

THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
BOARD ACTION SUMMARY

DEPT: Public Works

BOARD AGENDA #: *C-2

AGENDA DATE: September 20, 2016

SUBJECT:

Approval to Award a Contract for Professional Services and to Develop Two Water Exploratory Boreholes to E-PUR, LLC of Stockton, California, for the Crows Landing Industrial Business Park

BOARD ACTION AS FOLLOWS:

No. 2016-479

On motion of Supervisor Withrow, Seconded by Supervisor O'Brien

and approved by the following vote,

Ayes: Supervisors: O'Brien, Chiesa, Withrow, DeMartini, and Chairman Monteith

Noes: Supervisors: None

Excused or Absent: Supervisors: None

Abstaining: Supervisor: None

1) Approved as recommended

2) Denied

3) Approved as amended

4) Other:

MOTION:

ATTEST: Elizabeth A. King
ELIZABETH A. KING, Clerk of the Board of Supervisors

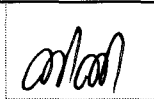
File No.

**THE BOARD OF SUPERVISORS OF THE COUNTY OF STANISLAUS
AGENDA ITEM**

DEPT: Public Works

Urgent

Routine



BOARD AGENDA #: *C-2

AGENDA DATE: September 20, 2016

CEO CONCURRENCE:

4/5 Vote Required: Yes No

SUBJECT:

Approval to Award a Contract for Professional Services and to Develop Two Water Exploratory Boreholes to E-PUR, LLC of Stockton, California, for the Crows Landing Industrial Business Park

STAFF RECOMMENDATIONS:

1. Award a contract for professional services for the development of two water exploratory boreholes to E-PUR, LLC of Stockton, CA., for the Crows Landing Industrial Business Park.
2. Authorize the Director of Public Works to execute a contract with E-PUR, LLC in the amount of \$312,879 and to sign necessary documents, including any amendments to the agreement not to exceed 10%.
3. Direct the Auditor-Controller to make necessary budget adjustments per the financial transaction sheet.

DISCUSSION:

The 1,531-acre former Crows Landing Naval Air Facility is located in an unincorporated portion of western Stanislaus County, approximately 1 mile from Interstate 5. The former airfield is bound by Marshall Road to the north, Fink Road to the south, Bell Road to the east, and Davis Road to the west. The site includes two decommissioned runways, associated pavement, and an air traffic control tower. Most structures that supported former military operations on the premises have been demolished. A segment of the Delta Mendota Canal and a segment of Little Salado Creek cross the site.

In 2004, the County Board of Supervisors accepted conveyance of the former Crows Landing Air Facility, and the National Aeronautics and Space Administration (NASA) transferred ownership of 1,352 acres of the 1,528-acre property to Stanislaus County. Of the remaining 176 acres associated with the former military facility, 158 acres are ready for transfer and will be conveyed to the County later this year. Groundwater remediation infrastructure and facilities are present on the remaining 18-acre area adjacent to the eastern property boundary. The U.S. Navy will continue to operate groundwater remediation activities on the 18-acre area of the property until 2024.

The primary goal associated with the County's acquisition of the Crows Landing project area has been to create an opportunity to produce a locally based job center that will allow County residents and those living in the region to earn sustainable wages without commuting to the

Approval to Award a Contract for Professional Services and to Develop Two Water Exploratory Boreholes to E-PUR, LLC of Stockton, California, for the Crows Landing Industrial Business Park

Bay Area or other distant job centers. Specifically, the former Crows Landing Air Facility is envisioned to be an industrial business park that combines the assets of public use, a general aviation airport, and a proximity to Interstate 5.

The combination of available land, nearby transportation infrastructure, and regional connections to the San Francisco Bay Area presents an opportunity for investment and creativity that has the potential to provide a new and important regional employment center in central California.

In October 2013, the Board of Supervisors approved an agreement with AECOM Technical Services, Inc. for land use, engineering, and environmental consultant services for the Crows Landing development project. This effort includes a review and analysis of needed infrastructure to insure the viability of this business park. Water supply is a critical feature of this needed infrastructure. California Environmental Quality Act (CEQA) guidelines require a detailed analysis of potential water supply sources. Groundwater supply will be an essential part of the supply plan for this industrial project.

The purpose of the exploratory borehole program is to gain adequate knowledge of the underlying groundwater system. It is good practice that exploratory boreholes be drilled and water samples be taken to determine quality and quantity of groundwater supplies in this area. The work to be accomplished includes construction of exploratory boreholes that will allow evaluation of the suitability of the proposed site for the installation of future drinking water supply wells based on the results of the geophysical exploration and water quality sampling of the test hole.

In July 2014, design and bid documents were prepared to advertise for bids for drilling a single exploratory borehole with water quality sampling from the borehole. The bid opening was on August 13, at 2:30 p.m. A single bid was received from Nor-Cal Pump and Well Drilling, Inc. The bid was in the amount of \$153,511, nearly double the Engineer's estimate. This bid was rejected by the Board of Supervisors on September 30, 2014.

The same project for a single exploratory borehole was re-advertised for bidding in January 2015, with the bid opening on January 28, 2015. A single bid was received from Cascade Drilling LP. The bid was in the amount of \$307,050, more than three times the engineers estimate. This bid was rejected by the Board of Supervisors on February 10, 2015.

Staff has explored contract alternatives with County Purchasing and County Counsel and has done additional research to achieve the goal of exploratory boreholes at a reasonable price and in an effort to obtain the best data possible. A concept was developed with a groundwater hydrologist to evaluate the suitability of groundwater for a drinking water supply well for the Crows Landing Project. It was determined that two exploratory boreholes would need to be developed due to the variability of the groundwater aquifers beneath the site. This is in contrast to the prior bids that were developed for just one location and exploratory borehole. The developed proposal and concept will not only ascertain the best water quality and quantity on site but will also support and validate the County's current CEQA effort for the Business Park. This concept is a seven task process:

Approval to Award a Contract for Professional Services and to Develop Two Water Exploratory Boreholes to E-PUR, LLC of Stockton, California, for the Crows Landing Industrial Business Park

- Task 1 – Assess Existing Geologic Information and Project Kickoff
- Task 2 – Water Quality Review and Proposed Well Location Submittal to State Water Resources Board Division of Drinking Water
- Task 3 - Exploratory Borehole Drilling and Zonal Monitoring Well Installation
- Task 4 – Monitoring Well Development, Groundwater Quality Sampling and Aquifer Testing (for two separate locations)
- Task 5 – Develop Production Well Designs (one for each well location)
- Task 6 – Exploratory Borehole Report with Production Well Design Technical Specifications (one for each location)
- Task 7 – Preparation of Water-Supply-Well Construction Bid Specifications and Contract Documents (for each well location)

In developing this concept and proposal County staff met with multiple professional consultants to determine the best direction in achieving the County's goal of cost effectiveness and highest quality. E-PUR, LLC (E-PUR) can efficiently and effectively provide Stanislaus County with the services it needs to evaluate the suitability of groundwater for a drinking water supply well system in aquifer zones beneath the Crows Landing Industrial Business Park. E-PUR has both the qualifications and experience in the engineering fields required for successfully establishing the suitability of the aquifer zones and developing water-supply production well designs. E-PUR staff includes registered geologists, water quality specialists, and engineers that will be needed for hydrogeologic evaluation and design of such wells.

The seven tasks above can be summarized into three stages. Below is a summary of the stages and tasks with associated costs.

Pre-Field Stage	Task 1	\$ 11,076
	Task 2	
Field Stage	Task 3	\$265,283
	Task 4	
Post-Field Stage	Task 5	\$ 36,520
	Task 6	
	Task 7	

The total cost estimate to complete the work is \$312,879. The well drilling portion and water quality testing component is \$265,283 for two exploratory boreholes. This is a lower per-well cost than either prior bid proposals received.

The Board may approve this work and contract without rebidding the project if the Board finds that a competitive bid for the project would not produce an advantage to the County and the public, and that advertisement for a competitive bid would thus be undesirable, impractical, or impossible. These factors exist for the following reasons:

1. The exploratory borehole project was put out to bid twice with just one bidder each time.
2. The first competitive bid received for 1 exploratory borehole was \$153,511.
3. The second competitive bid received for 1 exploratory borehole was \$307,050.

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4. The current proposal to construct 2 exploratory boreholes is \$265,284.
5. A new bid would likely yield another unreasonable bid, which is impractical and undesirable.

Per the E-PUR proposal, the time it will take to assess existing geologic information, conduct water quality and well location review, drill the exploratory boreholes, conduct groundwater quality sampling with aquifer testing, develop production well designs, and prepare bid documents for the future production wells is estimated at 45 weeks from award of contract.

All work as proposed will be conducted at prevailing wage rates compliant with state and local laws.

Public Works anticipates that the work will be able to proceed through the winter with minimal rain delays added to the contract.

POLICY ISSUE:

Public Contract Code Section 22032 requires Board of Supervisors' approval for all contracts exceeding \$175,000.

FISCAL IMPACT:

Funding for this project is available in the Fiscal Year 2016-2017 Crows Landing Air Facility Final Adopted Budget.

Cost of recommended action:		\$ 312,879
Source(s) of Funding:		
Agricultural Lease Revenue	\$ 312,879	
Funding Total:		312,879
Net Cost to County General Fund		\$ -

Fiscal Year:	2016-2017
Budget Adjustment/Appropriations needed:	Yes

BOARD OF SUPERVISORS' PRIORITY:

The recommended actions are consistent with the Board's priorities of providing A Safe Community, A Healthy Community, and A Well Planned Infrastructure System by developing a reliable and sustainable water supply for the Crows Landing Industrial Business Park.

STAFFING IMPACT:

Existing Public Works staff will oversee this project.

Approval to Award a Contract for Professional Services and to Develop Two Water Exploratory Boreholes to E-PUR, LLC of Stockton, California, for the Crows Landing Industrial Business Park

CONTACT PERSON:

Matt Machado, Public Works Director
Keith Boggs, Assistant Executive Officer

Telephone: (209) 525-4153
Telephone: (209) 652-1514

ATTACHMENT(S):

1. Professional Design Services Agreement with E-PUR, LLC
2. Budget Journal

ATTACHMENT 1

Professional Design Services Agreement with E-PUR, LLC

**STANISLAUS COUNTY PUBLIC WORKS
PROFESSIONAL DESIGN SERVICES AGREEMENT**

This Agreement is made and entered into by and between the County of Stanislaus, a political subdivision of the State of California, hereinafter referred to as "County" and E-PUR, LLC hereinafter referred to as "Consultant".

WHEREAS, County, by its Resolution No. 2016-479 adopted on the 20th day of September, 2016 awarded to Consultant the following Contract:

CROWS LANDING INDUSTRIAL BUSINESS PARK
Test-Well Installation and Production-Well Design
Contract No. 8068

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

1.0 PROFESSIONAL SERVICES TO BE PROVIDED BY CONSULTANT

1.1 Scope of Services: Consultant shall provide the professional services described in the County's Request for Proposal ("RFP") and Consultant's Response to County's RFP (the "Response") which are incorporated by reference in Section 2.0 entitled "Contract Documents".

1.2 Professional Practices: All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also represents that it is familiar with all laws that may affect its performance of this Agreement and shall advise County of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3 Representations: Consultant represents that it has reviewed the RFP and that in its professional judgment the services to be performed under this Agreement can be performed within the maximum fee set forth in Section 3.1 - Compensation and within the time specified in the Project Schedule (Exhibit "C") attached hereto. Consultant represents that it is qualified to perform the professional services required by this Agreement and possesses the necessary licenses and permits required to perform said services.

1.4 Compliance with Laws: Consultant agrees that it shall perform the services required by this Agreement in compliance with all applicable Federal and California laws including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement.

1.5 Non-Discrimination: During the performance of this Agreement, Consultant and its officers, employees, agents, representatives or subconsultants shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment in violation of any federal, state or local law, rule or regulation against any employee, applicant for employment or person receiving services under this Agreement because of race, religion, color, national origin, ancestry, physical or mental disability, medical condition (including genetic characteristics), marital status, age, political affiliation,

sex or sexual orientation. Consultant and its officers, employees, agents, representatives or subconsultants shall comply with all applicable Federal, State and local laws and regulations related to non-discrimination and equal opportunity, including without limitation the County's nondiscrimination policy; the Fair Employment and Housing Act (Government Code sections 12900 et seq.); California Labor Code sections 1101, 1102 and 1102.1; the Federal Civil Rights Act of 1964 (P.L. 88-352), as amended; and all applicable regulations promulgated in the California Code of Regulations or the Code of Federal Regulations.

1.6 Non-Exclusive Agreement: Consultant acknowledges that County may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7 Delegation and Assignment: This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of County. Consultant may engage a subconsultant(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense.

1.8 Subcontracting: Nothing contained in this contract or otherwise, shall create any contractual relation between County and any subconsultants(s), and no subconsultant shall relieve Consultant of its responsibilities and obligations hereunder. Consultant agrees to be as fully responsible to County for the acts and omissions of its subconsultant(s) and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by Consultant. Consultant's obligation to pay its subconsultant(s) is an independent obligation from County's obligation to make payments to the Consultant.

Consultant shall perform the services with resources available within its own organization; and no portion of the work pertinent to this agreement shall be subcontracted without written authorization by the County, except that, which is expressly identified in the approved Cost Proposal.

Any substitution of subconsultants must be approved in writing by the County.

1.9 Conflict of Interest: Consultant shall disclose any financial, business, or other relationship with County that may have an impact upon the outcome of this agreement, or any ensuing County construction project. The Consultant shall also list current clients who may have a financial interest in the outcome of this agreement, or any ensuing County construction project, which will follow.

Consultant represents that it has no interest and shall not acquire any interest direct or indirect which conflicts, or has the appearance of conflicting, in any manner or degree with the performance of the work and services under this Agreement.

Consultant hereby certifies that neither Consultant, nor any firm affiliated with the Consultant will bid on any construction agreement, or on any agreement to provide construction inspection for any construction project resulting from this agreement. An affiliated firm is one, which is subject to the control of the same persons through joint ownership, or otherwise.

Except for subconsultants whose services are limited to providing surveying or materials testing information, no subconsultant who has provided design services in connection with this agreement shall be eligible to bid on any construction agreement, or on any agreement to provide construction inspection for any construction project resulting from this agreement.

1.10 Covenant Against Contingent Fees: Consultant warrants that he/she has not employed or retained any company or person, other than a bona fide employee working for the consultant; to solicit or secure this agreement; and that he/she has not paid or agreed to pay any company or person other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award, or formation of this agreement. For breach or violation of this warranty, the local agency shall have the right to annul this agreement without liability, or at its discretion; to deduct from the agreement price or consideration, or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

1.11 Rebates, Kickbacks or Other Unlawful Consideration: The Consultant warrants that this agreement was not obtained or secured through rebates, kickbacks or other unlawful consideration, either promised or paid to any County employee. For breach or violation of this warranty, County shall have the right in its discretion; to terminate the agreement without liability; to pay only for the value of the work actually performed; or to deduct from the agreement price; or otherwise recover the full amount of such rebate, kickback or other unlawful consideration.

1.12 Prohibition of Expending State or Federal Funds for Lobbying: The Consultant certifies to the best of his or her knowledge and belief that:

No, state, federal or local agency appropriated funds have been paid, or will be paid by-or-on behalf of the Consultant to any person for influencing or attempting to influence an officer or employee of any state or federal agency; a Member of the State Legislature or United States Congress; an officer or employee of the Legislature or Congress; or any employee of a Member of the Legislature or Congress, in connection with the awarding of any state or federal contract; the making of any state or federal grant; the making of any state or federal loan; the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any state or federal contract, grant, loan, or cooperative agreement.

If any funds other than federal appropriated funds have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency; a Member of Congress; an officer or employee of Congress, or an employee of a Member of Congress; in connection with this federal contract, grant, loan, or cooperative agreement; the Consultant shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Consultant also agrees by signing this document that he or she shall require that the language of this certification be included in all lower-tier subcontracts, which exceed \$100,000, and that all such sub recipients shall certify and disclose accordingly.

1.13 Debarment and Suspension Certification: The Consultant's signature affixed herein, shall constitute a certification under penalty of perjury under the laws of the State of California, that the Consultant has complied with Title 49, Code of Federal Regulations, Part 29, Debarment and Suspension Certificate, which certifies that he/she or any person associated therewith in the capacity of owner, partner, director, officer, or manager, is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency; has not been suspended, debarred, voluntarily

excluded, or determined ineligible by any federal agency within the past three (3) years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct with the past three (3) years. Any exceptions to this certification must be disclosed to the County.

Exceptions will not necessarily result in denial of recommendation for award, but will be considered in determining Consultant responsibility. Disclosures must indicate to who exceptions apply, initiating agency, and dates of actions.

2.0 CONTRACT DOCUMENTS

Contract documents consist of the following documents, including all changes, addenda, and modifications thereto:

1. Agreement and all attachments
 - a. Exhibit A – Scope of Services
 - b. Exhibit B – Insurance Requirements
 - c. Exhibit C – Project Schedule
 - c. Exhibit D – Fee Schedule
2. County's Request for Proposal
3. Consultant's Response

3.0 COMPENSATION AND BILLING

3.1 Compensation: Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "D", attached hereto and made a part of this Agreement (the "Fee Schedule"). Consultant will be compensated on a time and materials basis, based on the hours worked by the Consultant's employees or subconsultants at the hourly rates specified in the Fee Schedule. Fee Schedule rates shall include direct salary costs, employee benefits, and overhead. The rates stated in the Fee Schedule are not adjustable during the term of this Agreement. Consultant's compensation under this Agreement shall in no case exceed **Three Hundred Twelve Thousand Eight Hundred Seventy-Nine Dollars (\$312,879)** during the term of this Agreement. The County may retain five percent of all periodic or progress payments made to the Consultant until completion and acceptance of all work tasks and County shall have right to withhold payment from Consultant for any unsatisfactory service until such time service is performed satisfactorily.

3.2 Reimbursements: In addition to the aforementioned fees, Consultant will be reimbursed for any expenses specifically set forth in a Project Scope of Work. All such reimbursement amounts are limited to those costs and expenses that are reasonable, necessary and actually incurred by the Consultant in connection with the services provided. The County shall not pay a mark up on any item of reimbursement. The County shall not pay for any item of overhead such as telephone, facsimile, postage, etc. All requests for reimbursement shall be accompanied by a copy of the original invoice.

3.3 Additional Services: Consultant shall not receive compensation for any services provided outside the scope of services specified in Exhibit "A" unless the County or the Project Manager for the Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable.

3.4 Method of Billing: Consultant may submit invoices to County's Project Manager for approval on a progress basis, but no more often than once each calendar month. Said invoice shall be based on the total of all Consultants' services that have been completed to County's sole satisfaction. County shall pay Consultant's invoice within forty-five (45) days from the date County receives said invoice. Each invoice shall describe in detail, the services performed and the associated percentage of tasks completed. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

3.5 Records and Audits: Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to County, its Project Manager, The State, State Auditor, FHWA, or any duly authorized representative of the Federal Government for inspection and/or audit at mutually convenient times for a period of three (3) years from the termination of this Agreement.

3.6 Extension of Term of Agreement: The original Fee Schedule shall apply to the extension of the term of the agreement unless renegotiated and approved by both parties in writing.

3.7 Cost Principles: The Consultant agrees that the Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31.000 et seq., shall be used to determine the allowability of cost individual items.

The Consultant also agrees to comply with federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

Any costs for which payment has been made to Consultant that are determined by subsequent audit to be unallowable under 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31.000 et seq., are subject to repayment by Consultant to the County.

All subcontracts in excess of \$25,000 shall contain the above provisions.

4.0 TIME OF PERFORMANCE

4.1 Commencement and Completion of Work: The professional services to be performed pursuant to this Agreement shall commence within five (5) days after County delivers its Notice to Proceed. Said services shall be performed in strict compliance with the Project Schedule approved by County as set forth in Exhibit "C", attached hereto and incorporated herein by this reference. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

4.2 Excusable Delays: Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party.

4.3 Completion of Agreement: This Agreement shall be completed no later than September 20, 2017, unless extended by amendment.

5.0 COMPENSATION AND TERMINATION

5.1 **Compensation:** In the event of termination, County shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of County's written notice of termination. Compensation for work in progress shall be prorated as to the percentage of work completed as of the effective date of termination in accordance with the fees set forth in Exhibit "D". In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the County or in the possession of the Consultant.

5.2 **Notice of Termination:** The County reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the County.

5.3 **Documents:** In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps, reports, correspondence, and all electronic files shall be delivered to the County within ten (10) days of delivery of termination notice to Consultant, at no cost to County. Any use of uncompleted documents without specific written authorization from Consultant shall be at County's sole risk and without liability or legal expense to Consultant.

6.0 INSURANCE REQUIREMENTS

6.1 **Coverage Required:** Contractor shall obtain, and maintain at all times during the term of this Agreement, insurance coverage in the amounts and coverage specified in the attached "Exhibit B."

7.0 INDEMNIFICATION

7.1 **Indemnification:** To the fullest extent allowed by law, Consultant shall defend, indemnify, and hold harmless the County and its officers, directors, officials, agents, employees, volunteers and representatives (collectively, "Indemnitee") from and against any and all claims, suits, actions, losses, injuries, damages or expenses of every name, kind, and description, including litigation costs and reasonable attorney's fees incurred, (collectively, "losses") which are founded upon, arise out of, pertain to, or relate to, directly or indirectly, in whole or in part, the alleged negligence, recklessness, or willful misconduct of Consultant, its officers, agents, employees, volunteers, representatives, contractors and subconsultants, excluding, however, such liabilities caused in part by the sole negligence, active negligence or willful misconduct of the County, its agents, employees, and representatives. These indemnification obligations shall not be limited by any assertion or finding that (1) the person or entity indemnified is liable by reason of non-delegable duty, or (2) the losses were caused in part by the negligence of, breach of contract by, or violation of law by Indemnitee. Nothing in this Agreement, including the provisions of this paragraph, shall constitute a waiver or limitation of any rights which Indemnitee may have under applicable law, including without limitation, the right to implied indemnity.

7.2 **Duty to Defend:** The duty of Consultant to indemnify and save harmless as set forth herein, shall include both the duty to indemnify and at Consultant's own cost and expense the duty to

defend as set forth in Section 2778 of the California Civil Code and as limited in section 2782.8 of the California Civil Code. This duty to defend arises immediately when such claim is made and shall be independent of any finding of negligence and shall arise regardless of any claim or assertion that Indemnitee caused or contributed to the Losses. Consultant shall provide legal counsel acceptable to the County.

7.3 Duty to Cooperate: Each party shall notify the other party within ten (10) days in writing of any claim or damage related to activities performed under this Agreement. The parties shall cooperate with each other in the investigation and disposition of any claim arising out of the activities under this Agreement. Specifically, Consultant shall take all steps necessary to assist the County in the defense of any claim brought by a contractor hired to construct the Project regarding any errors, flaws, and/or omissions in the plans or specifications of the Project.

7.4 Patent Rights: Consultant represents that professional services provided by Consultant pursuant to this Agreement does not infringe on any other copyrighted work. Consultant shall defend, indemnify and hold harmless the County from all loss, cost, damage, expense, liability or claims, including attorneys' fees, court costs, litigation expenses and expert consultant or witness fees, that may at any time arise for any infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark or any other proprietary right of any person or persons in consequence of the use by the County of any articles or services supplied under this agreement.

The foregoing provisions in this section "Indemnification" shall survive the term and termination of this Agreement.

8.0 GENERAL PROVISIONS

8.1 Entire Agreement: This Agreement constitutes the entire Agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

8.2 Representatives: The Director of the Stanislaus County Department of Public Works, or his designee, shall be the representative of County for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the County, called for by this Agreement, except as otherwise expressly provided in this Agreement. Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

8.3 Project Managers: County shall designate a Project Manager to work directly with Consultant in the performance of this Agreement. Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with County during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by County.

8.4 Designated Personnel: A material covenant of this agreement is that the Consultant shall assign the individuals designated below to perform the functions designated so long as they continue in the employ of the Consultant. The designated individuals shall, so long as their performance continues to be acceptable to County, remain in charge of the services for the Project from beginning through completion of services.

- a. Project Manager: John Lambie, PE, PG, Principal Hydrogeologist
- b. Lead/Manager: n/a

8.5 Removal of Personnel or Sub-Consultants: If the County, in its sole discretion at any time during the term of this agreement, desires the removal of any person or sub-consultant assigned by Consultant to perform services, then the Consultant shall remove such person or consultant immediately upon receiving notice from the County.

8.6 Notices: Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery, facsimile or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: a) at the time of delivery if such communication is sent by personal delivery; b) at the time of transmission if such communication is sent by facsimile; and c) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

If to County: Matt Machado, Director
Stanislaus County Public Works, 1716 Morgan Road, Modesto CA 95358

If to Consultant: John Lambie, Principal Hydrogeologist
E-PUR, 26 East Wyandotte Street, Stockton CA 95204

8.7 Attorneys' Fees: In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

8.8 Claims Filed by County's Construction Contractor: If claims are filed by County's construction contractor relating to work performed by Consultant's personnel, and additional information or assistance from Consultant's personnel is required in order to evaluate or defend against such claims; Consultant agrees to make its personnel available for consultation with County's construction contract administration and legal staff and for testimony, if necessary, at depositions and at trial or arbitration proceedings.

Consultant's personnel that County considers essential to assist in defending against construction contractor claims will be made available on reasonable notice from County. Consultation or testimony will be reimbursed at the same rates, including travel costs that are being paid for Consultant's personnel services under this contract.

8.9 Governing Law: This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Stanislaus County, California.

8.10 Assignment: Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without County's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of County's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

8.11 Independent Contractor: Consultant is and shall be acting at all times as an independent contractor and not as an employee of County. Consultant shall secure, at his expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant hereby indemnifies and holds County harmless from any and all claims that may be made against County based upon any contention by any third party that an employer-employee relationship exists by reason of this Agreement.

8.12 Confidentiality: The Consultant agrees to keep confidential all information obtained or learned during the course of furnishing services under this Agreement and to not disclose or reveal such information for any purpose not directly connected with the matter for which services are provided.

Permission to Disclose information on one occasion, or public hearing held by the County relating to the contract, shall not authorize the Consultant to further disclose such information, or disseminate the same on any other occasion.

The Consultant shall not comment publicly to the press or any other media regarding the contract or the County's actions on the same, except to the County's staff, Consultant's own personnel involved in the performance of this contract, at public hearings or in response to questions from a Legislative committee.

The Consultant shall not issue any news release or public relations item of any nature, whatsoever, regarding work performed or to be performed under this contract without prior review of the contents thereof by the County, and receipt of the County's written permission.

Any subcontract entered into as a result of this contract shall contain all of the provisions of this Article.

8.13 National Labor Relations Board Certification: In accordance with Public Contract Code Section 10296, Consultant hereby states under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against Consultant with the immediately preceding two-year period, because of Consultant's failure to comply with an order of a federal court that orders Consultant to comply with an order of the National Labor Relations Board.

8.14 Ownership of Documents: Any interest, including copyright interests, of Consultant or its contractors or subconsultants in studies, reports, memoranda, computational sheets, drawings, plans or any other documents, including electronic data, prepared in connection with the Services, shall be the property of County. To the extent permitted by law, work product produced under this Agreement shall be deemed works for hire and all copyrights in such works shall be the property of the County. In the event that it is ever determined that any works created by Consultant or its subconsultants under this Agreement are not works for hire, Consultant hereby assigns to County all copyrights to such works. With the County's prior written approval, Consultant may retain and use copies of such works for reference and as documentation of experience and capabilities.

8.15 Reuse of Design Documents: Should the County desire to reuse the documents specified above and not use the services of the Consultant, then the County agrees to require the new consultant to assume any and all obligations for the reuse of the documents, and the County releases Consultant and its subconsultants from all liability associated with the reuse of such documents.

8.16 Public Records Act Disclosure: Consultant has been advised and is aware that all reports, documents, information and data including, but not limited to, computer tapes, discs or files

furnished or prepared by Consultant, or any of its subconsultants, and provided to County may be subject to public disclosure as required by the California Public Records Act (California Government Code Section 6250 et. seq.). Exceptions to public disclosure may be those documents or information that qualifies as trade secrets, as that term is defined in the California Government Code Section 6254.7, and of which Consultant informs County of such trade secret. The County will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The County shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

8.17 Responsibility for Errors: Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the County's representative, regarding any services rendered under this Agreement at no additional cost to County. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to County, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of County and to participate in any meeting required with regard to the correction.

8.18 Order of Precedence: In the event of inconsistency among any of the Contract Documents, the following order of precedence applies:

1. This agreement shall prevail over all other documents;
2. The attachments to this agreement shall prevail over the RFP and Response;
3. The RFP shall prevail over the Response.

8.19 Costs: Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

8.20 No Third Party Beneficiary Rights: This Agreement is entered into for the sole benefit of County and Consultant and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

8.21 Construction: The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

8.22 Amendments: This Agreement may be amended only by a writing executed by the parties hereto or their respective successors and assigns.

8.23 Waiver: The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

8.24 Severability: If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party is materially impaired, which determination as made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.


8.25 Counterparts: This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

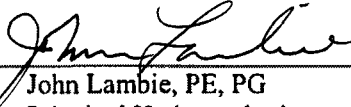
8.26 Corporate Authority: The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so the parties hereto are formally bound to the provisions of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers:

COUNTY OF STANISLAUS

E-PUR, LLC

By: 
Matt Machado, Director
Department of Public Works

By: 
John Lambie, PE, PG
Principal Hydrogeologist

APPROVED AS TO FORM:

John P. Doering
County Counsel


By: 
Amanda DeHart
Deputy County Counsel

EXHIBIT A

SCOPE OF WORK



September 6, 2016

Mr. Matt Machado, P.E., L.S.
Director, Stanislaus County Department of Public Works
1716 Morgan Road
Modesto, CA 95358

SUBJECT: PROPOSAL FOR TEST-WELL INSTALLATION AND PRODUCTION-WELL DESIGN AT CROWS LANDING INDUSTRIAL BUSINESS PARK - APPROACH, SCOPE ELEMENTS AND ESTIMATED COSTS

Dear Matt:

E-PUR LLC (E-PUR) can efficiently and effectively provide the Stanislaus County with the services it needs to evaluate the suitability of groundwater for a drinking water supply well system in aquifer zones beneath the Crows Landing Airport (the "Airport") for the eventual development of a Crows Landing Industrial Business Park. E-PUR has both the qualifications and experience in the engineering fields required for successfully establishing the suitability of the aquifer zones and developing water-supply production well designs. Our staff includes registered geologists, water quality specialists, and engineers that will be needed for hydrogeologic evaluation and design of such wells.

PROJECT UNDERSTANDING

It is our understanding that Stanislaus County Public Works desires to get new water supply to the Airport area that can provide potable quality water for the planned Crows Landing Industrial Business Park to be developed in a few years. The stated target rate of water production for the area is on the order of 1,000 to 1,500 gallons per minute based on our conversations and existing project documents. The Airport is located at the north end of West Ike Crow Road about 2 miles west-northwest of the central business district of Crows Landing. We understand that the area around the airport is currently leased by the County for farming and that two non-potable water supply wells serve the area with non-potable water. Those two wells are relatively shallow at less than 200 feet deep. Further we understand that one agricultural water supply well's production was recently lost. The overall project scope needs to determine whether the aquifer beneath the airport area can produce potable water and if so at what rates and locations.

E-PUR has reviewed the bid documents for the "Crows Landing Air Facility Test Well Project Contract No. 8013" developed in late 2014 by Blackwater Consulting Engineers. It is our understanding that Stanislaus County Public Works has put these documents out for bid twice and has received project bids well above the Engineer's Construction Cost Estimate of \$81,500.

E-PUR recommends a different approach to get Stanislaus County a reliable water-supply-well design. E-PUR's approach uses a testing and design protocol that can provide the best available information for water quality and water production. E-PUR's approach also reduces the cost risk to a drilling contractor for scope uncertainty on water-quality-testing protocols; this is done by installing zone specific groundwater-quality monitoring-wells. This is in contrast to test-borehole zonal sampling during drilling that produces low-quality data as well as costing the drilling contractor downtime. Zone specific monitoring wells can identify the trace levels of chemicals regulated in drinking water these days. A test

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Stockton, CA 95204
Phone: (209) 451-5933



borehole with formation sample collection and geophysical logging is still drilled to the target depth of aquifer exploration. Once the test borehole is drilled and the geophysical log is reviewed then a real-time judgement is made on the depth to install a deep monitoring well within the test borehole across one of the lowermost aquifer zones. To assess shallower aquifer zones a neighboring borehole is swiftly drilled to a second or third aquifer zone of interest without the need for borehole logging or formation sampling and a monitoring well rapidly installed. This step is repeated for more than one zone if it appears that other zones may produce useful water. Since these sample and test wells are based on the test borehole data, they are relatively inexpensive to install which makes this a lower cost approach for production well design, and produces a better overall set of data and information for the design.

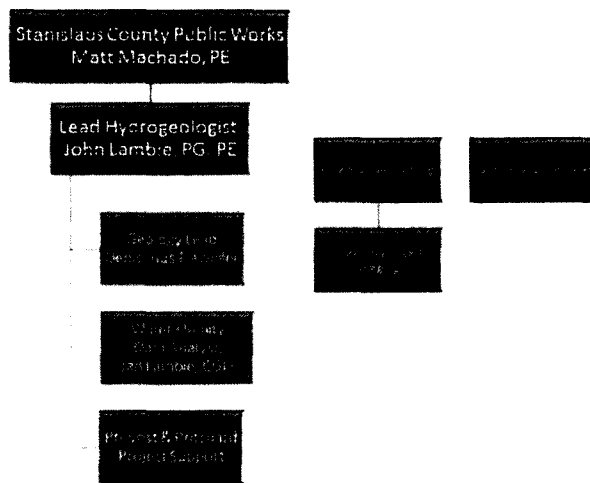
PROJECT TEAM

The E-PUR project team for Stanislaus County Public Works is a small focused team of experienced experts. The experience of the project team along with a proven project approach will provide Stanislaus County Public Works what it needs at a reasonable cost.

The project team consists principally of Stanislaus County Public Works and E-PUR LLC. This keeps project communication and assignments clear, and the chain of command for project implementation straightforward. We have the technical resources to meet the project needs. E-PUR has asked Provost & Pritchard Consulting Group to provide resource support to the project as a Subconsultant where needed to ensure this capacity at all times. To provide the field contractor services needed for the test borehole and sequential monitoring well installation E-PUR has partnered with Roadrunner Drilling and Pump out of Woodland, CA; the drilling program may benefit from running 24 hours a day at certain key points in borehole drilling and that is one of the points where additional professional resource support may be useful. For laboratory services we have partnered with California Laboratory Services out of Sacramento.

PROPOSED PROJECT TEAM ORGANIZATION

Project Team for Water Supply Well Design at Crows Landing Airport





Proposal for Test-Well Installation and Production-Well Design
For Crows Landing Industrial Business Park
Stanislaus County Public Works Department

Our project team will be led by John Lambie, a professional geologist and civil engineer who brings unique cross-over skills due to his experience as both a geologist and engineer. He has more than 30 years of consulting experience working across California, conducting, leading and coordinating hydrogeologic studies including test borehole drilling and municipal water-supply well design and installation for the Town of Windsor in Sonoma County and the Stockton East Water District in San Joaquin County. In addition, he has done extensive work in Stanislaus County evaluating the geology and hydrogeology of the region for conjunctive use projects by managing high stormwater flows into groundwater recharge basins for the Eastside Water District.

E-PUR PROFESSIONAL SERVICE TEAM QUALIFICATIONS AND EXPERIENCE

E-PUR LLC FIRM OVERVIEW

Since its inception as an engineering consultancy in 2006, E-PUR has provided water resources, engineering, and hydrogeologic services to cities, counties, federal agencies and private parties. E-PUR has offices in Stockton, California, and Portland, Oregon.

E-PUR develops project strategies based on our clients' objectives. We work closely with our clients to provide seasoned insight and advice to outline and develop solutions to meet those objectives. E-PUR also maintains a business philosophy focused on client respect and trust. We work hard for our clients to meet or exceed their expectations.

E-PUR staff are licensed and accredited experts in:

- hydrogeologic and hydrologic evaluation of water availability and beneficial uses,
- water supply well design and construction oversight,
- collection and mapping of water data, land use data, climatic data using geospatial information systems (GIS) and database tools,
- quantitative hydrogeologic, hydrologic, and hydraulic analysis,
- engineering design for water infrastructure,
- evaluation of engineering designs, and
- engineering cost-benefit analysis.

E-PUR's corporate statement of qualifications is on file with Stanislaus County Public Works and is made part of this proposal submittal.

PROVOST & PRITCHARD

Provost & Pritchard Consulting Group has a well-deserved reputation for engineering and consulting excellence in the San Joaquin Valley. With over 150 employees, their staff is diverse and includes civil and agricultural engineers, hydrogeologists, water resources specialists, environmental specialists, planners, land surveyors, construction managers and field representatives. They have worked for Stanislaus County Public Works in the past and have a Statement of Qualifications on file.

ROADRUNNER DRILLING AND PUMP

Roadrunner Drilling and Pump is a licensed California well driller with the needed equipment, skills, knowledge and personnel to efficiently and effectively perform the field work. Roadrunner recently completed a water supply well for the nearby City of Patterson. They know the drilling conditions in the



region and are an experienced practitioner in the methods and protocols of the E-PUR project approach. A brief summary of qualifications for Roadrunner is provided in Attachment A.

CALIFORNIA LABORATORY SERVICES

California Laboratory Services serves as a primary technical resource for laboratory related environmental and general health issues for state and Federal agencies, industrial clients, engineering firms, and private industries. They are a state certified lab that is a privately held corporation to provide quality services at competitive pricing for projects of any size. They have the requisite experience and capabilities to perform all of the required drinking water quality parameter analyses. Their accreditations and certifications can be reviewed at <http://www.californialab.com/certifications/>

OUTLINE OF OVERALL PROJECT SCOPE OF WORK

Based on our preliminary review and our recommended approach, the project team recommends that the water-supply-well design-project be done in incremental stages. The work to be done can easily be grouped into three stages, pre field, field, and post field. We have identified seven or more distinctive works steps or tasks to fit into these three stages.

Pre-Field Stage	Task 1 - Assess Existing Geologic Information
	Task 2 - Water Quality Review and Proposed Well Location Submittal to State Board Division of Drinking Water with Technical Memorandum (TM)
Field Stage	Task 3 - Test Borehole Drilling and Zonal Monitoring Well Installation
	Task 4 - Monitoring Well Development, Aquifer Testing, and Water Quality Sampling
Post-Field Stage	Task 5 – Develop Production Well Designs
	Task 6 - Test Well Report with Production-Well-Design Technical Specifications
	Task 7 - Preparation of Water-Supply-Well-Construction Bid Specifications and Contract Documents

Tasks 1 and 2 constitute the pre-field work stage to provide best information for the field work to explore good target locations. Tasks 3 and 4 constitute the work in the field and the scope items such as water quality sample collection and analysis. Tasks 5 and 6 constitute the post-field work stage for data analysis to develop water-supply-well designs. Task 7 is a post-field work stage to prepare full well construction specifications suitable for competitive bidding and contracting by Stanislaus County.

Per our discussions, this proposal encompasses all of the professional services and ancillary field contractors needed for scope of work scope detailed herein for Tasks 1 thru 7. By doing this Stanislaus County Public Works will get good production well-designs, a system of monitoring wells and a production-well capital-construction-project bid-packet completed in one contract; this extends beyond



the original test borehole contract that was put out to bid. It allows for a competitive solicitation for the capital improvement project when the time is right and for a project with a well-defined scope.

PROPOSED SCOPE OF WORK

E-PUR's letter proposal details a scope of work and corresponding fee estimate for these 7 tasks identified for the pre-field, field, and post-field stages. The scope of work is provided in this section of the proposal and the detailed fee estimate is found in this proposal after the introduction of the project team and in the attached tables.

There will be four key project meetings and project execution check-ins:

- one at project kick off,
- a second to review the TM findings from the pre-field stage and ,
- a third to review the field work outcomes prior to developing the Task 5 well designs, and
- a fourth to review the well design report and kick off development of full contract technical specifications in Task 7.

TASK 1 - ASSESS EXISTING GEOLOGIC INFORMATION AND PROJECT KICKOFF

A project kickoff meeting will be scheduled between the E-PUR key project personnel and Stanislaus County. This meeting will be conducted after review of reports and information on the project provided by the County. In addition E-PUR will obtain and review existing well data and water quality information from local and state sources prior to the meeting. The kick-off meeting will serve to summarize that information for the project team, identify project roles for E-PUR personnel and County Departments and personnel; it will also define some of the details to project steps such as further information to gather and review. Minutes of the meeting will be generated to document the understandings for the project developed in the kick-off.

To get a working conceptual model of the hydrogeologic system, E-PUR will evaluate the Airport area's geology from a variety of sources to produce preliminary geologic maps and a local geological/hydrogeological cross section. The attached figures, Figure 1 and Figure 2 represent existing coarse scale geologic mapping produced by the California Geologic Survey of the area of interest.

E-PUR will generate a geologic cross section from southwest of the Airport in an alignment like that shown on Figure 2. This will be done using a variety of data sources starting with the geologic maps. Also E-PUR will acquire, evaluate and incorporate geologic and hydrogeologic data from DWR well logs along the line of section from west-southwest of the Airport and Crows Landing, California to the east-northeast up toward the Sierran foothills above Turlock, California. In addition we will obtain geophysical logs of boreholes where available near the line of section to provide additional information on the geology and hydrogeology beneath the Airport. Our prior work has included such detailed evaluation in cross-sections but will be updated and refined to the Airport area in Task 1. Table 1 provides a preliminary list of areas we have previously evaluated and areas to evaluate and incorporate to this project.

E-PUR will also perform a focused field survey to assess areas and features of hydrogeologic significance. This will be done first using Google Earth tools to identify areas of interest and preliminarily assess those via that system's aerial photography over time. This office assessment will be followed up by a half day



field tour to examine and photograph those features of interest and to visit the Airport to gain an understanding of the variety of local site conditions that impact exploratory drilling work.

Deliverables: Project kick-off meeting. Geologic maps and cross section, relevant photographs, and a discussion of observations from field reconnaissance; these items will be incorporated to the TM scoped in Task 2.

Schedule: This work can be completed within six weeks of contract initiation concurrent with the water quality review in Task 2. The anticipated scope items in Task 1 for the project schedule and the schedule interdependent items are shown in Figure 3.

TASK 2 - WATER QUALITY REVIEW AND PROPOSED WELL LOCATION SUBMITTAL TO STATE WATER RESOURCES BOARD DIVISION OF DRINKING WATER

Groundwater quality is a foremost consideration for this project and thus deserves careful analysis.

E-PUR will assemble groundwater quality information of the area using available sources such as the State Water Board's Drinking Water Information System on nearby drinking water systems that use groundwater such as Crows Landing Community Water System, City of Newman, and City of Patterson. Groundwater quality data for agricultural water supply wells in the Central California District and Del Puerto Water District will be requested and incorporated as available. Water quality data exist for the current Airport non-potable wells that will be incorporated to an electronic tabular data format. E-PUR will then evaluate shallow and deeper groundwater quality spatially via mapping to assess where groundwater quality appears to be favorable and unfavorable for potable water supply near the Airport.

Further on groundwater quality E-PUR will review records with Stanislaus County Department of Environmental Health to assess the known problems with impaired groundwater at the former Navy Airfield, the Airport. This includes reviewing and evaluating the reports and their data and information regarding the groundwater pumping exclusion zone recently created in response to on-going groundwater remediation at the Airport. We understand from preliminary conversations with Stanislaus County Environmental Resources that groundwater beneath and near portions of the Airport is impacted by cleaning solvent and fuel releases and has been the subject of remediation by the US Navy for years; we also understand that the potential for further releases to groundwater is being addressed as part of the ownership transition at the Airport from the US Government to Stanislaus County. E-PUR will assess the potential effects of these known and potential on-going releases on the lateral and vertical areas suitable for long term groundwater use as a supply source. Those findings will be summarized in the TM along with a recommended course of actions for locating the test boreholes for the potential water supply well areas, and any other recommendations deemed appropriate for Public Works in relation to the source release work and the groundwater plume monitoring and remediation. The scope of work here does not include performing any site investigation and characterization for releases; a file review and evaluation of potential legacy pollution is scoped which will be summarized in a Technical Memorandum.

E-PUR will prepare a site map showing the site layout, proposed well locations and offsets from key land uses. The map will also reflect flood plain zone designation, and any known groundwater contamination in the vicinity of the project site.



E-PUR will submit the site map to Stanislaus County Department of Environmental Resources and the State Water Resources Control Board -Division of Drinking Water (DDW) to obtain their preliminary “buy off” on the suitability of the well site prior to mobilization for site exploration.

Deliverables: A brief Technical Memorandum (TM) will be prepared summarizing the findings of Tasks 1 and 2. The TM will present the well locations map, the water quality data in tabular and graphic format, the geologic maps and cross section, relevant photographs, field observation, water quality assessments of known or potential risks to groundwater quality in the area, notations of the regulatory file review as well as the input to County and State entities of the exploratory drilling location(s), and recommended next steps.

A project meeting with Stanislaus County Public Works to review project findings is also scoped as a Deliverable in Task 2.

Schedule: The work under Task 2 and the summary TM for Tasks 1 and 2 can be provided within eight weeks of contract initiation. The anticipated scope items in Task 2 for the project schedule and the schedule interdependent items are shown in Figure 3

TASK 3 - TEST BOREHOLE DRILLING AND ZONAL MONITORING WELL INSTALLATION

E-PUR’s scope of work encompasses directing and overseeing the test borehole drilling to design and install a cluster of monitoring wells at distinct depths at two selected locations. In our experience it is generally more cost effective and reliable to allow E-PUR to perform the test borehole exploratory drilling as a subcontracted geotechnical service, where E-PUR hires and provides on-site coordination of a drilling company throughout the exploratory drilling. The reasons why this is typically a better project execution approach are:

- It allows for better control over the quality of the data collected, which is critical to the proper design of the production well, and consequently the overall success of the project.
- The exploratory drilling program cannot be fully specified in advance, because it is designed partially in the field based upon what is encountered during drilling.
- It is less expensive for our clients to have E-PUR subcontract for exploration drilling than to hire a contractor through a formal bid process or during production well construction.

The first phase of the exploratory drilling program is test hole drilling. Based upon nearby boring logs it appears that a target depth of 670 feet is advisable to identify and examine deeper gravel deposits found below 600 feet. During exploration drilling, formation samples are to be collected by the driller a minimum of every 10 feet and at formation changes. An E-PUR geologist logs the samples taken during this activity. All drilling and lithologic logging is overseen by a licensed professional geologist and/or qualified engineer. E-PUR subsequently prepares a lithologic log of the borehole that describes the geologic formations encountered. We also select appropriate formation samples for sieve analysis to design the gravel envelope and well screen slot size for production well designs.

Upon completion of the exploration drilling phase a borehole geophysical log will be made. The geophysical log will be made for resistivity (long normal and short normal), spontaneous potential (SP) and borehole water temperature. The drilling contractor will subcontract and engage the geophysical survey crew since those schedules are closely intertwined.



E-PUR uses the formation samples and geophysical log from the test hole to identify the target water-producing zones to be assessed. The value of aquifer intervals or zones to produce a useful rate and quality of water is evaluated from the geophysical-log responses in the test hole. These responses provides information about the general water quality of the zone and the relative quantity of water moving within that zone. Where possible the geophysical logs can be correlated to nearby wells.

The initial test borehole will be converted to a 4-inch diameter monitoring well at the deepest interval selected from the geophysical log and formation sampling data. Conversion of a test borehole into a permanent monitoring well provides the means to assess the water quality of each of the major aquifer unit(s). E-PUR recommends constructing a permanent monitoring well to obtain water quality samples for the following reasons:

- Constructing and sampling from a permanent monitoring well provides more accurate water quality data than the data obtained using temporary zone sampling from the borehole. A monitoring well is a permanent structure that allows for comprehensive and accurate, zone-specific aquifer monitoring and testing.
- The monitoring well method provides all of the water quality data needed for production well design, and in addition offers the ability to resample any of the aquifers in the future and to conduct aquifer water production assessment.
- A monitoring well provides access to obtain zone-specific static hydraulic head data to support on-going efforts to manage groundwater resources.
- In most cases, constructing a permanent monitoring well is less expensive than the temporary zone sampling method with a production well drilling rig on standby time. Zone sampling with a production well drilling rig takes a lot of time.

For the purposes of developing a clear scope and cost, E-PUR proposes to complete the deepest monitoring well using 4-inch diameter mild steel with an engineered screen interval, with a field specified slot size and filter pack. This first monitoring well at each of the two test borehole locations is projected at a depth of 600 feet with a 30-foot screened interval. Sealing off the lower portion of the deeper test borehole is anticipated to be done using either native material or bentonite chips as needed.

The next step in the field program for zonal monitoring wells is to drill additional boreholes to selected depth intervals for water quality and water production evaluation. Again for the purposes of clarity in scope and cost, E-PUR has costed two additional 4-inch diameter monitoring wells would be installed, each with a 30-foot long screened interval with engineered slot size and filter pack. One well is projected to be 200-feet deep and another is projected to be 400-feet deep.

Each monitoring well is scoped to be completed with a 3'X3' concrete pad and locking steel riser pipe for the wellhead. Each well will be outfitted with a brass padlock or other as preferred by Public Works.

Deliverables: As-built drawings of the monitoring well completions along with geologic logs, geophysical logs, and laboratory grain-size analyses.

Schedule: Field work is estimated to take 40 to 45 days or 6 to 7 weeks. This overall task work can be completed within 20 weeks of the start of this Task 3, concurrent with the activities to follow in Task 4.



The anticipated scope items in Task 3 for the project schedule and the schedule interdependent items from Task 4 are shown in Figure 3.

TASK 4 - MONITORING WELL DEVELOPMENT, GROUNDWATER QUALITY SAMPLING AND AQUIFER TESTING

Aquifer water quality and water production characterization work is usually less expensive when subcontracting monitoring well construction and development through E-PUR rather than through a bid specification to a contractor. This is due to the efficiencies achieved in the field by synchronizing multiple work steps. In the proposed approach the drilling contractor sets up on the borehole, completes a well, and moves over to drill the next borehole while the first well is being developed a few feet away. The drilling contractor proceeds through well development to water quality sampling and aquifer hydraulic testing using a second smaller well development rig working alongside the drilling rig. This cuts down on professional staff time as well as on equipment work hours, and thus is very cost-effective compared to doing the same work in sequential stages.

Under this task we have scoped and costed developing and testing three (3) monitoring wells at each of two (2) locations, followed by a field stage summary meeting.

Each monitoring well is to be developed by the drilling contractor by air lift pumping followed by swabbing until the well produces water of sufficient clarity, typically less than 10 NTU. The monitoring well is then purged by the drilling contractor using a submersible pump. E-PUR monitors the water discharged during purging for specific conductance, pH, total dissolved solids, temperature, dissolved oxygen, and turbidity. After purging a sufficient volume and ensuring that the water quality parameters have stabilized, water quality samples from each aquifer are collected and laboratory tested for Title 22 parameter requirements as well as others including: general mineral, drinking water metals (including Cr6, iron, manganese, and arsenic), general physical, volatile organic compounds (including PCE and MTBE), methane, and perchlorate.

Aquifer testing will be done at each of the six monitoring wells in sequence. After purging and sampling for water quality the monitoring well will be allowed to "rest" with the submersible pump still in it along with a nearby electricity generator. An electronic pressure transducer and data logger will be installed in the well above the pump depth to record drawdown and recovery during an aquifer testing phase. The projected scope of work includes extracting water from the well at a fixed rate for six hours followed by pump shut down and recovery overnight. The pressure transducer data from the recovery will be collected, downloaded, and subsequently be analyzed to assess the transmissivity and corresponding estimates of hydraulic conductivity of each aquifer zone. This process will be repeated for each of the monitoring wells in the sequence that they are drilled, developed, sampled, and then hydraulically tested.

A project meeting to review the field stage findings is scoped at the conclusion of the analytic work to be done on the laboratory data for water quality and the office time analysis of aquifer testing and aquifer zone characterization. This meeting is an essential step in identifying within the entire project team which aquifer zones appear best suited to producing the desired quantity and quality of water supply. Based on the data gathered during the exploratory drilling program and depth-specific water quality assessment, E-PUR will develop recommendations for production well designs to discuss at the project review meeting. Shallow and deeper aquifer zones will be assessed to see if they have different



hydrostatic heads and/or water quality. Often connecting aquifer zones within a single well structure provides a conduit for the downward migration of water from shallow aquifer zones to the deeper zones. Thus it may offer protection and flexibility to work on more than one production well in high value locations. These and other potential well designs will be vetted at the project review meeting. The outcomes of this field stage review meeting will guide and direct the efforts for production well designs scoped in the subsequent Task 5.

Deliverables: Field logs of well development data and sampling, groundwater quality sample results, aquifer test analyses depictions and estimates of aquifer hydraulic characteristics, relevant photographs, and a discussion of field observations relating to well development, sampling and aquifer testing will be included in a field stage information packet and a draft TM. A project status review meeting agenda and minutes documenting key findings will be produced as a key project deliverable.

Schedule: Field work is estimated to take 12 days. However, this overall task work is completed concurrent with activities in Task 3, and thus will take 6 to 7 weeks in the field followed by time for completion of lab testing and aquifer test analyses. The project status review meeting would be scheduled within 1 or 2 weeks of completion of the analyses in Task 4 for an anticipated schedule of 20 weeks to complete all of the activities scoped in Tasks 3 and 4, the field stage. The anticipated scope items in Task 4 for the project schedule and the schedule interdependent items from Task 3 are shown in Figure 3.

TASK 5 – DEVELOP PRODUCTION WELL DESIGNS

The well structure will be designed with a proper aquifer-to-gravel envelope size ratio and water entry velocity. All of the well casing and accessory pipes will be evaluated for collapse pressure and adequacy for the specified well seal depth. The PW designs will include a proper conductor casing to stabilize the upper formations during drilling and will provide the state-required sanitary seal. The inner diameter borehole will be specified and the outside diameter, material type, and coupling method for the well casing assembly will be specified. The screen interval material type, screen length, slot size and finishing characteristics (e.g. well sump) will each be specified for each well designs. Additional appurtenances for the well borehole will also be specified for water level sounding and gravel pack maintenance. The well borehole sealing materials will be specified carefully along with the surface completion specifications compatible with well pump and piping designs (those wellhead designs would be completed in a subsequent scope of work and are not scoped here).

Deliverables: Well design drawings and design calculation tables and figures.

Schedule: This work can be completed within six weeks of kick off on Task 5 as shown on Figure 3.

TASK 6 - TEST WELL REPORT WITH PRODUCTION WELL DESIGN TECHNICAL SPECIFICATIONS

E-PUR will prepare a summary report of field findings and the production well design details during post-field stage work. This report will be prepared in draft to incorporate key components of the Pre-Field Stage TM, the Field Stage draft TM and the graphical design and calculations from Task 5 in sufficient detail for full specification and preparation of contractor biddable documents. The Production Well Design report does not encompass those full contracting design specifications. Those specifications are scoped in Task 7. Task 7 is to be preceded by a Production Well Design Report review meeting with the Stanislaus County Production Well design team that includes Public Works.



A review meeting will be conducted to review the design characteristics of the production wells and the full draft Production Well Design report. The Production Well Design report will be finalized after the review meeting and will be used as the starting point for development of contract design specifications in Task 7. The scope does not anticipate extensive design revisions should Public Works or other state or county entities require extensive modifications different than the understandings developed in the Task 4 review meeting.

Deliverables: A draft and final Production Well Design Report. Project review meeting of the draft Report

Schedule: This work can be completed within nine to ten weeks of initiation of Task 5 activities including the project meeting and report finalization as shown on Figure 3.

TASK 7 - PREPARATION OF WATER-SUPPLY-WELL CONSTRUCTION BID SPECIFICATIONS AND CONTRACT DOCUMENTS

This post field stage task encompasses the development of full contract design specifications for vendor bid solicitation in accordance with Stanislaus County standards as well as ANSi and AWWA standards for well design specifications for contracting.

The project goal here is to take the overall production well project to a key milestone that completes a work phase for the design and have it ready for bidding and contracting. Incorporating this last step of creating technical specifications into contract documents avoids the inefficiency of revisiting design considerations from the Production Well Design Report at a later date. Incorporating this work step takes the overall project to a capital-improvement-project ready state. From this point the overall project to have drinking water quality supply wells can pause to ensure that the timing and funding are right for installation of these wells.

Deliverables: Production well construction technical specifications for contract document preparation.

Schedule: This work can be completed within six weeks of Task 7 initiation.

SCHEDULE OF COST AND FEES

E-PUR's 2016 rate sheet for professional service fees is provided in Attachment B. For this contract E-PUR has reduced our contract markup to below the Federal rate allowance to just 5% to cover insurance and taxes.

Our estimated costs for labor inclusive of Provost & Pritchard support are approximately \$114,500. Costs for subcontracted services for test borehole drilling, geophysical logging, and well installation in Task 3 are estimated at \$157,000 inclusive of markup. The estimated costs for subcontractor costs for well development, aquifer testing, and laboratory analysis of water quality in Task 4 are estimated at \$33,500 inclusive of markup. Other direct costs are estimated to be approximately \$8,000. These costs are summarized in Table 2. They are detailed further in the accompanying cost estimates for each of Tasks 1 thru 7.

Roadrunner's program scope of work and associated costs are provided in Attachment C.



Proposal for Test-Well Installation and Production-Well Design
For Crows Landing Industrial Business Park
Stanislaus County Public Works Department

California Laboratory Services scope of analyses and associated costs are provided in Attachment D.

CONTRACTING

E-PUR is prepared to enter into a Stanislaus County standard contract for professional services.

CLOSING

E-PUR is ready and able to demonstrate the enthusiasm for what we do and the rigor with which we do it to you and Stanislaus. We have the right team, the right expertise, and valuable experience to address the County's objective of identifying a safe and reliable groundwater supply at the Airport in an effective and cost efficient manner. Please contact us should you have any questions on this proposal.

Respectfully,

E-PUR, LLC

Nathan J. Jacobsen, PE
Associate Engineer

John M. Lambie, PE
Principal Engineer

Attachments:

Figure 1- Geologic U.S. Geological Survey Map of Crows Landing and the Surrounding Area

Figure 2- State of California Digital Geologic Map Data of Crows Landing and the Surrounding Area

Figure 3 General Tasks and Execution Timeline for Crows Landing Airport Area Test Boreholes

Table 1 - PLS Township & Range Coverage for Well Completion Reports Needed to Evaluate Crows Landing Airport Area Geology and Hydrogeology

Table 2 – Summary of Costs by Task

Cost Estimate Worksheets Task 1 thru Task 7

Attachment A – Roadrunner Drilling Company Description and Qualifications

Attachment B – E-PUR Rate and Fee Schedule

Attachment C – Roadrunner Drilling Company Estimated Scope of Work and Associated Fees

Attachment D – California Laboratory Services Estimated Scope of Work and Associated Fees

EXHIBIT B

INSURANCE REQUIREMENTS

EXHIBIT B

Insurance Requirements for Professional Services

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.

MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than \$1,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.
2. **Automobile Liability:** If the Consultant or the Consultant's officers, employees, agents, representatives or subcontractors utilize a motor vehicle in performing any of the work or services under the Agreement Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than \$1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation** insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.
(Not required if consultant provides written verification it has no employees)
4. **Professional Liability (Errors and Omissions)** Insurance appropriate to the Consultant's profession, with limits not less than \$1,000,000 per occurrence or claim, \$2,000,000 aggregate.

If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the County requires and shall be entitled to the broader coverage and/or higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the County.

Application of Excess Liability Coverage

Consultants may use a combination of primary, and excess insurance policies which provide coverage as broad as ("follow form" over) the underlying primary policies, to satisfy the Required Insurance provisions.

Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

Additional Insured Status

The County, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Consultant including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Consultant's insurance (at least as broad as ISO Form CG 20 10 11 85 or **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37 forms if later revisions used).

Primary Coverage

For any claims related to this contract, the **Consultant's insurance coverage shall be primary** insurance primary coverage at least as broad as ISO CG 20 01 04 13 as respects the County, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees, agents or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

Reporting: Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the County or its officers, officials, employee's, agents or volunteers.

Notice of Cancellation

Each insurance policy required above shall state that **coverage shall not be canceled, except with notice to the County.**

Waiver of Subrogation

Consultant hereby grants to County a waiver of any right to subrogation which any insurer of said Consultant may acquire against the County by virtue of the payment of any loss under such insurance. Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the County has received a waiver of subrogation endorsement from the insurer.

Self-Insured Retentions

Self-insured retentions must be declared to and approved by the County. The County may require the Consultant to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or County.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the County.

Claims Made Policies

If any of the required policies provide coverage on a claims-made basis:

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

Verification of Coverage

Consultant shall furnish the County with a copy of the policy declaration and endorsement page(s), original certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the County before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

Subcontractors

Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that County is an additional insured on insurance required from subcontractors.

Special Risks or Circumstances

County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Insurance Limits

The limits of insurance described herein shall not limit the liability of the Consultant and Consultant's officers, employees, agents, representatives or subcontractors. Consultant's obligation to defend, indemnify and hold the County, its officers, officials, employees, agents and volunteers harmless under the provisions of this paragraph is not limited to or restricted by any requirement in the Agreement for Consultant to procure and maintain a policy of insurance.

APPROVED AS TO INSURANCE CONTENT:

Stanislaus County

Chief Executive Office – Risk Management Division

By: Kevin Watson

Name: KEVIN WATSON

Title: LIABILITY & INSURANCE MGR

Date: 9-7-2016 Vendor: E-Pur, LLC

Professional Services 2016

EXHIBIT C

PROJECT SCHEDULE



Figure 3
General Tasks and Execution Timeline
for Crows Landing Airport Area Test Boreholes

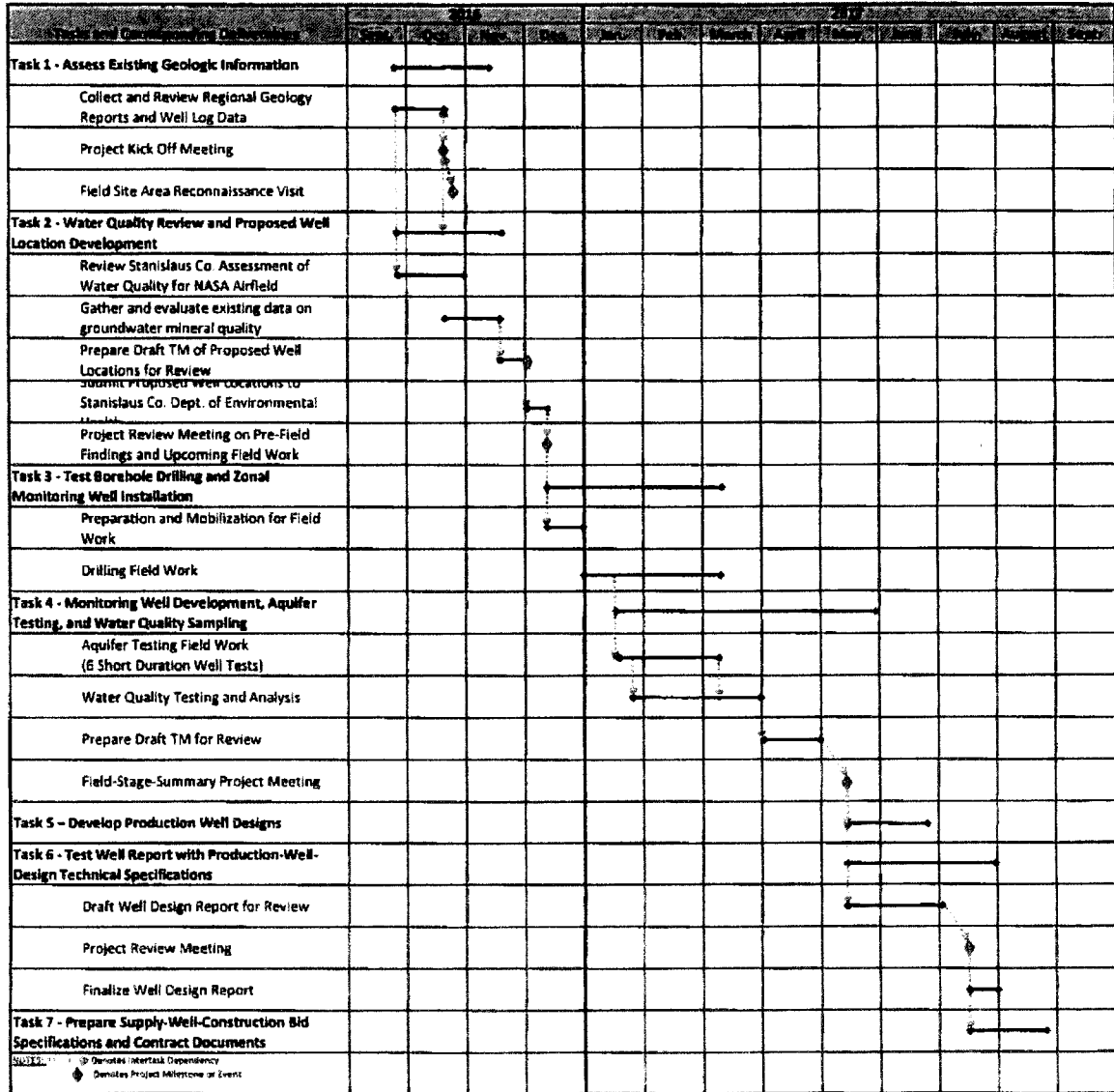


EXHIBIT D

FEE SCHEDULE



0624-001-01
 Stanislaus County Public Works
 Proposal for Test Borehole Drilling and Production Well Design

TABLE 2 - SUMMARY OF COSTS BY TASK

Client Stanislaus County Public Works	Date 7/13/2016
Project Name Crows Landing Airport Test Wells	Proposal Number 624
	Estimate By JML

		<i>E-PUR Labor</i>	<i>Direct Expenses</i>	<i>Subcontracted Expenses</i>	<i>Task for Task</i>
Tasks	1 - Assess Existing Geologic Information and Project Kick Off Meeting	\$2,893	\$71	\$1,302	\$4,266
	2 - Water Quality Review, Well Locations Submittal and Tech. Memo	\$4,350	\$113	\$2,347	\$6,810
	3 - Test Borehole Drilling and Zonal Monitoring Well Installation	\$19,320	\$3,307	\$169,890	\$192,517
	4 - Well Development, Aquifer Testing, Water Quality Sampling and Project Meeting	\$29,520	\$4,291	\$38,956	\$72,767
	5 - Production Well Design	\$15,880	\$0	\$1,229	\$17,109
	6 - Test Well Report with Production Well Design and Review Meeting	\$7,330	\$113	\$1,223	\$8,666
	7 - Preparation of Water-Supply-Well Construction Bid Specifications for Contracting	\$2,555	\$0	\$8,190	\$10,745
Subtotals by Category:		\$81,848	\$7,895	\$223,137	

	TOTAL \$312,879
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COST ESTIMATE WORKSHEET

Client Stanislaus County Public Works	Date 7/14/2016
Project Name Crows Landing Airport Test Wells	Proposal Number 624
Task 1 - Assess Existing Geologic Information and Project Kick Off Meeting	Estimate By JML

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	4	\$ 900	\$8,260
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours	12	\$ 2,220	
	Senior	\$165	Hours	20	\$ 3,300	
	Project	\$145	Hours	0	\$ -	
	Staff	\$125	Hours		\$ -	
	Assistant Engineer/GIS Technician	\$105	Hours	16	\$ 1,680	
	Field Technician/CAD Drafting	\$90	Hours		\$ -	
	Project Coordinator	\$80	Hours	2	\$ 160	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles	190	\$ 103	\$195
	Field Costs/ Day	\$ 30.00	Days	1	\$ 30	
	Subsistence, Overnight	\$ 120.00	Nights		\$ -	
	GPS Rental	\$ 45.00	Days	1	\$ 45	
	Materials (as % of ODCs)	+10%	Total		\$ 18	

Outside Expenses	Geologic Maps of Region (2*40)			\$ 80	\$1,302
	Provost & Pritchard			\$ 1,160	
				\$ -	
	Overhead (5%)			\$ 62	

TOTAL FOR TASK \$ 9,757



COST ESTIMATE WORKSHEET

Client	<u>Stanislaus County Public Works</u>	Date	<u>7/14/2016</u>
Project Name	<u>Crows Landing Airport Test Wells</u>	Proposal Number	<u>624</u>
Task	<u>2 - Water Quality Review, Well Locations Submittal and Tech. Memo</u>	Estimate By	<u>JML</u>

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	4	\$ 900	\$4,350
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours	6	\$ 1,110	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours		\$ -	
	Staff	\$125	Hours	12	\$ 1,500	
	Assistant Engineer/GIS Technician	\$105	Hours	8	\$ 840	
	Field Technician/CAD Drafting	\$90	Hours		\$ -	
	Project Coordinator	\$80	Hours		\$ -	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles	190	\$ 103	\$113
	Subsistence, Days	\$ 30.00	Days		\$ -	
	Subsistence, Overnight	\$ 120.00	Nights		\$ -	
	GPS Rental	\$ 45.00	Days		\$ -	
	Materials (as % of ODCs)	+10%	Total		\$ 10	

Outside Expenses	Provost & Pritchard			\$ 2,030	\$2,347
	Shipping			\$ 80	
	Photo Copying			\$ 125	
	Overhead (5%)			\$ 112	

TOTAL FOR TASK \$ 6,810				
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COST ESTIMATE WORKSHEET

Client Stanislaus County Public Works	Date 7/14/2016
Project Name Crows Landing Airport Test Wells	Proposal Number 624
Task 3 - Test Borehole Drilling and Zonal Monitoring Well Installation	Estimate By JML

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	40	\$ 9,000	\$19,320
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours		\$ -	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours		\$ -	
	Staff	\$125	Hours	80	\$ 10,000	
	Assistant Engineer/GIS Technician	\$105	Hours		\$ -	
	Field Technician/CAD Drafting	\$90	Hours		\$ -	
	Project Coordinator	\$80	Hours	4	\$ 320	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles	1900	\$ 1,026	\$3,307
	Field Costs/ Day	\$ 30.00	Days	20	\$ 600	
	Subsistence, Overnight	\$ 75.00	Nights	12	\$ 900	
	Transducer Rental	\$ 45.00	Days		\$ -	
	Water Level Sounder	\$ 35.00	Days	6	\$ 210	
	Well Depth Sounder	\$ 30.00	Days		\$ -	
	GPS Rental	\$ 45.00	Days	6	\$ 270	
	Materials (as % of ODCs)	+10%	Total		\$ 301	

Outside Expenses	Provost & Pritchard	\$ 11,600	\$169,890
	Roadrunner Drilling (includes Geophysical Logging)	\$ 149,400	
	Laboratory Grain Size Testing (20 @ \$40 each)	\$ 800	
	Overhead (5%)	\$ 8,090	

TOTAL FOR TASK \$ 192,517



COST ESTIMATE WORKSHEET

Client	<u>Stanislaus County Public Works</u>	Date	<u>7/14/2016</u>
Project Name	<u>Crows Landing Airport Test Wells</u>	Proposal Number	<u>624</u>
	<u>4 - Well Development, Aquifer Testing, Water</u>		
Task	<u>Quality Sampling and Project Meeting</u>	Estimate By	<u>JML</u>

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	12	\$ 2,700	\$29,520
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours	72	\$ 13,320	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours		\$ -	
	Staff	\$125	Hours	108	\$ 13,500	
	Assistant Engineer/GIS Technician	\$105	Hours		\$ -	
	Field Technician/CAD Drafting	\$90	Hours		\$ -	
	Project Coordinator	\$80	Hours		\$ -	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles	2280	\$ 1,231	\$4,291
	Field Costs/ Day	\$ 30.00	Days	12	\$ 360	
	Subsistence, Overnight	\$ 75.00	Nights	12	\$ 900	
	Transducer Rental	\$ 45.00	Days	12	\$ 540	
	Water Level Sounder	\$ 35.00	Days	12	\$ 420	
	Field Sampling Meter	\$ 45.00	Days	10	\$ 450	
	GPS Rental	\$ 45.00	Days		\$ -	
	Materials (as % of ODCs)	+10%	Total		\$ 390	

Outside Expenses	California Laboratory Services (6 samples for full suite)	\$ 3,981			\$38,956
	Provost & Pritchard	\$ 5,220			
	Roadrunner Drilling	\$ 27,900			
	Overhead (5%)	\$ 1,855			

TOTAL FOR TASK	\$ 72,767
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COST ESTIMATE WORKSHEET

Client Stanislaus County Public Works	Date 7/14/2016
Project Name Crows Landing Airport Test Wells	Proposal Number 624
Task 5 - Production Well Design	Estimate By JML

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	24	\$ 5,400	\$15,880
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours		\$ -	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours	40	\$ 5,800	
	Staff	\$125	Hours		\$ -	
	Assistant Engineer/GIS Technician	\$105	Hours	24	\$ 2,520	
	Field Technician/CAD Drafting	\$90	Hours	24	\$ 2,160	
	Project Coordinator	\$80	Hours		\$ -	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles		\$ -	\$0
	Subsistence, Days	\$ 30.00	Days		\$ -	
	Subsistence, Overnight	\$ 120.00	Nights		\$ -	
	GPS Rental	\$ 45.00	Days		\$ -	
	Materials (as % of ODCs)	+10%	Total		\$ -	

Outside Expenses	Provost & Pritchard			\$ 1,170	\$1,229
				\$ -	
	Overhead (5%)			\$ 59	

TOTAL FOR TASK \$ 17,109



COST ESTIMATE WORKSHEET

Client	<u>Stanislaus County Public Works</u>	Date	<u>7/14/2016</u>
Project Name	<u>Crows Landing Airport Test Wells</u>	Proposal Number	<u>624</u>
Task	<u>6 - Test Well Report with Production Well Design and Review Meeting</u>	Estimate By	<u>JML</u>

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	12	\$ 2,700	\$7,330
	Principal I	\$205	Hours	16	\$ 3,280	
	Associate	\$185	Hours		\$ -	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours		\$ -	
	Staff	\$125	Hours		\$ -	
	Assistant Engineer/GIS Technician	\$105	Hours	6	\$ 630	
	Field Technician/CAD Drafting	\$90	Hours	8	\$ 720	
	Project Coordinator	\$80	Hours		\$ -	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles	190	\$ 103	\$113
	Subsistence, Days	\$ 30.00	Days		\$ -	
	Subsistence, Overnight	\$ 120.00	Nights		\$ -	
	Transducer Rental	\$ 25.00	Days		\$ -	
	Materials (as % of ODCs)	+10%	Total		\$ 10	

Outside Expenses	Provost & Pritchard			\$ 1,165	\$1,223
				\$ -	
				\$ -	
	Overhead (5%)			\$ 58	

TOTAL FOR TASK \$ 8,666			
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COST ESTIMATE WORKSHEET

Client	<u>Stanislaus County Public Works</u>	Date	<u>7/14/2016</u>
Project Name	<u>Crows Landing Airport Test Wells</u>	Proposal Number	<u>624</u>
7 - Preparation of Water-Supply-Well			
Task	<u>Construction Bid Specifications for Contracting</u>	Estimate By	<u>JML</u>

		<i>Rate</i>	<i>Units</i>	<i>Quantity</i>	<i>Cost</i>	
Labor	Principal II	\$225	Hours	2	\$ 450	\$2,555
	Principal I	\$205	Hours		\$ -	
	Associate	\$185	Hours	8	\$ 1,480	
	Senior	\$165	Hours		\$ -	
	Project	\$145	Hours		\$ -	
	Staff	\$125	Hours	5	\$ 625	
	Assistant Engineer/GIS Technician	\$105	Hours		\$ -	
	Field Technician/CAD Drafting	\$90	Hours		\$ -	
	Project Coordinator	\$80	Hours		\$ -	
	Clerical	\$65	Hours		\$ -	

Direct Expenses	Ground Travel	\$ 0.5400	Miles		\$ -	\$0
	Subsistence, Days	\$ 30.00	Days		\$ -	
	Subsistence, Overnight	\$ 120.00	Nights		\$ -	
	Transducer Rental	\$ 25.00	Days		\$ -	
	Materials (as % of ODCs)	+10%	Total		\$ -	

Outside Expenses	Provost & Pritchard			\$ 7,800	\$8,190
				\$ -	
				\$ -	
	Overhead (5%)			\$ 390	

TOTAL FOR TASK \$ 10,745	
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ATTACHMENT 2

Budget Journal

