

AGREEMENT R&D # 127174 (“Agreement”)	
“Sponsor” Marina Coast Water District 11 Reservation Rd Marina, CA 93933	“Stanford” The Board of Trustees of the Leland Stanford Junior University 450 Serra Mall Stanford, CA 94305
	DUNS Number 009214214
	Stanford Principal Investigator Rosemary Knight
Project Title Airborne Electromagnetic Method (AEM) Monterey	
Period of Performance <del>03+2/20+176 – 0903/0431/187</del>	Amount Funded this Action: \$50,000.00

This Agreement is entered into to specify the terms and conditions under which Stanford will participate in the conduct of a project supported by the Sponsor.

1. Statement of Work

Except as otherwise may be provided herein, Stanford agrees to provide all the necessary qualified personnel, equipment, materials, and facilities to perform the Statement of Work as incorporated into this Agreement at **Attachment 1**.

2. Period of Performance; Location of Performance

The period of performance of this Agreement shall be as set forth above, unless extended by amendment of this Agreement. The location of Stanford’s performance will be at Stanford facilities located at 450 Serra Mall, Stanford, CA 94305.

3. Agreement Type and Cost

This is a cost-reimbursement agreement. Sponsor agrees to pay Stanford an amount not to exceed the funded amount set forth above. Funds provided may only be used in accordance with the Statement of Work and Budget in **Attachment 1**. Stanford is hereby authorized to rebudget, unless specific prior approval restrictions are provided in Article 7. Carryforward is allowed across budget periods.

4. Billing

Stanford shall submit invoices to Sponsor for payment at least quarterly, but no more often than monthly. Each invoice shall at minimum contain the Agreement Number, the period covered by the invoice, the amount expended in the current period, cumulatively expended to date, separated

by major cost category, and certification as required by 2 CFR 200.415(a). Late invoices may not be paid. Upon request, Stanford shall provide documentation supporting all invoiced costs.

All invoices must include the following certification, signed an authorized official of Stanford:

I certify that the above charges accurately represent actual expenditures incurred during the period listed, and all claimed costs are allowable under the terms and conditions of the subaward. I further certify that payment for the costs claimed above has not been received.

The final invoice, signed, certified and clearly marked FINAL, must be received within forty-five (45) days after the Agreement end date. Sponsor's final payment to Stanford is conditional upon receipt of all required deliverables (see Article 9). . All invoices must be submitted to the Financial Contact listed in **Attachment 2**.

#### 5. Key Personnel

The Stanford Principal Investigator for the performance of this Agreement is set forth above. If for any reason the Stanford Principal Investigator cannot continue his/her duties, Stanford will appoint a successor, subject to the approval of Sponsor. Stanford will provide thirty (30) days' written notice to Sponsor's Authorized Official of such a change. If the parties cannot agree on a successor, either party may terminate this Agreement in accordance with the terms of Article 17 – Termination.

#### 6. Authorized Representatives

The Authorized Representatives of Stanford and Sponsor for technical and administrative matters are listed in **Attachment 2** to this Agreement. Changes to the Authorized Representatives will be communicated in writing between parties, without necessity of a formal subaward amendment.

#### 7. Prior Approvals

Stanford shall obtain written approval from Sponsor's Authorized Official named in **Attachment 2** for any actions requiring Sponsor prior approval.

The following require prior approval of Sponsor's Authorized Official:

- Change in Key Personnel (Article 5)
- Change in the approved Statement of Work at **Attachment 1**
- Subawards not referenced in **Attachment 1**
- No-cost time extension, (requests for no-cost time extensions must be submitted in writing at least 30 days before end of project period)
- Acquisition of tangible property not listed in **Attachment 1**
- Any changes to indirect cost or fringe benefit rates that will be charged to this Subaward

#### 8. Intellectual Property

Sponsor agrees that Stanford shall own the entire right, title, and interest, including all patents, copyrights, and other intellectual property rights, in and to all tangible materials, inventions, works of authorship, software, information and data solely conceived or developed by Stanford in

the performance of the project and developed using Stanford's facilities and personnel ("Stanford Technology"). Stanford agrees that Sponsor shall own the entire right, title, and interest, including all patents, copyrights, and other intellectual property rights, in and to all tangible materials, inventions, works of authorship, software, information and data solely conceived or developed by Sponsor personnel, or conceived or developed using Sponsor facilities under this Agreement ("Sponsor Technology"). Technology that is jointly developed by Sponsor and Stanford personnel, or developed solely by Sponsor but involving more than incidental use of Stanford's facilities shall be jointly owned ("Joint Technology"). Notwithstanding the foregoing, Technology will be subject to any restrictions and requirements imposed by the Prime Award. Patents and inventions shall be handled in accordance with Patent Rights Clause of 37 CFR 401.14.

Stanford hereby grants to Sponsor an irrevocable, royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works, display, and perform publicly any patents, copyrights, and other intellectual property rights, in and to all tangible materials, inventions, works of authorship, software, information and data first conceived or developed and delivered under this Agreement, for non-commercial, academic, or research purposes.

9. Deliverables and Reporting Requirements

A. No later than four weeks after the completion of data acquisition Stanford will provide to MCWD the interpretation of the data acquired in the region of the suspected freshwater lens. This will be provided as images displaying the lateral and depth extent of the lens, accompanied by a report describing the steps involved in the interpretation. This work will be done in collaboration with AGF. No later than July 17, 2017, but preferably on June 5, 2017, at a workshop to be held at MCWD regarding sustainable groundwater management, Stanford will present this information to the MCWD Board of Directors in collaboration with MCWD staff.

B. No later than ten months after the completion of data acquisition Stanford will provide to MCWD the interpretation of all acquired data. This will be provided as images displaying the interpreted hydrostratigraphy and the distribution of freshwater and saltwater, accompanied by a final report. This work will be done in collaboration with AGF. The final project report will include all data and metadata files. The report will be delivered in PDF digital format. No later than March 31, 2018, Stanford will present this information to the MCWD Board of Directors in collaboration with MCWD staff.

C. ~~A. Technical Reports. Stanford shall submit a technical report to the Sponsor's Technical Contact, describing accomplishments and significant research findings derived from the work conducted under this Agreement within forty five (45) days after the Agreement end date, and as requested by the Sponsor's Technical Contact.~~

10. No Warranties

Any materials, tangible and intangible, provided by Stanford to Sponsor in connection with this Agreement are provided without warranty of any kind and for research purposes only.

## 11. Allowable Costs

Allowable costs shall be determined in accordance with the following cost principles in effect at the effective date of this Agreement and applicable to like organizations:

- OMB Uniform Guidance – Cost Principles for Educational Institutions (formerly OMB Circular A-21), Cost Principles for State & Local Governments and Indian Tribal Governments (formerly OMB Circular A-87), and Cost Principles for Non-Profit Institutions (formerly OMB Circular A-122)
- 45 CFR 74, Appendix E – Cost Principles for Hospitals
- 48 CFR 31.2 – Cost Principles for Commercial Organizations (FAR)

Total Anticipated Amount of the award is not committed funding and should not be treated as such. Only the Amount Funded this Action will be considered obligated to Stanford upon execution of this Agreement.

## 12. Audit

Stanford shall maintain and have available for audit and inspection all administrative and financial documents, and all other records, related to this Agreement for a period of four years following the expiration date except that, if an audit is initiated before the expiration of the four year period, the records shall be retained until audit findings have been resolved. The above records are subject to inspection and audit by Sponsor, its designated representatives, representatives of Sponsor, or the United States government (“Federal Government”) at all reasonable times and upon advance notice during the life of the Agreement and for four years thereafter, or longer if required by audit. If unallowable costs are identified, Sponsor reserves the right to recoup or withhold any costs found to be unallowable, unallocable, unreasonable, or outside the scope of the project.

Stanford agrees to provide copies of its current OMB Uniform Guidance audit report, annual audit or audited financials, and annual updates thereof, and any adverse findings that impact this subaward covering the period of performance of this Agreement. All audit and supporting financial documentation shall be available for inspection by designated representatives of Sponsor or the Federal Government at all reasonable times during the life of the Agreement and for four years thereafter, or longer if required by audit.

Stanford agrees to comply with the requirements of the OMB Uniform Guidance, to the extent that they are applicable under this Agreement. In cases of non-compliance with federal requirements, Stanford will also provide copies of responses to auditor’s report(s) and a plan for corrective action. In the event that Stanford fails to adequately perform its audit corrective action plans or management responses, Sponsor may terminate this Agreement immediately upon written notice emailed to the Administrative Contact for Stanford indicated on **Attachment 2**.

## 13. Property

Stanford is not authorized to acquire any property under this Agreement.

## 14. Program Income

Stanford shall inform Sponsor of any program related income resulting from this Agreement and shall maintain appropriate records for the receipt and disposition of such income. Stanford agrees to utilize any program income in accordance with the policy of the Sponsor, if any.

15. Party Liability; Limitation of Damages

- A. Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, directors, students, agents, or representatives to the extent allowed by law.

EXCEPT FOR CLAIMS BASED ON WILLFUL MISCONDUCT, NEITHER PARTY SHALL BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES OF THE OTHER PARTY.

16. Insurance

- A. Sponsor Coverage. Sponsor will maintain Worker's Compensation insurance or other coverage on its employees as required by California law, and will self-insure or maintain insurance covering its liability under this Agreement.
- B. Stanford Coverage. Subrecipient will procure and maintain during the term of this Agreement comprehensive general liability insurance, including coverage for intellectual property and product liability, to the full amount of Subrecipient's insurance limits, but in no event less than \$2,000,000 per occurrence, with a reputable and financially secure insurance carrier. This insurance will be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement. If Subrecipient's insurance is written on a claims-made basis, as opposed to an occurrence basis, Subrecipient will purchase the coverage necessary to ensure continued and uninterrupted coverage of all claims, including those made after the policy expires or is terminated. Stanford will maintain Worker's Compensation insurance or other coverage on its employees as required by California law, and will self-insure or maintain insurance covering its liability under this Agreement.
- C. Primary Coverage. Stanford's insurance will be primary coverage. Sponsor's insurance or self-insurance will be excess and noncontributory.

17. Termination

Either party may terminate this Agreement upon thirty (30) days' written notification to the other party. However, in the event that Sponsor terminates its award to Stanford prior to the end of the period of performance, Sponsor will promptly notify Stanford in writing, and this Agreement will be terminated. In the event of termination Sponsor shall pay for costs incurred and non-cancelable commitments made in performance of the Statement of Work and in accordance with the budget or as otherwise approved by Stanford prior to the effective date of termination.

Upon termination for any reason, Stanford will make all reasonable efforts to mitigate costs and immediately return any deliverables, materials, or property purchased or developed under this Agreement. Stanford will furnish all necessary reports of research completed or in progress through the date of termination, as required under Article 9, Deliverables and Reporting Requirements.

18. Publication

It is the intent of the parties to freely publish and disseminate research results under this Agreement.

19. Publicity

Sponsor shall not identify Stanford in any products, publicity, promotion, promotional advertising, website, or other promotional materials to be disseminated to the public, or use any trademark, service mark, trade name, logo, or symbol that is representative of Stanford or its entities, whether registered or not, or use the name, title, likeness, or statement of any Stanford faculty member, employee, or student, without prior written consent of the Stanford University Communications office. Any use of Stanford's name shall be limited to statements of fact and shall not imply endorsement by Stanford of the Sponsor's products or services.

Stanford shall not identify Sponsor in any products, publicity, promotion, promotional advertising, website or other promotional materials to be disseminated to the public, or use any trademark, service mark, trade name, logo, or symbol that is representative of Sponsor or its entities, whether registered or not, or use the name, title, likeness, or statement of any Sponsor employee, without Sponsor's prior written consent. Any use of Sponsor's name shall be limited to statements of fact and shall not imply endorsement by the of Stanford's products or services.

20. Laws and Regulations

This Agreement is subject to all applicable local, state and federal laws and regulations.

21. Dispute Resolution

The parties to this Agreement shall attempt to resolve any controversy, dispute or disagreement (collectively "dispute") arising out of or relating to this Agreement, or the breach thereof, in the following order:

- A. Good faith negotiation. If a dispute occurs that the parties cannot resolve by mutual agreement, the complaining party shall submit a written notification to the other party to initiate good faith negotiations, including escalation to the appropriate authority responsible for resolving such disputes. The written notification shall specify the nature of the dispute and be submitted in accordance with Article 26, Notice.
- B. Legal Recourse/Arbitration. If the dispute is not resolved within thirty (30) days of submission to good faith negotiation, then the Parties may pursue any available course of resolution, including submission to a court of competent jurisdiction or to binding arbitration. Notwithstanding the foregoing, if the parties pursue binding arbitration, such arbitration shall be conducted in Palo Alto, California. Arbitration shall be conducted in accordance with the AAA Commercial Arbitration Rules using one mutually agreeable arbitrator. The same person shall not serve as both the mediator and the arbitrator. The arbitrator must issue a finding of fact and conclusion of law. The arbitration shall be binding not only on all the parties to the Agreement, but on any other entity controlled by, in control of or under common control with the party to the extent that such affiliate joins in the arbitration. Judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof.

22. Assignment

Neither party may assign this agreement without the prior written consent of the other party, and the prior consent of Stanford's sponsor and awarding agency if required.

23. Severability

If any provision of this Agreement becomes or is declared illegal, invalid, or unenforceable, the provisions will be divisible from this Agreement and deemed to be deleted from this Agreement. If the deletion substantially alters the basis of this Agreement, the parties will negotiate in good faith to amend the provisions of this Agreement to give effect to the original intent of the parties.

24. Independent Contractors

Stanford and Sponsor are independent contractors and neither is an agent, joint venturer, or partner of the other.

25. Governing Law

This Agreement, the legal relationships between the parties, and any legal action in connection with this Agreement will be governed by and construed in accordance with the laws of the State of California, U.S.A., without regard to its conflict of laws doctrine.

26. Notice

- A. Form of Notice. All notices will be written in English and signed by the Authorized Official of the notifying party. The notice must reference the section of this Agreement pursuant to which it is given.
- B. Method of Notice. Notices will be deemed sufficient if given by (a) registered or certified mail, postage prepaid, return receipt requested; (b) private courier service, with signature provided by the receiving party; (c) electronic mail to the Authorized Official and Principal Investigator shown in Attachment 2, with a carbon copy to [osr\\_intake@stanford.edu](mailto:osr_intake@stanford.edu).
- C. Receipt. Notices sent via mail or courier will be deemed given upon receipt. Notices sent via electronic mail will be deemed given when receipt has been acknowledged by the Authorized Official, with an automatic "read receipt" not constituting acknowledgement.

27. Amendments or Changes

Amendments or changes to this Agreement must be in writing and signed by each party's authorized representative, with the exception of changes to **Attachment 2**.

28. Certifications

For the duration of this Agreement, including all amendments, Stanford agrees to notify Sponsor of material changes to the certifications provided below in connection with this Agreement. Such notice shall be sent to Sponsor's Authorized Official within 30 days of the material change. Stanford certifies that:

- A. To the best of its knowledge and belief, it and its principals:
1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency of the United States of America;
  2. Have not within a three year period preceding the proposal for this project been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (U.S. Federal, State, or local) transaction or contract under a public transaction; violation of U.S. Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
  3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (U.S. Federal, State, or local) with commission of any of the offenses enumerated in Article 28.A(2);
  4. Have not within a three-year period preceding the application/proposal for this project had one or more public transactions (U.S. Federal, State, or local) terminated for cause or default.
- A. It is not delinquent on the repayment of any debt(s) to the government of the United States of America.
- B. It will provide a drug-free workplace in accordance with the Drug-Free Workplace Act of 1988.
- C. Stanford shall comply with Title VI and VII of the Civil Rights Act of 1964, and Executive Order 11246 and certifies that it has a valid Assurance of Compliance on file with the DHHS (Form HHS 690).
- D. The Stanford shall comply with 41 U.S.C. §4712 Pilot program for enhancement of contractor protection from reprisal for disclosure of certain information.
- E. Stanford shall comply with all applicable Federal and local laws and regulations regarding the privacy of individually identifiable information (including its collection, use, storage, and disclosure), including, but not limited to, the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the regulations promulgated thereunder, as may be amended from time to time. Stanford agrees to collect, use and disclose data collected or produced in the Study that identifies or could be used to identify a Study subject ("Subject Data") in accordance with the subject authorization/informed consent. If Stanford de-identifies Subject Data in accordance with the standards as set forth in 45 C.F.R. Section 164.514, either party may use and disclose the de-identified information as allowed by law. Stanford will use all reasonable efforts to protect the privacy and security of Subject Data. It has an active and enforced policy for dealing with and reporting misconduct in science.
- F. No U.S. federal government appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an

officer or employee of any U.S. Agency, a Member of the U.S. Congress, an officer or employee of the U.S. Congress, or an employee of a Member of the U.S. Congress in connection with the awarding of any U.S. Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any U.S. Federal contract, grant, loan, or cooperative agreement.

- G. If any funds other than U.S. 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 U.S. agency, a Member of the U.S. Congress, an officer or employee of the U.S. Congress, or an employee of a Member of the U.S. Congress in connection with this contract, grant, loan, or cooperative agreement, the Stanford shall complete and submit Standard Form-LLL “Disclosure Form to Report Lobbying”, in accordance with its instructions.

Stanford shall require that the language of this certification be included in the award documents of all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this Agreement was made or entered into. Submission of this certification is a prerequisite for making or entering into this Agreement 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.

- H. Stanford, on behalf of itself and all of its employees and representatives, including any third parties it engages to perform services under this Agreement, understands and agrees that it is not authorized to make, offer, request, or receive any payments in violation of the U.S. Foreign Corrupt Practices Act or any local applicable anti-corruption laws when doing business with Stanford. Stanford certifies that it has an active and enforced policy that prohibits actual and suspected bribery and corruption and requires reporting of such incidents. Stanford agrees to follow its anti-bribery policy, and understands and agrees that it is required to comply with the terms of that policy when doing business with Sponsor.

## 29. Objectivity in Research

By signing this agreement Stanford certifies that it has an active and enforced conflict of interest policy that is consistent with the provision of 42 CFR Part 50, Subpart F “Responsibility of Applicants for Promoting Objectivity in Research.” Stanford also certifies that to the best of its knowledge, (1) all financial disclosures related to the activities funded by this Agreement and required by its conflict of interest policy have been made; (2) that all identified conflicts of interest under this Agreement will have been satisfactorily managed, reduced or eliminated prior to the expenditures of any funds under this Agreement in accordance with Stanford’s conflict of interest policy; and (3) any conflicts of interest that arise during the life of this Agreement will also be managed, reduced or eliminated. Stanford’s Authorized Official must disclose to Sponsor’s Authorized Official conflicts that cannot be satisfactorily managed, reduced or eliminated.

30. Force majeure

Neither party is liable for failure to perform if such failure is solely caused by circumstances beyond its control and not further exacerbated by its acts or omissions, including but not limited to war, acts of civil or military authorities, riots, embargoes, strikes at a national level, government orders, prolonged shortage of supplies, industry supply shortages, drought, hurricane, typhoon, earthquake, and severe fire or floods. The party experiencing the Force Majeure must immediately notify the other party giving full particulars of the event of force majeure and the reasons for the event preventing that party from, or delaying that party in performing its obligations under this Agreement. The party injured by the other's inability to perform may elect one of the following remedies: (a) to terminate this Agreement in whole or in part; or (b) to suspend the Agreement, in whole or in part, for the duration of the Force Majeure. The party injured has no liability for any costs, losses, expenses, damages, or delay costs suffered by the party experiencing the Force Majeure. The party experiencing the Force Majeure will cooperate with and assist the injured party in all reasonable ways to minimize the impact of Force Majeure on the injured party.

31. Order of Precedence

In the event of conflicting conditions, the following order of precedence shall apply:

1. This Agreement, including Attachment 1
2. Stanford's Proposal

The terms and conditions of this Agreement take precedence over any documents which Stanford or Stanford personnel may have executed in connection with this project.

[Remainder of page intentionally left blank.]

32. Entire Agreement

This Agreement represents the entire agreement and understandings between the parties with respect to its subject matter. It supersedes all prior or contemporaneous discussions, representations, or agreements, whether written or oral, of the parties regarding this subject matter.

Approved and accepted for:

Board of Trustees  
of the Leland Stanford Junior University

Marina Coast Water District

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

EIN: 94-1156365

Congressional District: CA-018

**ATTACHMENT 1**

Stanford Statement of Work, Budget, and Budget Justification

Indirect Cost Rate Applied 57%
% on TDC _____ MTDC <u> X </u>
Cost Sharing Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Cost Sharing Amount \$ _____

## **Stanford University Scope of Work**

This project involves the use of airborne electromagnetic (AEM) method in the northern Salinas Valley to map out the distribution of salt and freshwater; additional information will also be acquired about the hydrogeology. Stanford University will assist Marina Coast Water District (MCWD) and Aqua Geo Frameworks (AGF) with the logistics of planning the data acquisition; will work (advised by AGF) with MCWD staff to compile, locate and format well data; and will assist AGF in the processing and inversion of the data. Stanford will collaborate with AGF in the interpretation of the results to produce a hydrogeologic framework report, and a map of estimated saltwater intrusion areas in the surveyed area. Stanford will be responsible for the final presentation of results to MCWD, and for publication of the results.

### **Deliverables**

No later than four weeks after the completion of data acquisition Stanford will provide to MCWD the interpretation of the data acquired in the region of the suspected freshwater lens. This will be provided as images displaying the lateral and depth extent of the lens, accompanied by a report describing the steps involved in the interpretation. This work will be done in collaboration with AGF.

No later than ten months after the completion of data acquisition Stanford will provide to MCWD the interpretation of all acquired data. This will be provided as images displaying the interpreted hydrostratigraphy and the distribution of freshwater and saltwater, accompanied by a final report. This work will be done in collaboration with AGF. The final project report will include all data and metadata files. The report will be delivered in PDF digital format.

**Title: Monterey Airborne Electromagnetic (MAEM)**

PI: Rosemary Knight

Solicitation

SPO # XXXXXX

Period 5/1/17-2/1/2018

	Category	Details	Monthly Rate	5/1/2017-2/1/2018	TOTAL
	<b>Senior Personnel</b>	PI Salary - Prof Rosemary Knight	\$ 24,235.11	12,118	<b>12,118</b>
	<b>Other Personnel</b>				
		Ahmad Behroozmand	\$ 5,416.67	1,479	
	<b>Graduate Student</b>				
		Ian Gottschalk	\$ 3,249.67	9,749	<b>9,749</b>
	<b>Fringe Benefits</b>				
		Faculty Fringe Benefit	30.70%	3,720	
		Graduate Student Benefits	5.40%	526	
		<b>Total Fringe Benefits</b>	22.60%	334	<b>4,247</b>
	<b>Other direct costs</b>				
		Tuition		6,156	<b>6,156</b>
<hr/>					
	<b>Total direct costs (A-G)</b>	Total Direct Costs		34,082	<b>34,082</b>
<hr/>					
		Modified Total Direct Costs (excludes tuition)		27,926	<b>27,926</b>
	<b>Total indirect costs</b>	IDC at 57%		15,918	<b>15,918</b>
<hr/>					
	<b>Total direct and indirect costs</b>	TOTAL (Subtotal plus IDC)		50,000	<b>50,000</b>
<hr/>					

**\*FY17 final Fringe Benefits and Vacation Accrual/Disability Sick Leave rates:**

Regular Benefits-eligible Empl 32.45%

Post-Doctoral Research Affilia 22.60%

Graduate Assistants 5.40%

**Budget Justification**  
**Airborne Electromagnetic Method, Monterey**  
**Marina Coast Water District**  
**period: 5/1/2017-2/1/2018**

**1. Salary 1.1.**  
**Senior Key Personnel**

Professor Rosemary Knight is requesting salary support for .5 person months during the period of performance. As Principal Investigator she will be responsible for all aspects of the project. She will ensure that research goals are met in a timely manner, with scientific integrity, and completed within budgeted amounts.

**1.2. Other personnel**

Ahmad Behroozmand, Research Associate (School of Earth, Energy, and Environmental Sciences) will work on interpretation of data assisting the student.

Stanford Graduate Student (School of Earth, Energy, and Environmental Sciences) will commit 1.5 person months to the project. As a graduate student at Stanford, support will be in the form of a graduate student research assistantship of 50% for 3 months, which earns a compensation package that includes both salary and tuition for the performance of research. 1 quarter at 50% effort is considered full-time for a graduate student.

**1.3. Fringe Benefits**

Per agreement dated September 12, 2016 between Stanford University and the Office of Naval Research, effective September 1, 2017 provisional fringe benefit rates are 30.7% for faculty, 5.4% for graduate students, and 22.6% for post-doctoral research affiliates.

**2. Tuition:** The tuition rate for a graduate student in the Geophysics Department is \$6,156 per quarter for a 50% appointment. OMB memorandum M-01-06, dated January 5, 2001, Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs, is incorporated into the Uniform Guidance (200.306 (4)(k)) and allows Stanford University to charge tuition allowance directly for Graduate Research Assistants working on sponsored projects. Tuition for a 50% time research assistant equals 10 units and 60% of that tuition cost is included in this budget.

**3. Facilities and Administrative Costs:**

Per agreement dated August 2, 2016 between Stanford University and the Office of Naval Research, effective September 1, 2016 the predetermined F&A rate for on-campus research for FY2017 through FY2018 is 57% of modified total direct costs.

**ATTACHMENT 2**  
Authorized Representatives

<b>STANFORD Contacts</b>	<b>SPONSOR Contacts</b>
<p align="center"><b><u>Authorized Official/Admin Contact</u></b></p> <p>Name: Michala Welch  Address: Stanford University  Office of Sponsored Research  3160 Porter Drive, Suite 100  Palo Alto, CA 94304-8445  Telephone: 650-736-7736  Email: Welchmi6@stanford.edu</p>	<p align="center"><b><u>Administrative Contact</u></b></p> <p>Name:  Address:  Telephone:  Email:</p>
<p align="center"><b><u>Principal Investigator</u></b></p> <p>Name: Rosemary Knight  Address: Mitchell Bldg 321  Stanford, CA 94305  Telephone: 650-736-1487  Email: rknight@stanford.edu</p>	<p align="center"><b><u>Technical Contact</u></b></p> <p>Name:  Address:  Telephone:  Email:</p>
<p align="center"><b><u>Financial Contact</u></b></p> <p>Name: Tim Reuter  Address: 3160 Porter Drive  Room 136  Palo Alto, California 94304  Telephone: 650-721-1758  Email: treuter@stanford.edu</p>	<p align="center"><b><u>Financial Contact</u></b></p> <p>Name:  Address:  Telephone:  Email:</p>
<p align="center"><b><u>Property Management Contact</u></b></p> <p>Name: Ivonne Bachar, Director  Address: Stanford University  Property Management Office  Encina Commons 122  Stanford, CA 94305-6025  Telephone: (650) 723-9095  Email: ibachar@stanford.edu</p>	<p align="center"><b><u>Authorized Official</u></b></p> <p>Name:  Address:  Telephone:  Email:</p>
<p align="center"><b><u>A-133 Contact</u></b></p> <p>Name: Laura Register  Address: Office of Sponsored Research  Stanford University  3160 Porter Drive, Suite 100  Palo Alto, CA 94304-8445  Telephone: (650) 725-0093  Email: laregist@stanford.edu</p>	<p align="center"><b><u>A-133 Contact</u></b></p> <p>Name:  Address:  Telephone:  Email:</p>

**Export Control Officer**  
Name: Steve Eisner  
Address: Stanford University Export Control  
450 Serra Mall, Room 212  
Stanford, CA 94305-2064  
Telephone: 650-724-7072  
Email: steve.eisner@stanford.edu

**Export Control Officer**  
Name:  
Address:  
Telephone:  
Email: