trees to be removed. Individual trees depicted shall be identified/labeled by their diameter at breast height and species.

11.5. Preliminary Design and Analysis Survey:

- a. Perform topographic/bathymetric total station survey to collect channel corridor cross sections (vineyard grade to vineyard grade) to support preliminary design analysis. These data shall supplement the existing topographic and cross section data that were collected for prior studies and design (to be provided by Sonoma Water).

11.6. Detailed Design and Analysis Survey:

- a. Perform topographic/bathymetric surveying to characterize the active stream channel and banks in detail over 1.25 miles of stream channel, to support detailed design analysis for the 1.25 mile long collection of enhancements taken to final design. The data shall be of sufficient resolution to support detailed design analyses, and aquatic habitat modeling analyses as required to evaluate the selected enhancements in consultation with the resource agencies.
- b. Perform design level survey of the overbank area (between the active channel and the vineyards on either side of the creek channel) within the collective 1.25 mile long reach advanced to the detailed design level to a level of detail sufficient to facilitate layout of design grading and features, and to serve as a basis for grading volume estimates. In areas not to be graded, survey to a level of detail sufficient to support detailed hydraulic

modeling and analysis, and evaluation of access and staging opportunities. Include all features, improvements, trees greater than 12" DBH, and topography in sufficient detail to support development of accurate design basemaps (1' contour interval) within the areas of design grading and improvements.

12. SUBSURFACE EXPLORATION AND GEOTECHNICAL REPORT

- 12.1. Perform subsurface exploration to support the design of the 1.25-mile detailed design reach of Dry Creek including, but not limited to:
 - a. Conform to applicable guidelines and requirements outlined in EM 1110-1-1804 and EM 1110-1-1802.
 - b. Map bedrock, groundwater seepage rates, groundwater level, material characterization, stability.
 - c. Bedrock mapping should cover areas being advanced beyond preliminary design, shall be to a 2-foot contour or finer resolution, and may be done using publicly available records, supplemented with additional geotechnical investigations as necessary.
 - d. Provide bedrock mapping results in the geotechnical report and in AutoCAD Civil 3D format.
- 12.2. Prepare a geotechnical report and draft map of bedrock which conforms to applicable guidelines and requirements outlined in ER 1110-2-1150, and summarizes the methods, observations, and results of the subsurface investigation and laboratory analysis. The report shall include a site location map, site plan, and logs of the borings and test pits, results of geophysical investigation, results of transmissivity testing, and provide geotechnical recommendations and conclusions suitable for developing designs for habitat enhancements for the 1.25-mile reach. A draft geotechnical report shall be included as an appendix to the DDR. Final geotechnical report shall be stamped by a licensed geotechnical engineer or geologist.

13. DRAFTING SERVICES

- 13.1. Prepare drawings necessary for bidding and construction of the Project using current AutoCAD Civil3D format. Include the following with sufficient detail to describe construction of the Project and to allow receipt of bids from qualified contractors:
 - a. Title sheet with location map, vicinity map, index to drawings, and legend (including, but not limited to abbreviations and symbols)
 - b. Right-of-way drawings
 - c. Plans
 - d. Profiles (where applicable)
 - e. Sections

- f. Construction details
 - g. Control diagram
 - h. Other drawings as may be needed for construction
- 13.2. Include the following features on each plan and profile drawing:
- a. Location of control points with point number identification, elevation, and description
 - b. Graphic scale
 - c. North arrow
 - d. Key map
 - e. Elevations of and labels for existing features, structures, utilities, manholes, and drainage facilities.
- 13.3. Use Sonoma Water-provided template drawings, title blocks, and border drawings. Basic layers and line types are part of template drawings and are recommended where applicable. Sonoma Water's standard will be provided to Consultant.
- 13.4. Prepare plan and profile drawings using the primary scale of: horizontal 1" = 40' and vertical 1" = 4'. Obtain prior Sonoma Water approval before preparing plan and profile drawings in any other scale.
- 13.5. Prepare finished contract drawings and maps on a 22" x 34" gross size. A 1½" blank margin shall be left on edges of the sheets. No hand-drawn media is allowed.
- a. Finished contract drawings shall also be supplied in native AutoCAD format as specified in 13.1 along with supporting files such as fonts, Xref and image files, point data, plotter and/or pen style table configuration files.
 - b. Electronic drawing file names shall be at the direction of Sonoma Water's Drafting/GIS Section. Xref files shall have filename with an "X" prefix (i.e., X_ExTopo for original existing topographic file used as base reference file).
 - c. Existing and design features shall be represented spatially accurate in "real world model space" in the CAD files. Coordinate information shall be preserved in its true and original orientation in real world space (X axis= East Coordinates, Y axis = North Coordinates, Z axis =Elevation; all in US Survey Feet Units; Scale 1:1). Any movement or rotation (i.e., Dview, twist), for any purpose, such as alignment or northing adjustment to page is to be handled in the paper/layout space view. Data files, such as topo files and point files, may be "Xrefed" provided the Xref file is inserted at 0,0,0 and no rotation is imposed on the file.
 - d. Sonoma Water existing non-editable data shall be in an "Xref" file. "Xrefed" drawing files shall have filenames with an "X-9999" prefix, where the "X" clearly identifies the file as an "Xref" support file and the "9999" is an Sonoma Water-provided file number (for example: X-9999-Extopo.dwg

would represent an “Xref” file for “9999” that is existing, non-editable, topography).

- e. Each drawing file shall contain a layer named “CadNotes.” This layer shall be a non-plot layer and shall contain pertinent “metadata” that includes, but is not limited to, the following:
 - i. Coordinate/projection basis
 - ii. Relevant survey, data dates
 - iii. Data sources, references
 - iv. Design notes and/or assumptions or other relevant information useful to design review
 - f. Prepare construction detail drawings in the same manner as described in paragraph 13.5 such that each detail item is represented in its full size in model space and is represented in a scale and orientation to appropriately and adequately convey the necessary information for construction on layout space.
 - g. Sonoma Water will accept electronic drawing files with multiple “drawings” or “Sheet” layouts. These layouts are to be setup as follows:
 - i. Each layout tab’s label shall be the drawing name (i.e. C1, G1, D1, P1, and so on) and therefore only include one sheet per layout tab. The layouts shall be set to the standard 22” x 34” sheet at a 1:1 scale.
- 13.6. Minimize the use of notes on drawings. Specifications of any type shall be written in the specifications and shall not be added to drawings.
- 13.7. Use match lines with appropriate sheet numbers.
- 13.8. Use lettering size no smaller than a 0.12-inch tall and 0.010-inch (0.25 mm) pen diameter for construction notes and data.
- 13.9. Ensure that drawings are easily readable when reduced to 11” x 17.”
- 13.10. Ensure that the 60% draft drawings describe the general size, nature, and complexity of the Project.
- 13.11. Reconcile drawings with specifications to minimize redundancies and avoid conflicts.
- 13.12. If requested by Sonoma Water, provide conformed drawings. Sonoma Water’s standard will be provided to Consultant.
- 13.13. Provide post-construction record drawings based on as-built information, markups, and field sketches provided by the Contractor and Sonoma Water. Sonoma Water’s standard will be provided to Consultant.

14. SPECIFICATIONS PREPARATION

- 14.1. Specifications shall adhere to USACE ER 1110-1-8155.
- 14.2. Assist Sonoma Water's Project Manager in completing Sonoma Water's Project Manual Questionnaire.
- 14.3. Prepare Divisions 2 through 16 (Technical Specifications), as appropriate, of the Project Manual as necessary for construction of the Project in conformance with the Project Manual concept of the Construction Specification Institute (CSI), using Sonoma Water's templates, and the 1995 edition of CSI's MasterFormat, including SectionFormat and PageFormat.
- 14.4. Comply with applicable provisions of the Public Contract Code including, but not limited to formal and informal bid procedures and the avoidance of closed proprietary specifications (where no substitutions are allowed).
- 14.5. Assist Sonoma Water to develop justification memos for any proposed single-source of products or materials; for special qualification of bidders, manufacturers, installers, or other professionals performing construction work for the Project; and for other special circumstances that require justification to Sonoma Water's Board of Directors.
- 14.6. Provide Bid item descriptions for inclusion in Division 1. Ensure that method of payment for materials, equipment, and work required to complete Project is described clearly.
- 14.7. In coordination with Sonoma Water's Project Manager, reconcile redundancies and conflicts with Sonoma Water-prepared Division 0 and Division 1 requirements.

15. ASSISTANCE DURING BIDDING AND CONSTRUCTION

- 15.1. Bidding support for up to 2 bid advertisements:
 - a. Answer questions submitted by Sonoma Water ("questions") during bid advertisement period.
 - b. Communicate only through Sonoma Water.
 - c. Immediately hand-deliver or email copies of any non-Sonoma Water questions directed to Consultant to Sonoma Water.
 - d. Alert Sonoma Water to potential impacts, if any, associated with questions including, but not limited to impacts on schedule and cost.
 - e. Upon request from Sonoma Water, prepare Addenda to clarify, correct, or change the Bidding Documents in accordance with the following:
 - i. Paragraphs 13 and 14 of this scope of work.
 - ii. Sonoma Water-provided drafting standards and standard Addenda form

- f. If Consultant chooses to prepare Addenda drawings manually, revise electronic files and resubmit to Sonoma Water.
- 15.2. Construction support for up to 2 construction contracts:
- a. Assist Sonoma Water by providing engineering and related services after the receipt of construction bids as requested by Sonoma Water.
 - b. Attend preconstruction conference.
 - c. Assist Sonoma Water by answering request(s) for information (RFIs), as requested by Sonoma Water (up to 30 RFIs).
 - d. Submittal Review:
 - i. Review contractor's submittals of information and shop drawings for the Project and either mark "No Exceptions Taken," "Make Corrections Noted," "Revise and Resubmit," or "Rejected" on each submittal. Provide Sonoma Water with a brief written narrative of what is required from the contractor for items the Consultant marks on each submittal response.
 - ii. Ensure that copies of submittals reviewed are stamped, dated, and signed by the person performing the review.
 - iii. Review items that have been submitted by the contractor as a substitution or an "approved equal" for specified items. Ensure that each substituted item meets the performance requirements specified in the Project specifications and ensure its compatibility with other components of the operating system (including, but not limited to electrical connections and size). Consult with Sonoma Water's Project Manager regarding acceptability of the proposed substitution.
 - iv. Upon completion of review, return the submittals with any written narratives to Sonoma Water.
 - e. Construction Observation:
 - i. Perform construction observation up to 20 hours per week for a 17-week construction duration.
 - ii. Upon request, provide guidance to Sonoma Water construction regarding proper placement of LWD, log jams, boulder cluster, and all other elements of the Work.
 - iii. Review grading stakes for enhancement sites. Review layout of enhancement features with Sonoma Water.
 - iv. Participate in construction of key LWD habitat structures and elements of the work.
 - v. Provide on-call remote consultation to assist Sonoma Water.
 - f. Review and comment on proposed Change Order(s), if any. Provide comments to Sonoma Water in writing within 2 working days after receipt of the proposed Change Order(s). Change Order review may not be paid if

Change Order is a result of Consultant's error or omissions in design, at Sonoma Water's sole discretion.

- g. Upon request from Sonoma Water, assist Sonoma Water with Final Inspection.

16. SCHEDULE AND SUBMITTAL OF DOCUMENTS

- 16.1. Perform services and submit documents to Sonoma Water for review and approval in accordance with the schedule included in Exhibit B (Schedule and Submittals).
 - a. If changes that Sonoma Water has not previously approved are made to the drawings or specifications after the 99% design review meeting, submit drawing(s) or specifications to Sonoma Water for approval prior to preparing the final submittal.
- 16.2. The schedule in Exhibit B (Schedule and Submittals) is based upon timely review and decision making by Sonoma Water. Delays in the schedule caused by Sonoma Water will be cause for consideration of time extensions.
- 16.3. Provide full-sized hard copy and electronic copy in PDF format as well as native AutoCAD Civil 3D format at each design phase. Include CTB or STB plot configuration file with electronic submittal to ensure correct and intended image quality when plotting from file.
- 16.4. Electronic media formats:
 - a. Survey information and drawings: Provide in electronic media format compatible with current Sonoma Water AutoCAD standard in drawing format (.DWG). To ensure there are no discrepancies between electronic and hard copies, provide plot style tables files.
 - b. Technical Specifications and other documents, if any: Provide in electronic media format compatible with Microsoft® Word 2013. Ensure that there are no discrepancies between electronic and hard copies.
- 16.5. Final Drawings Submittal Requirements:
 - a. Prepare finished contract drawings and maps on 22" x 34" gross size. Drawings shall be "wet" stamped and signed by the appropriate disciplined professional.
 - b. The final (100%) AutoCAD submittal shall consist of files with filenames specified by Sonoma Water's Drafting/GIS Section and include embedded digital professional stamps and signatures. Drawings shall have filenames displayed per Sonoma Water-provided standards. Final submittal shall also include a composite PDF document of the drawing files formatted for half size (11" x 17") as well as full size (22" x 34")

Exhibit B

Schedule and Submittals

1. GENERAL

- 1.1. Unless otherwise noted below, submit one electronic copy in PDF format (emailed or on CD) and three hard copies of each final submittal to Sonoma Water.
- 1.2. Comply with requirements of Paragraph 11 Content Online Accessibility.

2. SCHEDULE AND SUBMITTALS

MILESTONE	DOCUMENTS TO BE SUBMITTED	CALENDAR DAYS
Notice to Proceed with Design	-	Immediately upon the Effective Date of this Agreement
Kick-off Meeting Submittal	<ul style="list-style-type: none"> Electronic copy of Kick-off meeting agenda 	7 calendar days prior to Kick-off meeting
Kick-off Meeting	-	Within 21 calendar days following Notice to Proceed with Design
Field Reconnaissance	-	Within 28 calendar days after Kick-off meeting
Design Workshop Submittal	<ul style="list-style-type: none"> Assumptions and preliminary conclusions that will be included in the Design Documentation Report (DDR) Electronic copy of Design Workshop agenda 	7 calendar days prior to Design Workshop
Design Workshop	-	Within 49 calendar days after Kick-off meeting
Preliminary Field Investigations	-	Within 90 calendar days after Kick-off meeting
Preliminary Design and Analysis Survey	-	Within 90 calendar days after Kick-off meeting
Preliminary Design Submittal	<ul style="list-style-type: none"> 3 copies of Preliminary Design Booklet Preliminary Statement of Probable Construction Costs 3 copies and 1 electronic copy of DDR 	Within 120 Calendar Days following commencement of work [USACE: target date Feb 2016]
Sonoma Water Comments on Preliminary Design Submittal	-	Within 28 calendar days after receipt of draft Preliminary Design Submittal

MILESTONE	DOCUMENTS TO BE SUBMITTED	CALENDAR DAYS
Revised Preliminary Design Submittal	<ul style="list-style-type: none"> • Address comments from Sonoma Water, USACE, and Resource Agencies • 8 copies of revised Preliminary Design Booklet • Preliminary Statement of Probable Construction Costs • Electronic copy in PDF format of DDR 	Within 14 calendar days of receipt of Sonoma Water comments
Public Outreach Support	<ul style="list-style-type: none"> • To be determined 	To be determined
Permitting Support	<ul style="list-style-type: none"> • To be determined 	To be determined
30% Design Submittal	<ul style="list-style-type: none"> • 3 sets of 11x17" hard copy drawings • 1 electronic copy of drawings • Shapefiles of conceptual 30% alternative designs • 3 hard copies and 1 electronic copy of DDR • Preliminary Statement of Probable Construction Costs • Draft Table of Contents for specifications • Summary narrative and existing vegetation map • Preliminary revegetation plan 	Within 45 calendar days after receipt of Sonoma Water comments on Preliminary Design Submittal [USACE: target date? Sept 2016]
30% Design Review Meeting		Within 14 calendar days after 30% Design Submittal
30% Design Review Meeting Minutes	<ul style="list-style-type: none"> • Electronic copy of meeting minutes 	Within 7 calendar days of 30% Design Review Meeting
Sonoma Water provides Comments on 30% Design Submittal		Within 28 calendar days after 30% Design Submittal
Resubmit 30% Design	<ul style="list-style-type: none"> • Address comments from Sonoma Water, USACE, and Resource Agencies • Resubmit electronic copies of updated documents in pdf format • Shapefiles of conceptual 30% alternative designs 	Within 14 calendar days of receipt of comments

MILESTONE	DOCUMENTS TO BE SUBMITTED	CALENDAR DAYS
60% Design Submittal	<ul style="list-style-type: none"> • 3 sets of 11x17" drawings • One electronic copy of drawings • 60% DDR • Electronic CAD files (AutoCAD format)Boundary of required temporary construction easements (TCE) • construction schedule • one revised Preliminary Statement of Probable Construction Costs • Design Notebook • topographic survey information • Detailed hydrodynamic modeling • Revised Draft Revegetation Plans • Draft Vegetation Management Plan • Draft specifications • 60% design review meeting agendas 	Within 45 calendar days after resubmission of 30% Design Submittal
60% Design Review Meeting		Within 14 calendar days after 60% Design Submittal
60% Design Review Meeting Minutes	<ul style="list-style-type: none"> • Electronic copy of meeting minutes 	Within 7 calendar days of 60% Design Review Meeting
Sonoma Water Comments on 60% Design Submittal		Within 28 calendar days after 60% Design Submittal
90% Design Submittal	<ul style="list-style-type: none"> • 3 sets of 11x17" drawings • one electronic copy of drawings • Final DDR • Electronic CAD files • One revised Statement of Probable Construction Costs • Design Notebook • Updated detailed hydrodynamic modeling (if comments on 60% model results necessitate updates or revisions) • Draft specifications – incorporating permit requirements • Bid item descriptions • Topographic survey information • Revised Draft Revegetation Plans • Draft Vegetation Management Plan • 90% design review meeting agenda 	Within 45 calendar days after receipt of Sonoma Water comments on 60% Design Submittal

MILESTONE	DOCUMENTS TO BE SUBMITTED	CALENDAR DAYS
90% Design Review Meeting		14 calendar days after 90% Design Submittal
90% Design Review Meeting Minutes	<ul style="list-style-type: none"> • Electronic copy of meeting minutes 	Within 7 calendar days of 90% Design Review Meeting
Sonoma Water Provides Comments on 90% Design Submittal		Within 28 calendar days after 90% Design Submittal
99% Design Submittal	<ul style="list-style-type: none"> • 3 sets of 11x17" drawings • electronic copy of revised drawings and specifications • Electronic CAD files (AutoCAD format) • Updated DDR(if revisions to the 90% submittal were necessary) • revised Preliminary Statement of Probable Construction Costs • Design Notebook • Final Revegetation Plans • Final Vegetation Management Plan • Specifications • Bid item descriptions • electronic copy of 90% design review meeting agenda 	July 30, 2020
99% Design Review Meeting		21 calendar days after 99% Design Submittal
99% Design Review Meeting Minutes	<ul style="list-style-type: none"> • Electronic copy of meeting minutes 	Within 7 calendar days of 99% Design Review Meeting
Sonoma Water Comments on 99% Design Submittal		Within 28 calendar days after 99% Design Submittal

MILESTONE	DOCUMENTS TO BE SUBMITTED	CALENDAR DAYS
Final Submittal	<ul style="list-style-type: none"> • Complete set of revised and final stamped and wet signed original drawings • Complete set of electronic construction drawings with supporting files • Complete set of construction drawings in full (22" x 34") and half-size (11" x 17") PDFs • Complete electronic set of revised and final specifications • Stamped and signed Document 00007 Seals Page • Final Statement of Probable Construction Costs • Final Design Notebook • Topographic survey information 	November 31, 2022
Draft Addendum submittal, if applicable	<ul style="list-style-type: none"> • as appropriate 	8 calendar days prior to Project Bid Opening, if requested by Sonoma Water
Final Addendum submittal, if applicable	<ul style="list-style-type: none"> • as appropriate, submit original drawing(s) 	7 calendar days prior to Project Bid Opening, if requested by Sonoma Water
Bidding Support	<ul style="list-style-type: none"> • Response to RFIs • Review of contractor submittals 	as requested by Sonoma Water
Construction Support	<ul style="list-style-type: none"> • Construction observation • Response to change orders 	as requested by Sonoma Water

Exhibit C

Schedule of Costs

Job Title	Rate
Project Manager	(hourly)\$225
Deputy Project Manager	\$190
Engineer - IV	\$210
Geomorphologist III	\$180
Engineer III	\$160
Hydraulic Modeler	\$160
Geotechnical Engineer	\$165
Engineer II	\$130
Engineer I	\$110
GIS Consultant	\$100
CADD/Drafting/GIS	\$100
Project Coordinator	\$85
Expenses	
Subconsultants (note: subconsultants shall not be entitled to any markup of their rates or expenses in excess of 10%)	At cost plus 2.5%
Travel	At cost
Mileage	(per mile) \$0.575
Lodging	At cost
Meals	At cost
Equipment/Rental/Supplies	At cost
Geotechnical Exploration	At cost
Copies	(each) \$9.00
Permits	At cost

Exhibit D

Estimated Breakdown of Costs

Task Number	Task Description	Estimated Cost
3	Coordination With USACE	\$54,933
4	Permitting Support	-----
5	Project Management	\$113,087
7	Right-of Way Support	-----
8	Cost Estimates	\$33,025
9	Design Services	\$785,435
10	Public Outreach Support	\$27,110
11	Surveying Services	\$117,796
12	Subsurface Exploration and Geotechnical Support	\$85,531
13	CAD Drafting Services	\$10,440
14	Specifications	\$38,028
15	Construction and Bid Assistance	\$227,292
Total		\$1,493,398

Exhibit E

Insurance Requirements

With respect to performance of work under this Agreement, Consultant shall maintain and shall require all of its subcontractors, consultants, and other agents to maintain insurance as described below unless such insurance has been expressly waived by the attachment of a *Waiver of Insurance Requirements*. Any requirement for insurance to be maintained after completion of the work shall survive this Agreement.

Sonoma Water reserves the right to review any and all of the required insurance policies and/or endorsements, but has no obligation to do so. Failure to demand evidence of full compliance with the insurance requirements set forth in this Agreement or failure to identify any insurance deficiency shall not relieve Consultant from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.

1. INSURANCE TO BE MAINTAINED BY CONSULTANT

1.1. Workers Compensation and Employers Liability Insurance

- a. Required if Consultant has employees as defined by the Labor Code of the State of California.
- b. Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
- c. Employers Liability with minimum limits of \$1,000,000 per Accident; \$1,000,000 Disease per employee; \$1,000,000 Disease per policy.
- d. Required Evidence of Insurance: Certificate of Insurance.
- e. If Consultant currently has no employees as defined by the Labor Code of the State of California, Consultant agrees to obtain the above-specified Workers Compensation and Employers' Liability insurance should employees be engaged during the term of this Agreement or any extensions of the term.

1.2. General Liability Insurance

- a. Commercial General Liability Insurance on a standard occurrence form, no less broad than Insurance Services Office (ISO) form CG 00 01.
- b. Minimum Limits: \$1,000,000 per Occurrence; \$2,000,000 General Aggregate; \$2,000,000 Products/Completed Operations Aggregate. The required limits may be provided by a combination of Excess or General Liability Insurance and Commercial Umbrella Liability Insurance. If Consultant maintains higher limits than the specified minimum limits, Sonoma Water requires and shall be entitled to coverage for the higher limits maintained by Consultant.
- c. Consultant is responsible for any deductible or self-insured retention and shall fund it upon Sonoma Water's written request, regardless of whether Consultant has a claim against the insurance or is named as a party in any action involving Sonoma Water.

- d. Sonoma County Water Agency, its officers, agents, and employees, shall be endorsed as additional insured(s) for liability arising out of ongoing and completed operations by or on behalf of the Consultant in the performance of this Agreement.
- e. The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- f. The policy definition of “insured contract” shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard (broad form contractual liability coverage including the “f” definition of insured contract in Insurance Services Office form CG 00 01, or equivalent).
- g. The policy shall cover inter-insured suits between the additional insureds and Consultant and include a “separation of insureds” or “severability” clause which treats each insured separately.
- h. Required Evidence of Insurance:
 - i. Copy of the additional insured endorsement or policy language granting additional insured status, and
 - ii. Certificate of Insurance.

1.3. Automobile Liability Insurance

- a. Minimum Limit: \$1,000,000 combined single limit per accident. The required limit may be provided by a combination of Automobile Liability Insurance and Commercial Excess or Umbrella Liability Insurance.
- b. Insurance shall cover all owned autos. If Consultant currently owns no autos, Consultant agrees to obtain such insurance should any autos be acquired during the term of this Agreement or any extensions of the term.
- c. Insurance shall cover hired and non-owned autos.
- d. Required Evidence of Insurance: Certificate of Insurance.

1.4. Professional Liability/Errors and Omissions Insurance

- a. Minimum Limit: \$1,000,000 per Claim or per Occurrence; \$1,000,000 Annual Aggregate.
- b. If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the commencement of the work.
- c. Coverage applicable to the work performed under this Agreement shall be continued for two (2) years after completion of the work. Such continuation coverage may be provided by one of the following: (1) renewal of the existing policy; (2) an extended reporting period endorsement; or (3) replacement insurance with a retroactive date no later than the commencement of the work under this Agreement.
- d. Required Evidence of Insurance: Certificate of Insurance.

1.5. Contractors Pollution Liability Insurance

- a. Required prior to inception of any subsurface exploration work.
- b. Minimum Limits: \$1,000,000 per Pollution Incident; \$1,000,000 Annual Aggregate. If Consultant maintains higher limits than the specified minimum limits, Sonoma Water requires and shall be entitled to coverage for the higher limits maintained by Consultant.
- c. Consultant is responsible for any deductible or self-insured retention and shall fund it upon Sonoma Water's written request, regardless of whether Consultant has a claim against the insurance or is named as a party in any action involving Sonoma Water.
- d. If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the commencement of work.
- e. Consultant shall maintain coverage for one (1) year after completion of all work under this Agreement. If the insurance is on a Claims-Made basis, the continuation coverage may be provided by: (a) renewal of the existing policy; (b) an extended reporting period endorsement; or (c) replacement insurance with a retroactive date no later than the commencement of the Work.
- f. Sonoma County Water Agency, its officers, agents, and employees, shall be endorsed as additional insureds for liability arising out of ongoing and completed operations by or on behalf of the Consultant in the performance of this Agreement. The foregoing shall continue to be additional insureds for one (1) year after completion of all work under this Agreement.
- g. The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- h. Required Evidence of Coverage:
 - i. Copy of the additional insured endorsement or policy language granting additional insured status, and
 - ii. Copy of the endorsement or policy language indicating that coverage is primary and non-contributory; and
 - iii. Certificate of Insurance.

1.6. Standards for Insurance Companies

- a. Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII .

1.7. Documentation

- a. The Certificate of Insurance must include the following reference:
TW 14/15-157C.
- b. Consultant shall submit all required Evidence of Insurance, except Contractor's Pollution Liability Insurance, prior to the execution of this Agreement. Consultant agrees to maintain current Evidence of Insurance on

file with Sonoma Water for the entire term of this Agreement and any additional periods if specified in Sections 1.1, 1.2, 1.3, or 1.4, above.

- c. The name and address for mailing Additional Insured endorsements and Certificates of Insurance is: Sonoma County Water Agency, its officers, agents, and employees, 404 Aviation Boulevard, Santa Rosa, CA 95403-9019.
- d. Consultant shall submit required Evidence of Insurance for any renewal or replacement of a policy that already exists, at least ten (10) days before expiration or other termination of the existing policy.
- e. Consultant shall provide immediate written notice if: (1) any of the required insurance policies is terminated; (2) the limits of any of the required policies are reduced; or (3) the deductible or self-insured retention is increased.

1.8. Policy Obligations

- a. Consultant's indemnity and other obligations shall not be limited by the foregoing insurance requirements.

1.9. Material Breach

- a. If Consultant fails to maintain insurance which is required pursuant to this Agreement, it shall be deemed a material breach of this Agreement. Sonoma Water, at its sole option, may terminate this Agreement and obtain damages from Consultant resulting from said breach. Alternatively, Sonoma Water may purchase the required insurance, and without further notice to Consultant, Sonoma Water may deduct from sums due to Consultant any premium costs advanced by Sonoma Water for such insurance. These remedies shall be in addition to any other remedies available to Sonoma Water.

2. **INSURANCE TO BE MAINTAINED BY SUBCONSULTANTS AND SUBCONTRACTORS ("Subconsultants")**

2.1. Workers Compensation and Employers Liability Insurance

- a. Required if Consultant has employees as defined by the Labor Code of the State of California.
- b. Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.
- c. Employers Liability with minimum limits of \$1,000,000 per Accident; \$1,000,000 Disease per employee; \$1,000,000 Disease per policy.
- d. Required Evidence of Insurance: Certificate of Insurance.
- e. If subconsultant currently has no employees as defined by the Labor Code of the State of California, subconsultant agrees to obtain the above-specified Workers Compensation and Employers Liability insurance should employees be engaged during the term of this Agreement or any extensions of the term.

2.2. General Liability Insurance

- a. Commercial General Liability Insurance on a standard occurrence form, no less broad than Insurance Services Office (ISO) form CG 00 01.
- b. Minimum Limits: \$1,000,000 per Occurrence; \$2,000,000 General Aggregate; \$2,000,000 Products/Completed Operations Aggregate. The required limits may be satisfied by a combination of General Liability Insurance and either Commercial Excess or Commercial Umbrella Liability Insurance. If Consultant maintains higher limits than the specified minimum limits, Sonoma Water requires and shall be entitled to coverage for the higher limits maintained by subconsultant.
- c. Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds \$25,000 it must be approved in advance by Sonoma Water. Subconsultant is responsible for any deductible or self-insured retention and shall fund it upon Sonoma Water's written request, regardless of whether subconsultant has a claim against the insurance or is named as a party in any action involving Sonoma Water.
- d. Sonoma County Water Agency, its officers, agents, and employees, shall be endorsed as additional insured(s) for liability arising out of operations by or on behalf of the subconsultant in the performance of this Agreement.
- e. The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- f. The policy definition of "insured contract" shall include assumptions of liability arising out of both ongoing operations and the products-completed operations hazard (broad form contractual liability coverage including the "f" definition of insured contract in Insurance Services Office form CG 00 01, or equivalent).
- g. The policy shall cover inter-insured suits between the subconsultant and the additional insureds and include a "separation of insureds" or "severability" clause which treats each insured separately.
- h. Required Evidence of Insurance:
 - i. Copy of the additional insured endorsement or policy language granting additional insured status, and
 - ii. Certificate of Insurance.

2.3. Automobile Liability Insurance

- a. Minimum Limit: \$1,000,000 combined single limit per accident. The required limit may be satisfied by a combination of Automobile Liability Insurance and either Commercial Excess or Commercial Umbrella Liability Insurance.
- b. Insurance shall cover all owned autos. If subconsultant currently owns no autos, subconsultant agrees to obtain such insurance should any autos be acquired during the term of this Agreement or any extensions of the term.

- c. Insurance shall cover hired and non-owned autos.
- d. Required Evidence of Insurance: Certificate of Insurance.

2.4. Professional Liability/Errors and Omissions Insurance

- a. Required for subconsultants that provide any of the following services:
 - i. Project management;
 - ii. Cost estimation;
 - iii. Design services;
 - iv. Surveying services;
 - v. Drafting services;
 - vi. Preparation of specifications; or
 - vii. Assistance during bidding and construction.
- b. Minimum Limits: \$1,000,000 per Claim or per Occurrence, \$1,000,000 Annual Aggregate.
- c. Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds \$25,000 it must be approved in advance by Sonoma Water.
- d. If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the commencement of the work.
- e. Coverage applicable to the work performed under this Agreement shall be continued for two (2) years after completion of the work. Such continuation coverage may be provided by one of the following: (1) renewal of the existing policy; (2) an extended reporting period endorsement; or (3) replacement insurance with a retroactive date no later than the commencement of the work under this Agreement.
- f. Required Evidence of Insurance: Certificate of Insurance.

2.5. Contractors Pollution Liability Insurance

- a. Required only for subconsultants that provide subsurface exploration services.
- b. Required prior to inception of any subsurface exploration work.
- c. Minimum Limits: \$1,000,000 per Pollution Incident; \$1,000,000 Annual Aggregate. If subconsultant maintains higher limits than the specified minimum limits, Sonoma Water requires and shall be entitled to coverage for the higher limits maintained by subconsultant.
- d. Any deductible or self-insured retention shall be shown on the Certificate of Insurance. If the deductible or self-insured retention exceeds \$25,000 it must be approved in advance by Sonoma Water. Subconsultant is responsible for any deductible or self-insured retention and shall fund it upon Sonoma Water's written request, regardless of whether subconsultant has a claim against the insurance or is named as a party in any action involving Sonoma Water.

- e. If the insurance is on a Claims-Made basis, the retroactive date shall be no later than the commencement of work.
- f. Coverage shall be continued for one (1) year after completion of subsurface exploration work. If the insurance is on a Claims-Made basis, the continuation coverage may be provided by: (a) renewal of the existing policy; (b) an extended reporting period endorsement; or (c) replacement insurance with a retroactive date no later than the commencement of the Work.
- g. Sonoma County Water Agency, its officers, agents, and employees, shall be endorsed as additional insureds for liability arising out of ongoing and completed operations by or on behalf of the subconsultant in the performance of this Agreement. The foregoing shall continue to be additional insureds for one (1) year after completion of the work.
- h. The insurance provided to the additional insureds shall be primary to, and non-contributory with, any insurance or self-insurance program maintained by them.
- i. Required Evidence of Coverage:
 - i. Copy of the additional insured endorsement or policy language granting additional insured status;
 - ii. Copy of the endorsement or policy language indicating that coverage is primary and non-contributory; and
 - iii. Certificate of Insurance.

2.6. Standards for Insurance Companies

- a. Insurers, other than the California State Compensation Insurance Fund, shall have an A.M. Best's rating of at least A:VII.



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
06/22/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Southwest, Inc.
Houston TX Office
5555 San Felipe
Suite 1500
Houston TX 77056 USA

CONTACT
NAME:
PHONE
(A/C. No. Ext): 8662837122 FAX (A/C. No.): (800) 363-0105
E-MAIL
ADDRESS:

INSURER(S) AFFORDING COVERAGE

NAIC #

INSURED
Cardno, Inc.
10004 Park Meadows Drive
Suite 300
Lone Tree CO 80124 USA

INSURER A: Zurich American Ins Co 16535
INSURER B: Lexington Insurance Company 19437
INSURER C: Ironshore Specialty Insurance Company 25445
INSURER D:
INSURER E:
INSURER F:

COVERAGES

CERTIFICATE NUMBER: 570076954991

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR Per Project Agg \$2M GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			GLO018396104	06/30/2019	06/30/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$10,000,000 PRODUCTS - COMP/OP AGG \$2,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			BAP 0183962-04	06/30/2019	06/30/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
	UMBRELLA LIAB EXCESS LIAB DED RETENTION						EACH OCCURRENCE AGGREGATE
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC018396004	06/30/2019	06/30/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-EA EMPLOYEE \$1,000,000 E.L. DISEASE-POLICY LIMIT \$1,000,000
C	Env Site Liab			002161705 Pollution Liability	06/30/2019	06/30/2020	Occurrence \$1,000,000 Aggregate \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Severability of Interest is included under the General Liability policy. RE: TW 14/15-157. Sonoma County Water Agency, its officers, agents and employees are included as Additional Insured in accordance with the policy provisions of the General Liability, Automobile Liability and Umbrella Liability policies. General Liability and Automobile Liability evidenced herein are Primary and Non-Contributory to other insurance available to Additional Insured, but only in accordance with the policy's provisions. Should General Liability, Automobile Liability and Workers' Compensation Liability Policies described on the Certificate of Insurance be cancelled before the expiration date thereof, we will endeavor to mail 30 days written notice, except 10 days' notice for non-payment, to the certificate holder named on the certificate, but failure to do so shall impose

CERTIFICATE HOLDER

CANCELLATION

Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa CA 95403 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Southwest, Inc.

Holder Identifier :

Certificate No : 570076954991



ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Services Southwest, Inc.		NAMED INSURED Cardno, Inc.
POLICY NUMBER See Certificate Number: 570076954991		
CARRIER See Certificate Number: 570076954991	NAIC CODE	
		EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER	
INSURER	
INSURER	
INSURER	

ADDITIONAL POLICIES

If a policy below does not include limit information, refer to the corresponding policy on the ACORD certificate form for policy limits.

[illegible]

**ADDITIONAL REMARKS SCHEDULE**

Page _ of _

AGENCY Aon Risk Services Southwest, Inc.		NAMED INSURED Cardno, Inc.	
POLICY NUMBER See Certificate Number: 570076954991			
CARRIER See Certificate Number: 570076954991	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,****FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance**

Additional Description of Operations / Locations / Vehicles:

no obligation or liability of any kind upon the insurer, its agents or representatives.



ADDITIONAL REMARKS SCHEDULE

Page _ of _

AGENCY Aon Risk Services Southwest, Inc.		NAMED INSURED Cardno, Inc.
POLICY NUMBER See Certificate Number: 570076954991		
CARRIER See Certificate Number: 570076954991	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: ACORD 25 FORM TITLE: Certificate of Liability Insurance

CARDNO NAMED INSUREDS

Cardno ChemRisk, LLC.
 Cardno EM-Assist, Inc.
 Cardno Emerging Markets USA, Ltd.
 Cardno ENTRIX
 Cardno ERI
 Cardno GS, Inc.
 Cardno Haynes Whaley, Inc.
 Cardno JFNew
 Cardno MMA
 Cardno NC, Inc.
 Cardno TBE (AZ)
 Cardno TBE (FL)
 Cardno TBE; TBE Group, Inc.
 Cardno TEC, Inc.
 Cardno USA, Inc.
 Cardno WRG, Inc.
 Cardno WRG, Inc. dba WRG Designs Inc.
 Cardno, Inc (OR)
 Cardno, Inc. (TX)
 Cardno, Inc. (FL)
 Cardno (MI), Inc.
 Cardno PPI Engineering & Construction, Services LLC., PPI Technology Services, LLC., PPI Quality & Asset Management, LLC., and its Affiliated Companies
 Ensign Haynes Whaley, LLC
 Entrix Inc. dba Cardno Entrix
 Environmental Resolutions, Inc.
 ES NY Engineering, P.A. PC.
 J.F. New & Associates, Inc.
 JFNew
 TBE Group, Inc. (Adden)
 TBE Group, Inc. dba: Cardno TBE
 TBE Group, Inc.; Cardno TBE
 TBE Professional Services, PLLC
 WRG North Carolina PLLC