

STATE OF CALIFORNIA
STANDARD AGREEMENT
 STD 213 (Rev 06/03)

AGREEMENT NUMBER 13-C0031
REGISTRATION NUMBER 1315543

1. This Agreement is entered into between the State Agency and the Contractor named below:

STATE AGENCY'S NAME

Department of Pesticide Regulation (DPR)

CONTRACTOR'S NAME

The Regents of the University of California

2. The term of this Agreement is: November 1, 2013 or upon final approval by the State whichever occurs later, through May 15, 2016

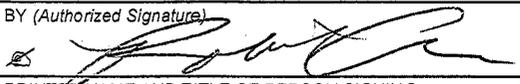
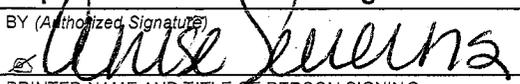
3. The maximum amount of this Agreement is: **\$ 149,999.00**
One hundred forty-nine thousand nine hundred ninety-nine dollars and no cents

4. The parties agree to comply with the terms and conditions of the following exhibits which are by this reference made a part of the Agreement.

Exhibit A – Scope of Work	4 Pages
Exhibit B – Budget Detail and Payment Provisions	4 Pages
Exhibit C* – General Terms and Conditions (GIA 610)	
Exhibit D - Special Terms and Conditions	2 Pages
Exhibit E – Additional Terms and Conditions	1 Page
Exhibit F – Curriculum Vitae	9 Pages
Attachment 1 – Federal Agreement	14 Pages

Items shown with an Asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto. *These documents can be viewed at <http://www.ols.dqs.ca.gov/Standard+Language/default.htm>*

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR		<i>California Department of General Services Use Only</i>
CONTRACTOR'S NAME (if other than an individual, state whether a corporation, partnership, etc.) The Regents of the University of California		
BY (Authorized Signature) 	DATE SIGNED (Do not type) 10/16/13	
PRINTED NAME AND TITLE OF PERSON SIGNING Robert Chan, Sr. Contract & Grant Officer		
ADDRESS Research and Economic Development 200 University Office Building, Riverside, CA 92521-0217		
STATE OF CALIFORNIA		
AGENCY NAME Department of Pesticide Regulation		
BY (Authorized Signature) 	DATE SIGNED (Do not type) 10/24/13	<input checked="" type="checkbox"/> Exempt per: Delegation Letter 74.5
PRINTED NAME AND TITLE OF PERSON SIGNING Anise Severns, Assistant Director, Administrative Services Division		
ADDRESS 1001 I Street, 4th Floor, Sacramento, CA 95814		

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EXHIBIT A
STANDARD AGREEMENT

SCOPE OF WORK

1. This Agreement is between the Regents of the University of California, UC Riverside (UCR) through Drs. Les Greenberg (PI), Michael K. Rust (co-PI), and Dong-Hwan Choe (co-PI), Department of Entomology, and Dr. Jay Gan, Department of Environmental Sciences, hereinafter referred to as Contractor, and the Department of Pesticide Regulation (DPR), hereinafter referred to as DPR.
2. This Agreement will commence on the start date November 1, 2013 as presented herein or upon final approval by the State, whichever is later and no work shall begin before that time. This Agreement is of no effect unless approved by the State. Contractor shall not receive payment for work performed prior to the approval of the Agreement and before receipt of notice to proceed by the Contract Manager. This agreement shall expire on May 15, 2016. The services shall be provided during normal working hours.
3. The Project Representatives during the term of this Agreement will be:

- A. All official communications, except invoices, from the Contractor to DPR shall be directed to the attention of the DPR Contract Manager, **Mike Ensminger**, Ph.D., or designee at:

Department of Pesticide Regulation
Environmental Monitoring Branch, MS 3-B
1001 I Street
P.O. Box 4015
Sacramento, CA 95812-4015
Phone 916-324-4186; Fax (916) 324-4405
Email address: mensminger@cdpr.ca.gov

- B. All invoices from the Contractor to DPR shall be directed to:

Department of Pesticide Regulation
Attn: Accounts Payable
P.O. Box 4015, MS 4A
Sacramento, CA 95812-4015

- C. All communications, except payment of invoices, from DPR to the Contractor shall be directed to the attention of **Dr. Les Greenberg** or designee at:

Dr. Les Greenberg
Department of Entomology, UC Riverside, CA 92521
Phone: 951-827-3217; Fax: (951) 827-3086
Email: Les.greenberg@ucr.edu

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- D. All payment of invoices from DPR to Contractor shall be directed to:

Mark Carr, Extramural Funds Supervisor
Regents of the University of California,
Riverside Accounting Office - 002 Riverside, CA 92521
Phone: (951) 827-3303; Fax: (951) 827-3314
Email Address: mark.carr@ucr.edu

- E. The Project Representatives during the term of this Agreement may be changed by mutual written agreement without the necessity of formal amendment to this Agreement.

4. Contractors Responsibilities

A. Background and Goals

Recent monitoring has shown that California urban creeks are commonly contaminated with numerous urban-use pesticides. Creeks may become contaminated during irrigation or storm water runoff. Insecticides in these waters are a concern due to their high level of potential toxicity to aquatic organisms. As chlorpyrifos and diazinon urban use, and corresponding detections in urban surface waters, have decreased, a concurrent increase in pyrethroid (especially bifenthrin), fipronil, and imidacloprid use and detections in urban surface waters has occurred. Minimal research has been conducted on how to reduce these insecticides from entering into urban surface waters. Some recent work has shown that formulation type or application method may affect runoff, but this work is limited. Additional research is needed on insecticide urban runoff (how it occurs, how to reduce or prevent it), especially research studies under controlled conditions with replicated data to allow for statistical analysis. The goals of this work will be to further characterize urban insecticide runoff (pyrethroids and fipronil, looking at various application methods, formulations, hardscape differences, non-water particle [dust, wind] movement) and to determine the efficacy of less toxic insecticides (botanical, natural products, less toxic insecticides).

B. Work to Be Performed

Overview: Contractor will perform research to evaluate the insecticide runoff from a constructed wall and an abutting sloping cement pad ("fabricated wall"). The wall and pad are designed to simulate a house and adjacent concrete driveway which would normally carry runoff to the street. Different insecticides and formulations will be applied to the wall and pad and water irrigated onto the wall will lead to runoff collected at the end of the concrete pad. On-site research trials at homes in the Riverside area will be conducted.

Task 1. Field Trials on Fabricated Wall

Using the fabricated wall constructed under contract 11-C0086, conduct replicated runoff trials to characterize the runoff of pyrethroids (i.e., bifenthrin and other pyrethroids as time permits) and fipronil from this wall, mimicking runoff conditions typical of urban areas. Trials

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will be conducted to address several key insecticide urban runoff issues as (but not limited to these nor are all required for contract completion):

1. Differentiation of painted and unpainted concrete surfaces;
2. Determining the effectiveness, and characterizing, the use of wiping surfaces ("wipes") to quantify insecticide runoff in water;
3. Determine the amount of pyrethroids or fipronil in untreated areas (driveways and other untreated areas) that end up in urban runoff water (or wipes) due to pyrethroid or fipronil movement in wind and in dust particles (or other non-water movement);
4. Quantify the breakdown of fipronil products ("degradates");
5. Determine the effect of formulation on pyrethroid and fipronil runoff and efficacy; and,
6. Determine the effect of application methods (pin stream vs. fan sprays) on pyrethroid and fipronil runoff and efficacy.

Task 2. Riverside homes study

1. Determine how botanicals, natural products, or less toxic insecticides (as indoxacarb and chlorfenapyr), or alternate application methods, may be used to replace pyrethroid or fipronil products or application methods on or near driveways;
2. Conduct studies using private homes in the Riverside area to address 1 of Task 2;
3. Alternate application methods would include, but not limited to, bait stations and different application strategies (as spraying insecticides inside the garage near the garage door rather than outside the garage door); and,
4. All tested products must be registered insecticides in California.

Task 3. Reporting

1. Provide three annual update reports at year end (Dec 2013, Dec 2014, and Dec 2015);
2. Present at minimum two seminars at DPR, approximately half-way through the study and at study end); and,
3. Submit a final report of the study results to DPR 30 days before completion of the contract.

TIMELINE and TASKS (Table 1)

1. Fall 2013 – Spring 2016. Conduct replicated, field insecticide runoff trials on fabricated wall;
2. Fall 2013 – Spring 2016. Riverside home trials. Conduct trials at homes in Riverside area;
3. Seminars and Reporting – See Table I.

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Table I - Task Timeline

Year:	FY 2013-2014				FY 2014-2015				FY 2015-2016			
	2013	2014			2015			2016				
Activities/Tasks	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	
1. Runoff characterization – field trials with constructed wall ¹	X	X	X	X	X	X	X	X	X			
2. Riverside home-sites trials	X		X	X	X		X	X	X			
3a. Year-end status reports	X				X				X		X	
3b. Seminars to DPR					X						X	
3c. Final report											X	

¹Formulations, application methods, hardscape differences, non-water particle [dust, wind] movement, fipronil degradates, or other pesticides (as pyrethroids).

5. DPR's Responsibility

- A. Provide review and approval of study report within 30 days of submission.
- B. Arrange seminar times at DPR.

EXHIBIT B
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BUDGET DETAIL AND PAYMENT PROVISIONS

1. Invoicing

- A. For services rendered in accordance with the agreed upon Scope of Work, Exhibit A, and upon receipt of the invoices, DPR agrees to compensate Contractor, in arrears, for actual allowable costs incurred as specified herein and in accordance with the rates specified herein or attached hereto. Incomplete or disputed invoices shall be returned to Contractor, unpaid, for correction.
- B. Invoices shall include the Agreement Number, shall be itemized in accordance with the Rates detailed in Item 4 of this Exhibit, and submitted in triplicate, not more frequently than monthly or less than quarterly in arrears, to:

Department of Pesticide Regulation
Attn: Accounts Payable
P.O. Box 4015, MS-4A
Sacramento, CA 95812-4015

- C. Contractor shall submit the final invoice for services to DPR no later than June 30, 2016.

2. Budget Contingency Clause

- A. It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, DPR shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.
- B. If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, DPR shall have the option to either cancel this Agreement with no liability occurring to DPR, or offer an Agreement Amendment to Contractor to reflect the reduced amount.

3. Payment

- A. Costs for this Agreement shall be computed in accordance with State Administrative Manual (SAM) Sections 8752 and 8752.1.
- B. Nothing herein contained shall preclude advance payments pursuant to Article 1, Chapter 3, Part 1, Division 3, Title 2 of the California Government Code, Sections 11256 and 11257.

EXHIBIT B
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- C. Transportation and subsistence costs shall not exceed rates authorized to be paid UC system non-represented employees traveling within California.
- D. Contractor will be reimbursed for direct costs, other than salary costs, that are identified in the Contractor's rates.
- E. Contractor will bill in arrears for costs incurred during the billing period. If applicable, salary costs will be itemized and billed by position. Documentation supporting specific salary costs will be presented if requested by DPR. Non-wage costs will be billed, in summary, according to general expense categories. A detailed report of transactions will support the billing. Individual expenditures exceeding \$500.00 will be supported by a photocopy of the original documentation. Documentation in support of expenditures less than \$500.00 will be presented if requested by DPR.
- F. Contractor shall not commence performance of work or services until this Contract has been approved by the State. No payment will be made prior to approval nor for any work performed prior to approval of this Agreement.
- G. Ten percent (10%) of each invoice amount shall be withheld by DPR until the satisfactory completion of this Agreement

4. Rates

Table I. Expenditures by Budget Line Item

BUDGET LINE ITEM	LINE ITEM TOTALS
Salaries & Wages	\$86,642
Direct Benefits	\$29,374
Travel ¹	\$2,420
Supplies & Materials ²	\$1,563
Subtotal	\$119,999
Indirect Costs, 25% ³	\$30,000
Total Cost	\$149,999

¹ Travel – To and from study site in Orange County and neighborhood sampling at UC approved rates.

² Supplies include: miscellaneous consumable supplies required to perform the contracted services, Includes cost for solvents, chemicals, pesticides, glassware, safety items (per pesticide label) this line item does not include any unit acquisition of \$5,000 or more.

³ Indirect Costs –Includes department and general administration, sponsored projects administration, building and equipment depreciation, building interest, operations and maintenance, library, and student services administration.

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Table II. Detail of Costs by Fiscal Year

ITEM	2013/14 FY	2014/15 FY	2015/2016 FY	TOTAL
Personnel	11/1/13-6/30/14 (8 months)	7/1/14-6/30/15 (12 months)	7/1/15-5/15/16 (10.5 months)	
Dr. Les Greenberg, Specialist IV				
Monthly salary	\$ 7,409	\$ 7,557	\$ 7,708	
Effort	60.00%	9.00%	10.29%	
Months/Total Effort	4.8 months	1.08 month	1.08 month	7 months
Salary	\$ 35,562	\$ 8,162	\$ 8,325	\$ 52,048
Direct Benefits @ 46%	\$ 16,359	\$ 3,754	\$ 3,829	\$ 23,943
Post-doctoral fellow				
Monthly salary	\$ 3,447	\$ 3,516	\$ 3,586	
Effort	50.00%	33.33%	17.90%	
Months/Total Effort	4 months	4 months	1.88 months	9.88 months
Salary	\$ 13,788	\$ 14,064	\$ 6,742	\$ 34,594
Direct Benefits @ 14.27, 16, 18%	\$ 1,968	\$ 2,250	\$ 1,213	\$ 5,431
TOTAL Personnel	\$ 67,677	\$ 28,230	\$ 20,109	\$ 116,016
Supplies and Materials¹	\$ 1,563	\$ 0	\$ 0	\$ 1,563
Travel	\$ 1,200	\$ 920	\$ 300	\$ 2,420
SUBTOTAL	\$ 70,440	\$ 29,150	\$ 20,409	\$ 119,999
Indirect Costs @ 25%	\$ 17,610	\$ 7,288	\$ 5,102	\$ 30,000
TOTALS	\$ 88,050	\$ 36,438	\$ 25,511	\$ 149,999

¹Includes cost for solvents, chemicals, pesticides, glassware, safety items (per pesticide label).

EXHIBIT B
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5. Cost Limitation

- A. The total amount of this Agreement shall not exceed \$ 149,999.00.
- B. It is understood and agreed that this total is an estimate and that DPR will pay for only those services actually rendered as authorized by the DPR Contract Manager or his/her designee.

EXHIBIT D
Standard Agreement

SPECIAL TERMS AND CONDITIONS

1. Termination

- A. Either Party reserves the right to terminate this agreement without cause upon thirty (30) days written notice to the other Party, or immediately in the event of a material breach. In the event of termination, Contractor shall be paid for all allowable costs incurred up to the date of termination, including any non-cancelable obligations.
- B. In the event that the total Agreement amount is expended prior to the expiration date, DPR may, at its sole discretion, terminate this Agreement with 30 days notice to contractor.

2. Subcontracting

Contractor shall perform the work contemplated with resources available within its own organization and no portion of the work shall be subcontracted.

3. Dispute Resolution

- A. DPR reserves the right to issue an order to stop work in the event that a dispute should arise, or in the event that DPR gives the performing agency a notice that this Agreement will be terminated. If DPR exercises this right, the stop-work order will be in effect until the dispute has been resolved or this Agreement has been terminated.
- B. Any dispute concerning a question of fact arising under the terms of this Agreement which is not disposed of within a reasonable period of time by agency employees normally responsible for the administration of this agreement, shall be brought to the attention of the Executive Officer or designated representative of each agency for joint resolution.
- C. The Contractor shall continue to perform all its responsibilities under this agreement during any dispute until notified to stop work or expiration of this Agreement.

4. Harassment Free Workplace

The Department of Pesticide Regulation (DPR) is committed to providing a safe, secure environment, free from sexual misconduct. It is policy of the Department that employees have the right to work in an environment that is free from all forms of discrimination, including sexual harassment. This policy specifically speaks to freedom from a sexually harassing act that results in the creation of an intimidating, hostile or offensive work environment or that otherwise interferes with an individual's employment or work performance. As a Contractor with DPR, you and your staff are expected to comply with a standard of conduct that is respectful and courteous to DPR employees

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and all other persons contacted during the performance of this Agreement. Sexual harassment is unacceptable, will not be tolerated; and may be cause for prohibiting some or all of the Contractor's staff from performing work under this Agreement.

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ADDITIONAL PROVISIONS

1. Disposition of Work Product

DPR retains use and non-commercial governmental distribution rights to all deliverables identified in Exhibit A of this Agreement.

2. Contractor Evaluation

The Contractor is hereby notified that its performance under this Agreement shall be evaluated within thirty (30) calendar days following the Expiration of this Agreement. The evaluation may include statements on the adequacy of the service or the product, whether the service was satisfactory, whether the service or the product was provided or completed within the time limitations, reasons for time or cost overruns, whether the product is operational or being utilized by the State, and/or the State plans for implementation, and the State's general impression as to the competency of the Contractor and its staff. The evaluation shall be filed in the State's official Contractor Evaluation File.

3. Consulting Services

- A. The Contractor is hereby advised of its duties, obligations and rights under Public Contract Code § 10335.5.
- B. The Contractor's key personnel assigned to perform work under this Agreement and their level of responsibility shall be mutually acceptable to the State and the Contractor.

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Les Greenberg
Specialist IV

Entomology

Department of Entomology
College of Natural and Agricultural
Sciences
University of California
Riverside, CA 92521
951.827.3217
les.greenberg@ucr.edu

Education

PhD Entomology 1981, University of Kansas
MA Biology 1975, City College, NY
BS Biology 1967, Brooklyn College

Research Area

Red imported fire ant research and extension program for UC Riverside since the arrival of the pest in California in 1988. Control of Argentine ants and red imported fire ants in urban and agricultural environments. Research in methods to improve monitoring for fire ants; and to find replacements for organophosphates and other pesticides that are contaminating runoff water as well as the use of liquid sugar water baits in bait stations. Evaluation of newer pesticides and biocontrol agents that are not yet available in California. Other research involves studying flight behavior of the red imported fire ant in California, both in the laboratory and the field. Recent projects included studying the Sex pheromone of the slave making ant, *Polyergus breviceps*.

Selected Publications

Greenberg, L., Tollerup, K., and Rust, M. K. In press 2013. Control of Argentine ants (Hymenoptera: Formicidae) in citrus using methoprene and imidacloprid delivered in liquid bait stations. Florida Entomologist.

Greenberg, L., M. K. Rust, J. H. Klotz, D. Haver, J.N. Kabashima, S. Bondarenko, and J. Gan. Impact of ant control technologies on insecticide runoff and efficacy. 2010. Pesticide Science. DOI 10.1002/ps.1970.

Costa, H.S., L. Greenberg, J.H. Klotz, and M.K. Rust. 2005. Response of Argentine ants and red imported fire ants to permethrin-impregnated plastic strips: foraging rates, colonization of potted soil, and differential mortality. J. Econ. Entomol. 98(6): 2089-2094

Greenberg, L., A. Aliabadi, S. McElfresh, H. Topoff and J. Millar. 2004. Sex pheromone of the slave-making ant, *Polyergus breviceps*. J. Chem. Ecol. 30(6): 1297-1303.

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Greenberg, L., D. Reiersen and M.K. Rust. 2003. Fipronil trials in California against the red imported fire ant, *Solenopsis invicta* Buren, using sugar water consumption and mound counts as measures of ant abundance. *J. Urban and Agricultural Entomology*. 20(4): 221-233.

Peloquin, J.J. and L. Greenberg. 2003. Identification of midgut bacteria from fourth instar red imported fire ant larvae, *Solenopsis invicta* Buren (Hymenoptera: Formicidae). *J. Urban and Agricultural Entomology*. 20(3): 157-164.

Klotz, J.H., M.K. Rust, D. Gonzalez, L. Greenberg, H. Costa, P. Phillips, C. Gispert, D.A. Reiersen and K. Kido. 2003. Directed sprays and liquid baits to manage ants in vineyards and citrus groves. *J. Urban and Agricultural Entomology*. 20: 31-40.

Greenberg, L. 2003. Fire ants. *In: Encyclopedia of Insects*. V.H. Resh and R.T. Carde, eds., Academic Press, 414-416.

Klotz, J.H., K. Jetter, L. Greenberg, J. Hamilton, John Kabashima and D.F. Williams. 2003. An insect pest of agricultural, urban and wildlife areas: The red imported fire ant. *In: Exotic Pests and Diseases: Biology and Economics for Biosecurity*. Daniel A. Sumner, editor. Iowa State Press, pp. 151-166.

Costa, H., L. Greenberg, J. Klotz, and M.K. Rust. 2001. Monitoring the effects of granular insecticides for argentine ant control in nursery settings. *J. Urban and Agricultural Entomology*. 18: 13-22.

Klotz, J.H., L. Greenberg, C. Amrhein and M.K. Rust. 2000. Toxicity and repellency of borate-sucrose water baits to Argentine ants (Hymenoptera: Formicidae). *J. Economic Entomol.* 93: 1256-1258.

Klotz, J.H., L. Greenberg and G. Venn. 2000. Evaluation of two hydramethylnon granular baits for control of Argentine ants (Hymenoptera: Formicidae). *Sociobiology* 36: 201-107.

Greenberg, L. and J.H. Klotz. 2000. Argentine ant trail pheromone enhances consumption of liquid sucrose solution (Hymenoptera: Formicidae). *J. Economic Entomol.* 93: 119-122.

Greenberg, L., J. Kabashima, J.H. Klotz and C. Wilen. 1999. The red imported fire ant in California. *Pacific Coast Nurseryman*. 58: 69-73.

Klotz, J.H., L. Greenberg, B.L. Reid and L. Davis, Jr. 1998. Spatial distribution of colonies in three carpenter ants, *Camponotus pennsylvanicus*, *C. flordanus*, and *C. laevigatus* (Hymenoptera: Formicidae). *Sociobiology*. 32: 51-62.

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Klotz, J.H., L. Greenberg and E.C. Venn. 1998. Liquid boric acid bait for control of argentine ants (Hymenoptera: Formicidae). J. Economic Entomol. 91: 910-914.

Klotz, J.H., L. Greenberg, H.H. Shorey and D.F. Williams. 1997. Alternative control strategies for ants around homes. J. Agric. Entomol. 14: 249-257.

Michael K. Rust
Professor of Entomology

Department of Entomology
College of Natural and Agricultural
Sciences
University of California
Riverside, CA 92521
951.827.5327
Michael.rust@ucr.edu

Education

PhD Entomology 1975 University of Kansas
M MA Entomology 1973 University of Kansas
BA Biology 1970 Hiram College, Ohio

Research Area

Urban entomology is the study of insects and arthropods associated with people in cities. At UC Riverside, the goals are to explore the basic biology of pests that attack stored foods, museum objects, fiber, structures, and pets and to develop integrated pest management strategies. Students conduct research on the biology and control of ants, cockroaches, fleas, yellowjackets, and termites, which represent the major economic pests in urban settings worldwide. In recent years, there has been an increasing awareness and

interest in the use of alternative pest control technologies that reduce the amount of insecticide used. Ongoing projects include the use of baits to control ants in urban and agricultural areas, baiting and soil treatments to control subterranean termites, nutrient dynamics and food flow in subterranean termite and ant colonies, and the development of IPM programs to control yellowjackets. Recent studies conducted by our students include the response of ants to barrier treatments, nutrient and bait dynamics in ant and termite colonies, physiological ecology of drywood termites, insecticide resistance in cat flea populations, and interactions between ants and dead nestmates (necrophoresis). Our approach to urban pest management has always emphasized innovative and creative research. Student research topics balance both basic and applied aspects, ensuring maximum exposure and training to the field of urban entomology. We explore conventional as well as novel methods of pest management emphasizing the reduction in the use of

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pesticides. Little is known about the biology and ecology of most major urban insect pests. The urban pest management practices of the future have yet to be exploited.

Awards

2010 Entomological Society of America, Pacific Branch, Integrated Pest Management Team Award
2008 - Entomological Society of America Recognition Award in Entomology, Pacific Branch
2007 - Pest Control Hall of Fame
2002 - PCT/Zeneca Leadership Award
2002 - PCT/Syngenta Leadership Award
2002 Fellow of the American Association for the Advancement of Science
2000 - Pest Control Technology's 25 Most Influential People in the Industry
2000 - Mallis Recognition Award, National Conference on Urban Entomology
1999-2000 - UC Presidential Scholar in Entomology
1999-2001 - Presidential Chair in Entomology
1995 - Book of Professional Services Award Pi Chi Omega
1995 - Excellence in Entomology Award -California Association, American Registry of Professional Entomologists
1994 W. W. Woodworth Award, Pacific Branch, Entomological Society of America
1993 Distinguished Achievement Award in Urban Entomology, Entomological Society of America
1990, 1995, 1997 - Orkin Research Award
1990, 1991, 1993 - Outstanding Urban Entomologist Award, Pacific Branch, Entomological Society of America

Publications

Greenberg, L., M. K. Rust, J. H. Klotz, D. Haver, J.N. Kabashima, S. Bondarenko, and J. Gan. Impact of ant control technologies on insecticide runoff and efficacy. 2010. Pesticide Science. DOI 10.1002/ps.1970.

Choe, D-H., Rust, M.K. 2008, Horizontal transfer of insecticides in the laboratory colonies of the Argentine ant (Hymenoptera). J. Econ. Entomol. 101: 1397-1405.

Rust, M.K., Saran, R.K. 2008. The toxicity, repellency, and effects of acetamiprid on the western subterranean termite (Isoptera: Rhinotermitidae). J. Econ. Entomol. 101: 1360-1366

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- Saran, R.K., Rust, M.K. 2008. Phagostimulatory sugars enhance uptake and horizontal transfer of hexaflumuron in the western subterranean termite (Isoptera: Rhinotermitidae). *J. Econ. Entomol.* Vol. 101: p.873-879.
- Kabashima, J.N., Greenberg, L., Rust, M.K., Paine, T.D. 2007. Aggressive interactions between *Solenopsis invicta* and *Linepithema humile* (Hymenoptera: Formicidae) under laboratory conditions. *J. Econ. Entomol.* Vol. 100: p.148-154
- Saran, R.J., J.G. Millar, and M.K. Rust. 2007. Role of (3Z,6Z,8E) – Dodecatrien-1-ol in trail following, feeding, and mating behavior. *J. Chem. Ecol.* 33: 369-389.
- Choe, D.-H. and M.K. Rust. 2007. Use of plant resin by a bee assassin bug *Apiomerus flaviventris* (Hemiptera:Reduviidae). *Ann. Entomol. Soc. Am.* 100: 320-326.
- Choe, D.-H, and M. K. Rust. 2006. Agonistic behavior of Argentine ants to scales and scale parasitoids and their cuticular extracts. *Sociobiology* 48: 799-818.
- Choe, D.-H. and M.K. Rust. 2006. Homopteran chemical signatures reduce aggression of tending ants. *Chemoecology* 16: 175-178.
- Saran, R.J. and M.K. Rust. 2005. Feeding, uptake, and utilization of carbohydrates by the western subterranean termite (Isoptera: Rhinotermitidae). *J. Econ. Entomol.* 98: 1284-129
- aagsma, K. and M. K. Rust. 2005. Effect of hexaflumerun on mortality of thewestern subterranean termite (Isoptera: Rhinotermitidae) during and following exposure and movement of hexaflumeron in termite colonies. *Pest Manage. Sci.* 61: 517-531.
- Soeprono, A. M. and M. K. Rust. 2004. The effect of delayed toxicity of chemical barriers to control Argentine ants (Hymenoptera: Formicidae). *J. Econ. Entomol.* 97: 2021-2028.
- Soeprono, A. M. and M. K. Rust. 2004. Effect of horizontal transfer of barrier insecticides to control Argentine ants (Hymenoptera: Formicidae). *J. Econ. Entomol.* 97: 1675-1681.
- Hooper-Bui, L. M., M. K. Rust, and D. A. Reiersen. 2004. Predation of endangered California least tern, *Sterna antillarum browni* by southern fire ant, *Solenopsis xyloni* (Hymenoptera: Formicidae). *Sociobiology* 43: 1-18.
- Vega, S. Y., and M. K. Rust. 2003. Determining the foraging range and origin of resurgence after treatment of Argentine ant (Hymenoptera: Formicidae). *J. Econ. Entomol.* 96: 844-849.
- Fernandez, N. and M. K. Rust. 2003. Site fidelity in foraging Argentine ants. *Sociobiology* 41: 625-632.

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Metzger, M.E. and M. K. Rust. 2001. Laboratory evaluation of fipronil and imidacloprid topical insecticides for control of plague vector *Oropsylla montanta* (Baker) (Siphonaptera: Ceratophyllidae and Pulicidae) of California ground squirrels (Rodentia: Sciuridae) using a novel nest box. J. Med. Entomol. 38: 465-470.

Dong-Hwan Choe

Assistant Cooperation Extension Specialist / Assistant Professor
University of California, Riverside Phone: 951-827-5717
Department of Entomology FAX: 951-827-3086
Riverside, CA 92521 donghwan.choe@ucr.edu

Education:

Bachelor of Agriculture, Korea University, Seoul, Korea, 2002
Master of Science in Entomology, University of California, Riverside, USA, 2005
PhD in Entomology, University of California, Riverside, USA, 2009

Professional Experience

Assistant Cooperative Extension Specialist / Assistant Professor, 2011-current
Department of Entomology
University of California, Riverside
Post-doctoral Researcher, 2009-2011
Department of Environmental Sciences, Policy, and Management
University of California, Berkeley (Advisor – Dr. Neil Tsutsui)

Awards and Honors

1. Excellence prize in the student research (Metamorphosis of a Cicada, *Cryptotympana atrata* - Given Priority to the Emergence) (1986)
2. Departmental prize for high scholarship (Department of Agricultural Biology, University of Korea, Seoul, Korea) (2000)
3. Dean's Fellowship Award (University of California, 2003 - 2005)
4. Annual photography competition of National Wildlife Federation (2004)
5. Carl Strom / Western Exterminator Company Scholarship (2004 - 2009)
6. Anza-Borrego Institute Student Entomology Award (2006)
7. Temecula Valley Wine Society Scholarship (Nancy Johnston Memorial Scholarship) (2006)
8. Pi Chi Omega Scholarship (2007)
9. Best PhD Poster in annual entomology student seminar day (2007)
10. Selected as one of the "40 Under 40" future leaders of the pest management industry by Pest Management Professional Magazine (2008)

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11. Bayer Young Scientist of the Year Competition (2nd place winner, sponsored by Bayer Environmental Science) (2008)
12. 1st place in Korean Young Entomologist (KYE) annual symposium student competition (as a part of ESA meeting in Reno, NV, November 2008)

Professional Organizations and Memberships:

Entomological Society of America (ESA)
Asia-Pacific Association of Chemical Ecologists (APACE)
Pi Chi Omega (The National Professional Pest Control Fraternity)

Selected Recent Refereed Scientific Journal Articles

(10 most recent publications selected)

1. Choe, D.-H., S. R. Ramirez, N. D. Tsutsui. 2012. A silica gel based method for extracting insect surface hydrocarbons. *J. Chem. Ecol.* 38: 176-187.
2. van Wilgenburg, E., A. Felden, D.-H. Choe, R. Sulc, J. Luo, K. J. Shea, M. A. Elgar, N. D. Tsutsui. 2012. Learning and discrimination of cuticular hydrocarbons in a social insect. *Biol. Lett.* 8: 17-20.
3. Forero, D., D.-H. Choe, C. Weirauch. 2011. Resin gathering in Neotropical resin bugs (Insecta: Hemiptera: Reduviidae): functional and comparative morphology. *J. Morphol.* 272: 204-229.
4. Choe, D.-H., R. S. Vetter, M. K. Rust. 2010. Development of virtual bait stations to control Argentine ants (Hymenoptera: Formicidae) in environmentally sensitive habitats. *J. Econ. Entomol.* 103: 1761-1769.
5. Choe, D.-H., J. G. Millar, M. K. Rust. 2009. Chemical signals associated with life inhibit necrophoresis in Argentine ants. *Proceedings of the National Academy of Sciences USA.* 106: 8251-8255.
6. Choe, D.-H., M. K. Rust. 2009. Dead ant walking. *Pest Control Technology.* 37: 48-55, 128.
7. Choe, D.-H., M. K. Rust. 2008. Horizontal transfer of insecticides in laboratory colonies of the Argentine ant (Hymenoptera: Formicidae). *J. Econ. Entomol.* 101: 1397-1405.
8. Choe, D.-H., M. K. Rust. 2007. Use of plant resin by a bee assassin bug; *Apiomerus flaviventris* (Hemiptera: Reduviidae). *Ann. Entomol. Soc. Am.* 100: 320-326.
9. Choe, D.-H., M. K. Rust. 2006. Agonistic behavior of Argentine ants to scales and scale parasitoids and their cuticular extracts. *Sociobiology.* 48: 799-818.

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10. Choe, D.-H., M. K. Rust. 2006. Homopteran chemical signatures reduce aggression of tending ants. *Chemoecology*. 16: 175-178

Jay Gan

Professor of Environmental Chemistry
Water Quality Specialist

- Office: 210 Science Laboratories I
- Phone: (951) 827-2712
- jgan@ucr.edu

Academic Degrees:

- Ph.D., Zhejiang University, China, 1988

Specialization:

- Environmental fate, risk assessment and regulation of pesticides and emerging contaminants.
- Processes of organic contaminants in ecosystems, including biotic and abiotic degradation, adsorption, bioavailability, aquatic bioaccumulation, and ecotoxicity.
- Detoxification and remediation of organic contaminants.
- Evaluation and development of best management practices.
- Method development for trace contaminant analysis.

Representative Publications:

Books

- Gan, J., P. Zhu, S.D. Aust, and A.T. Lemley. Pesticide Decontamination and Detoxification. American Chemical Society Symposium Series 863, American Chemical Society: Washington, DC, 2003.
- Gan, J., F. Spurlock, P. Hendley, and D. Weston. *Synthetic Pyrethroids: Occurrence and Effects in Aquatic Environments*. American Chemical Society Symposium Series 991, American Chemical Society: Washington, DC, 2003.

Journal Articles (selected from 150+)

- Gan, J., Q. Wang, S.R. Yates, W.C. Koskinen and W.A. Jury. 2002. Dechlorination of chloroacetanilide herbicides by thiosulfate salts. *PNAS (USA)* 99: 5189-5194.

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- Liu, W.P., J. Gan, D. Schlenk and W.A. Jury. 2005. Enantioselectivity in environmental safety of current chiral insecticides. *PNAS (USA)* 103: 701-706.
- Yang, W.C., F. Spurlock, W.P. Liu, and J. Gan. 2006. Inhibition of aquatic toxicity of synthetic pyrethroids by suspended sediment. *Environ. Toxicol. Chem.* 25: 1913-1919.
- Xu, Y.P., F. Spurlock, Z.J. Wang, and J. Gan. 2007. Comparison of five methods for measuring sediment toxicity of hydrophobic contaminants. *Environ. Sci. Technol.* 41: 8394-8399.
- Hunter, W., Y. Yang, F. Reichenberg, P. Mayer, and J. Gan. 2009. Measuring pyrethroids in sediment porewater using matrix-solid phase microextraction. *Environ. Toxicol. Chem.* 28: 36-43.
- Budd, R., A. O'Geen, K. Goh, S. Bondarenko, and J. Gan. 2009. Efficacy of constructed wetlands in pesticide removal from tailwaters in the Central Valley, California. *Environ. Sci. Technol.* 43: 2925-2930.
- Bondarenko, S., and J. Gan. 2009. Simultaneous determination of free and total concentrations of hydrophobic compounds. *Environ. Sci. Technol.* 43: 3772-3777.
- Yang, Y., W. Hunter, S. Tao, and J. Gan. 2009. Microbial availability of different forms of phenanthrene in soils. *Environ. Sci. Technol.* 43: 1852-1857.
- Lin, K.D., W.P. Liu, and J. Gan. 2009. Oxidative removal of bisphenol-A with manganese dioxide: Kinetics, products, and pathways. *Environ. Sci. Technol.* 43: 3860-3864.
- Cui, X.Y., W. Hunter, Y. Yang, Y.X. Chen, and J. Gan. 2010. Bioavailability of sorbed phenanthrene and permethrin in sediments to *Chironomus tentans*. *Aquatic Toxicol.* 98: 83-90

Courses Taught:

- ENSC 127 - Fate and Transport of Contaminants in Soil (upper division)
- SWSC 204 - Environmental Organic Chemistry (graduate)

Graduate Program Affiliations and Research Focus Areas:

- Environmental Chemistry and Ecotoxicology
- Soil and Water Sciences

**ATTACHMENT 1
Standard Agreement**

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	U.S. ENVIRONMENTAL PROTECTION AGENCY Cooperative Agreement	GRANT NUMBER (FAIN): 00T11414 MODIFICATION NUMBER: 0 PROGRAM CODE: BG	DATE OF AWARD 09/11/2013
		TYPE OF ACTION New	MAILING DATE 09/18/2013
		PAYMENT METHOD: ASAP	ACH# 90142
RECIPIENT TYPE: State	Send Payment Request to: Las Vegas Finance Center, Fax (702) 798-2423		
RECIPIENT: CA Dept of Pesticide Reg 1001 I Street Sacramento, CA 95812-4015 EIN: 68-0325102	PAYEE: CA Dept of Pesticide Reg 1001 I Street Sacramento, CA 95812-4015		
PROJECT MANAGER Natalya Eagan 1001 I Street Sacramento, CA 95812-4015 E-Mail: neagan@cdor.ca.gov Phone: 916-323-9303	EPA PROJECT OFFICER Fabiola Estrada 75 Hawthorne Street, CED-5 San Francisco, CA 94105 E-Mail: estrada.fabiola@epa.gov Phone: 415-972-3493	EPA GRANT SPECIALIST Linda Struna Grants Management Office, MTS-7 E-Mail: Struna.Linda@epa.gov Phone: 415-972-3723	
PROJECT TITLE AND DESCRIPTION PERFORMANCE PARTNERSHIP GRANT The purpose of this agreement is to support the California Department of Pesticide Regulation in ensuring that pesticides are manufactured, sold, used, and stored according to federal and state law. This agreement aims to improve the understanding and compliance with pesticide laws and regulations, protecting human health and the environment by implementing activities related to compliance, certification and training, and field program activities related to endangered species, water quality and worker safety. This assistance agreement provides partial Federal funding in the amount of \$1,373,863.			
BUDGET PERIOD 07/01/2013 - 06/30/2016	PROJECT PERIOD: 07/01/2013 - 06/30/2016	TOTAL BUDGET PERIOD COST \$5,262,404.00	TOTAL PROJECT PERIOD COST \$5,262,404.00
NOTICE OF AWARD			
Based on your Application dated 04/11/2013 including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA) hereby awards \$1,373,863. EPA agrees to cost-share % of all approved budget period costs incurred, up to and not exceeding total federal funding of \$1,373,863. Recipient's signature is not required on this agreement. The recipient demonstrates its commitment to carry out this award by either: 1) drawing down funds within 21 days after the EPA award or amendment mailing date; or 2) not filing a notice of disagreement with the award terms and conditions within 21 days after the EPA award or amendment mailing date. If the recipient disagrees with the terms and conditions specified in this award, the authorized representative of the recipient must furnish a notice of disagreement to the EPA Award Official within 21 days after the EPA award or amendment mailing date. In case of disagreement, and until the disagreement is resolved, the recipient should not draw down on the funds provided by this award/amendment, and any costs incurred by the recipient are at its own risk. This agreement is subject to applicable EPA statutory provisions. The applicable regulatory provisions are 40 CFR Chapter 1, Subchapter B, and all terms and conditions of this agreement and any attachments.			
ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)		AWARD APPROVAL OFFICE	
ORGANIZATION / ADDRESS U.S. EPA, Region 9 Grants Management Office, MTS-7 75 Hawthorne Street San Francisco, CA 94105		ORGANIZATION / ADDRESS U.S. EPA, Region 9 Communities and Ecosystems Division, CED-1 75 Hawthorne Street San Francisco, CA 94105	
THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY			
Digital signature applied by EPA Award Official Denise Zvanovec - Grants Management Officer			DATE 09/11/2013

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EPA Funding Information

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FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$	\$ 1,373,863	\$ 1,373,863
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$ 1,156,854	\$ 1,156,854
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$	\$ 0
Allowable Project Cost	\$ 0	\$ 2,530,717	\$ 2,530,717

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
66.605 - Performance Partnership Grants	Appropriations Act of 1995 (PL 104-134)	40 CFR PTS 31 & 35 SUBPT A

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Deobligation
-	1309FE0114	13	E1	09F2	501E12	4108			700,810
-	1309FE0114	13	E1	09F2	401C09	4108			531,391
-	1309FE0114	13	E1	09F2	501E12	4108			28,250
-	1309FE0114	11	E1D	09F2	401C09	4108			49,797
-	1309FE0114	12	E1D	09F2	401C09	4108			41,084
-	1309FE0114	13	E1	09F2	401C09	4108			22,721
									1,373,863

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 Standard Agreement**

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Budget Summary Page

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$1,985,070
2. Fringe Benefits	\$734,481
3. Travel	\$0
4. Equipment	\$0
5. Supplies	\$0
6. Contractual	\$1,127,003
7. Construction	\$0
8. Other	\$0
9. Total Direct Charges	\$3,846,534
10. Indirect Costs: % Base Refer to Condition #15	\$1,415,870
11. Total (Share: Recipient % Federal %.)	\$5,262,404
12. Total Approved Assistance Amount	\$1,373,863
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$1,373,863
15. Total EPA Amount Awarded To Date	\$1,373,863

Detailed Table B Budget Page: 1

Table B - Program Element Classification (Non-construction)	Total Approved Allowable Budget Period Cost
1.	\$
2. AMOUNTS FOR THIS ACTION:	\$
Pesticide - Enforcement 501 (Federal) This Action = \$728,860	
Pesticide - Programs 401 (Federal) This Action = \$645,003	
Pesticide - Enforcement (Match) Cumulative Total = \$771,236	
Pesticide - Programs (Match) Cumulative Total = \$385,618	
3.	\$
4.	\$
5.	\$
6.	\$
7.	\$
8.	\$
9.	\$
10.	\$
11. Total (Share: Recip % Fed %)	\$
12. Total Approved Assistance Amount	\$

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Administrative Conditions

1. Federal Financial Report (SF 425)

The final Federal Financial Report (FFR) covering the entire project period shall be submitted within 90 days after the end of the project period according to 40 CFR Part 31.23(b) and 31.41(b). The LVFC will make adjustments, as necessary, to obligated funds after reviewing and accepting a final Federal Financial Report. Recipients will be notified and instructed by EPA if they must complete any additional forms for the closeout of the assistance agreement.

For awards with cumulative project and budget periods greater than 12 months, an interim FFR covering the period from "project/budget period start date" to June 30 of each calendar year shall be submitted to the U.S. EPA Las Vegas Finance Center, 4220 South Maryland Parkway, Bldg. C, Room 503, Las Vegas, NV 89193-8515, no later than September 30 of the same calendar year.

2. Single Audit Act

In accordance with OMB Circular A-133, which implements the Single Audit Act, the recipient hereby agrees to obtain a single audit from an independent auditor, if it expends \$500,000 or more in total Federal funds in any fiscal year. Within nine months after the end of a recipient's fiscal year or 30 days after receiving the report from the auditor, the recipient shall submit the SF-SAC and a Single Audit Report Package. The recipient **MUST** submit the SF-SAC and a Single Audit Report Package using the Federal Audit Clearinghouse's Internet Data Entry System. For complete information on how to accomplish the single audit submissions, you will need to visit the Federal Audit Clearinghouse Web site: <http://harvester.census.gov/fac/>.

3. Central Contractor Registration/System for Award Management and Universal Identifier Requirements.

A. Requirement for Central Contractor Registration (CCR)/System for Award Management (SAM).

Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain the currency of your information in the SAM until you submit the final financial report required under this award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another award term.

B. Requirement for Data Universal Numbering System (DUNS) numbers. If you are authorized to make subawards under this award, you:

1. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from you unless the entity has provided its DUNS number to you.
2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

C. Definitions. For purposes of this award term:

1. Central Contractor Registration (CCR)/System for Award Management (SAM) means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the System for Award Management (SAM) Internet site <http://www.sam.gov>.
2. Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).
3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:
 - a. A Governmental organization, which is a State, local government, or Indian tribe;

ATTACHMENT 1 Standard Agreement

- b. A foreign public entity;
- c. A domestic or foreign nonprofit organization;
- d. A domestic or foreign for-profit organization; and
- e. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. Subaward:

- a. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- b. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. --210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").
- c. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. Subrecipient means an entity that:

- a. Receives a subaward from you under this award; and
- b. Is accountable to you for the use of the Federal funds provided by the subaward.

4. Reporting Subawards and Executive Compensation

a. Reporting of first-tier subawards.

1. Applicability. Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e of this award term).

2. Where and when to report.

- i. You must report each obligating action described in paragraph a.1. of this award term to www.fsrs.gov.
- ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. What to report. You must report the information about each obligating action that the submission instructions posted at www.fsrs.gov specify.

b. Reporting Total Compensation of Recipient Executives.

1. Applicability and what to report. You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if –

- i. The total Federal funding authorized to date under this award is \$25,000 or more;
- ii. In the preceding fiscal year, you received—
 - (A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - (B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
- iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. Where and when to report. You must report executive total compensation described in paragraph b.1. of this award term:

- i. As part of your Central Contractor Registration/System for Award Management profile available at www.sam.gov.
- ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives.

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1. Applicability and what to report. Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if –

i. in the subrecipient's preceding fiscal year, the subrecipient received –

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execom.htm>.)

2. Where and when to report. You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. Exemptions. If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. subawards, and

ii. the total compensation of the five most highly compensated executives of any subrecipient.

e. Definitions. For purposes of this award term:

1. Entity means all of the following, as defined in 2 CFR part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization;

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. Executive means officers, managing partners, or any other employees in management positions.

3. Subaward:

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. --210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. Subrecipient means an entity that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

i. Salary and bonus.

ii. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.

iii. Earnings for services under non-equity incentive plans. This does not include group life,

ATTACHMENT 1 Standard Agreement

health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

iv. *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.

v. *Above-market earnings on deferred compensation which is not tax-qualified.*

vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

5. Trafficking in Persons

a. Provisions applicable to a recipient that is a private entity

1. You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not—

i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;

ii. Procure a commercial sex act during the period of time that the award is in effect; or

iii. Use forced labor in the performance of the award or subawards under the award.

2. We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity—

i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or

ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either—

A. Associated with performance under this award; or

B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our Agency at 2 CFR 1532.

b. *Provision applicable to a recipient other than a private entity.* We as the Federal awarding agency may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity—

1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or

2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either—

i. Associated with performance under this award; or

ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 CFR 1532.

c. Provisions applicable to any recipient

1. You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.

2. Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:

i. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

ii. Is in addition to all other remedies for noncompliance that are available to us under this award.

3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

d. Definitions. For purposes of this award term:

1. "Employee" means either:

i. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or

ii. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.

2. "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt

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bondage, or slavery.

3. "Private entity":

i. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.

ii. Includes:

A. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).

B. A for-profit organization.

4. "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

6. Recycled Paper

In accordance with Executive Order 13423 (Strengthening Federal Environmental, Energy and Transportation Management dated January 24, 2007), EPA Order 1000.25 and 40 CFR Part 30.16 (as applicable), the recipient shall use recycled paper and double sided printing for all reports which are prepared as a part of this agreement and delivered to EPA. This requirement does not apply to reports prepared on forms supplied by EPA, or to Standard Forms, which are printed on recycled paper and are available through the General Services Administration. The recipient shall give preference in its procurement programs funded with Federal funds to the purchase of recycled products pursuant to EPA's guidelines, as applicable.

Any State agency or agency of a political subdivision of a State shall also comply with the requirements set forth in the Resource Conservation and Recovery Act (RCRA), Section 6002 (42 U.S.C. 6962), which requires that preference be given in procurement programs to the purchase of specific products containing recycled materials identified in guidelines developed by EPA under 40 CFR Part 247. Regulations issued under RCRA Section 6002 apply to any acquisition of an item where the purchase price exceeds \$10,000 or where the quantity of such items acquired in the course of the preceding fiscal year was \$10,000 or more.

7. Hotel and Motel Fire Safety

The recipient agrees to ensure that all conference, meeting, convention, or training funded in whole or in part with Federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL 101-391, as amended). Recipients may search the Hotel-Motel National Master List at <http://www.usfa.dhs.gov/applications/hotel/> to see if a property is in compliance (FEMA ID is currently not required), or to find other information about the Act. (Refer to 40 CFR Part 30.18 and 15 U.S.C. 2225a, as applicable.)

8. Drug-Free Workplace

The recipient organization of this EPA assistance agreement must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in Title 2 CFR Part 1536 Subpart B. Additionally, in accordance with these regulations, the recipient organization must identify all known workplaces under its federal awards, and keep this information on file during the performance of the award. Those recipients who are individuals must comply with the drug-free provisions set forth in Title 2 CFR Part 1536 Subpart C.

The consequences for violating this condition are detailed under Title 2 CFR Part 1536 Subpart E. Recipients can access the Code of Federal Regulations (CFR) Title 2 Part 1536 at <http://ecfr.gpoaccess.gov/cqrl/text/text-idx?c=ecfr&sid=701081165f70316effa8ebf67df73de0&rqn=div5&view=text&node=2:1.2.11.11.2&idno=2>.

9. Debarment, Suspension and Other Responsibility Matters

The recipient shall fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled "Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons)." The recipient is responsible for ensuring that any lower tier covered transaction as described in Subpart B of 2 CFR Part 180 and 2 CFR Part 1532, entitled "Covered Transactions," includes a term or condition requiring compliance with Subpart C. The recipient is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transactions. The recipient acknowledges that failing to disclose the information as required at 2 CFR 180.335 may result in the delay or negation of

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this assistance agreement, or pursuance of legal remedies, including suspension and debarment.

Recipients may access suspension and debarment information at <http://www.sam.gov>. This system allows recipients to perform searches determining whether an entity or individual is excluded from receiving Federal assistance. This term and condition supersedes EPA Form 5700-49, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters."

10. Reimbursement Limitation

EPA's financial obligations to the recipient are limited by the amount of federal funding awarded to date as shown on line 15 in its EPA approved budget. If the recipient incurs costs in anticipation of receiving additional funds from EPA, it does so at its own risk.

11. Management Fees

Management fees or similar charges in excess of the direct costs and approved indirect rates are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs which are not allowable under this assistance agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

12. Lobbying and Litigation Prohibition

The recipient shall ensure that no grant funds awarded under this assistance agreement are used to engage in lobbying of the Federal Government or in litigation against the United States unless authorized under existing law. The recipient shall abide by 2 CFR 225 (OMB Circular A-87), which prohibits the use of federal grant funds for litigation against the United States or for lobbying or other political activities.

The recipient agrees to comply with Title 40 CFR Part 34, *New Restrictions on Lobbying*. The recipient shall include the language of this provision in award documents for all subawards exceeding \$100,000, and require that subrecipients submit certification and disclosure forms accordingly. In accordance with the Byrd Anti-Lobbying Amendment, any recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.

13. Utilization of Disadvantaged Business Enterprises

The recipient agrees to comply with the requirements of EPA's Program for Utilization of Small, Minority and Women's Business Enterprises in procurement under assistance agreements as set forth in 40 CFR Part 33. The EPA DBE rule can be accessed at <http://www.epa.gov/osbp>. In addition, the recipient agrees to make good faith efforts whenever procuring construction, equipment, services and supplies under an EPA assistance agreement, and to ensure that sub-recipients, loan recipients, and prime contractors also comply with 40 CFR Section 33.301. Records documenting compliance with the six good faith efforts shall be retained.

The recipient accepts the applicable MBE/WBE fair share objectives/goals negotiated with EPA by the California State Water Resources Control Board, as follows:

	MBE	WBE
Construction	2%	1%
Equipment	1%	1%
Services	1%	1%
Supplies	1%	1%

By signing this financial assistance agreement, the recipient is accepting the fair share objectives/goals stated above and attests to the fact that it is purchasing the same or similar construction, supplies, services and equipment, in the same or similar relevant geographic buying market as California State Water Resources Control Board.

Pursuant to 40 CFR Section 33.404, the recipient has the option to negotiate its own MBE/WBE fair share

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objectives/goals. If the recipient wishes to negotiate its own MBE/WBE fair share objectives/goals, the recipient agrees to submit proposed MBE/WBE objectives/goals based on an availability analysis, or disparity study, of qualified MBEs and WBEs in their relevant geographic buying market for construction, services, supplies and equipment.

The submission of proposed fair share goals with the supporting analysis or disparity study means that the recipient is not accepting the fair share objectives/goals of another recipient. The recipient agrees to submit proposed fair share objectives/goals, together with the supporting availability analysis or disparity study to Joe Ochab, MTS-7, the Regional MBE/WBE Coordinator, within 120 days of acceptance of the financial assistance award. EPA will respond to the proposed fair share objectives/goals within 30 days of receiving the submission. If proposed fair share objectives/goals are not received within the 120 day time frame, the recipient may not expend its EPA funds for procurements until the proposed fair share objectives/goals are submitted.

A recipient of a Continuing Environmental Program Grant or other annual grant agrees to create and maintain a bidders list. A recipient of an EPA financial assistance agreement to capitalize a revolving loan fund also agrees to require entities receiving identified loans to create and maintain a bidders' list if the recipient of the loan is subject to, or chooses to follow, competitive bidding requirements. Refer to 40 CFR Section 33.501 (b) and (c) for specific requirements and exemptions.

14. MBE/WBE Utilization Report

The recipient agrees to complete and submit to GrantsRegion9@epa.gov a MBE/WBE Utilization Report (EPA Form 5700-52A) within 30 days after the end of the Federal fiscal year; i.e., by October 30 of each calendar year. Negative reports are required. Only procurements with certified MBE/WBEs are counted towards a recipient's MBE/WBE accomplishments. A final MBE/WBE report must be submitted within 90 days after the end of the project period. Your grant cannot be officially closed without all MBE/WBE reports. EPA Form 5700-52A may be obtained from the EPA Office of Small Business Program's Home Page on the internet at www.epa.gov/osbp.

15. Indirect Costs

The cost principles of 2 CFR Part 225 (OMB Circular A-87), "Cost Principles for State, Local, and Indian Tribal Governments," applies to this agreement.

If the recipient does not have a previously established indirect cost rate, it agrees that it will prepare its indirect cost rate proposal and/or cost allocation plan and in accordance with OMB Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments." For proposal preparation, the recipient may use the appropriate completeness checklist located at: <http://www.aqd.nrc.gov/services/ICS.aspx>

The recipient must send its proposal to its cognizant federal agency within six (6) months after the close of the governmental unit's fiscal year. If EPA is the cognizant federal agency, the state recipient must send its indirect cost rate proposal within six (6) months after the close of the governmental unit's fiscal year to:

Regular Mail

Financial Analysis and Rate Negotiation Service Center
Office of Acquisition Management
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, MC 3802R
Washington, DC 20460

Mail Courier (e.g. FedEx, UPS, etc.)

Financial Analysis and Rate Negotiation Service Center
Office of Acquisition Management
US Environmental Protection Agency
1300 Pennsylvania Avenue, NW, 6th floor
Bid and Proposal Room Number 61107
Washington, DC 20004

Electronic submissions of proposals may be sent via email to OGD_IndirectCost@epa.gov.

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Recipients are entitled to reimbursement of indirect costs, subject to any statutory or regulatory administrative cost limitations, if they have a current rate agreement or have submitted an indirect cost rate proposal to their cognizant federal agency for review and approval. Recipients are responsible for maintaining an approved indirect cost rate throughout the life of the award. Recipients may draw down grant funds once a rate has been approved, but only for indirect costs incurred during the period specified in the rate agreement. Recipients are not entitled to indirect costs for any period in which the rate has expired.

Recipients with differences between provisional and final rates are not entitled to more than the award amount. Recipients may request EPA approval to rebudget funds from direct cost categories to the indirect cost category (to grants which have not expired or been closed out) to cover increased indirect costs.

Pursuant to 40 CFR 31.26, a recipient agrees to comply with the audit requirements prescribed in the Single Audit Act Amendments, and revised OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," including Subpart C Section 305(b) which addresses the restriction on auditors preparing indirect cost proposals.

16. Civil Rights Obligations

GENERAL

This term and condition incorporates by reference the signed assurance provided by the recipient's authorized representative on: 1) EPA Form 4700-4, "Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance"; and 2) Standard Form 424B or Standard Form 424D, as applicable. These assurances and this term and condition obligate the recipient to comply fully with applicable civil rights statutes and implementing EPA regulations.

STATUTORY REQUIREMENTS

In carrying out this agreement, the recipient must comply with:

- Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including limited English proficiency (LEP), by entities receiving Federal financial assistance.
- Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities by entities receiving Federal financial assistance; and
- The Age Discrimination Act of 1975, which prohibits age discrimination by entities receiving Federal financial assistance.

If the recipient is conducting an education program under this agreement, it must also comply with:

- Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex in education programs and activities operated by entities receiving Federal financial assistance.

If this agreement is funded with financial assistance under the Clean Water Act (CWA), the recipient must also comply with:

- Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex in CWA-funded programs or activities.

REGULATORY REQUIREMENTS

The recipient agrees to comply with all applicable EPA civil rights regulations, including:

- For Title IX obligations, 40 C.F.R. Part 5; and
- For Title VI, Section 504, Age Discrimination Act, and Section 13 obligations, 40 C.F.R. Part 7.
- As noted on the EPA Form 4700-4 signed by the recipient's authorized representative, these regulations establish specific requirements including maintaining compliance information, establishing grievance procedures, designating a Civil Rights Coordinator, and providing notices of non-discrimination.

TITLE VI – LEP, Public Participation and Affirmative Compliance Obligation

- As a recipient of EPA financial assistance, you are required by Title VI of the Civil Rights Act to

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provide meaningful access to LEP individuals. In implementing that requirement, the recipient agrees to use as a guide the Office of Civil Rights (OCR) document entitled "*Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons.*" The guidance can be found at http://rvebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2004_register&docid=fr25jn04-79.pdf.

If the recipient is administering permitting programs under this agreement, the recipient agrees to use as a guide OCR's Title VI Public Involvement Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs. The Guidance can be found at <http://edocket.access.gpo.gov/2006/pdf/06-2691.pdf>.

In accepting this assistance agreement, the recipient acknowledges it has an affirmative obligation to implement effective Title VI compliance programs and ensure that its actions do not involve discriminatory treatment and do not have discriminatory effects even when facially neutral. The recipient must be prepared to demonstrate to EPA that such compliance programs exist and are being implemented or to otherwise demonstrate how it is meeting its Title VI obligations.

17. Payment to Consultants

Per 40 CFR Part 31.36(j), EPA's participation in the salary rate (excluding overhead and travel) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors shall be limited to the maximum daily rate for a Level IV of the Executive Schedule, to be adjusted annually. The Federal Executive Schedule (i.e., Salary Table) is located at <http://www.opm.gov/oca/>. This limit applies to consultation services of designated individuals with specialized skills and if the terms of the contract provide the recipient with responsibility for the selection, direction, and control of the individuals who will be providing services under the contract at an hourly or daily rate of compensation. This rate does not include overhead or travel costs and the recipient may pay these in accordance with its normal travel practices.

Subagreements with firms or individuals for services which are awarded using the procurement requirements in 40 CFR Part 31, are not affected by this limitation unless the terms of the contract provide the recipient with responsibility for the selection, direction, and control of the individuals who will be providing services under the contract at an hourly or daily rate of compensation. See 40 CFR Part 31.36(j)(2).

18. Procurement

The recipient will ensure all procurement transactions will be conducted in a manner providing full and open competition consistent with EPA regulations under 40 CFR Part 30.43, 31.36 or 35.6555, as applicable. In accordance with 40 CFR Part 30.45, 31.36(f) or 35.6585, as applicable, the grantee and subgrantee(s) must perform a cost or price analysis in connection with every procurement action, including contract modifications.

19. Subawards

- a. The recipient agrees to:
 - (1) Establish all subaward agreements in writing;
 - (2) Maintain primary responsibility for ensuring successful completion of the EPA-approved project (this responsibility cannot be delegated or transferred to a subrecipient);
 - (3) Ensure that any subawards comply with the standards in Section 210(a)-(d) of OMB Circular A-133 and are not used to acquire commercial goods or services for the recipient;
 - (4) Ensure that any subawards are awarded to eligible subrecipients and that proposed subaward costs are necessary, reasonable, and allocable;
 - (5) Ensure that any subawards to 501(c)(4) organizations do not involve lobbying activities;
 - (6) Monitor the performance of their recipients and ensure that they comply with all applicable regulations, statutes, and terms and conditions which flow down in the subaward;
 - (7) Obtain EPA's consent before making a subaward to a foreign or international organization, or a subaward to be performed in a foreign country; and
 - (8) Obtain approval from EPA for any new subaward work that is not outlined in the approved work plan in accordance with 40 CFR Parts 30.25 and 31.30, as applicable.
- b. Any questions about subrecipient eligibility or other issues pertaining to subawards should be addressed to the recipient's EPA Project Officer. Additional information regarding subawards may be

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found at <http://www.epa.gov/ogd/guide/subaward-policy-part-2.pdf>. Guidance for distinguishing between vendor and subrecipient relationships and ensuring compliance with Section 21D(a)-(d) of OMB Circular A-133 can be found at <http://www.epa.gov/ogd/guide/subawards-appendix-b.pdf> and http://www.whitehouse.gov/omb/financial_fin_single_audit

c. The recipient is responsible for selecting its subrecipients and, if applicable, for conducting subaward competitions.

Programmatic Conditions

P1. The U.S. EPA will be substantially involved in overseeing and monitoring this cooperative agreement. Involvement includes oversight of pesticide programs including pesticide enforcement, endangered species and worker safety (agricultural worker protection and applicator certification). For example:

Pesticide Enforcement: States may cooperate in the enforcement authority for pesticide use inspections by entering into a cooperative agreement with EPA and maintaining an effective program for enforcing pesticide use regulations. As such, EPA has oversight responsibilities to ensure that basic elements of the enforcement program are carried out adequately including, but not limited to:

- review and recommend improvements to pesticide inspections;
- monitor state investigation and enforcement response on significant pesticide incidents;
- issue federal inspector credentials to state employees consistent with EPA policy and guidance;
- review and comment on inspection files which are submitted to Region 9 (Market Place and Producer Establishment Inspections);
- request additional information when needed for federal case development;
- provide inspector training to state inspectors;
- issue special investigation requests for state inspectors to conduct inspections on EPA's behalf.

Pesticide Applicator Certification: EPA reviews and approves the state plan for certifying restricted use pesticide applicators.

Worker Protection Standard: Ensures that OPP/OECA Guidance for baseline worker protection programs is conducted and activities reported.

P2. The California Department of Pesticide Regulation is reporting per national program guidance for Enforcement, Certification & Training (C&T), and Pesticide Program Implementation.

The recipient agrees to submit quarterly progress reports to the EPA Project Officer within 30 calendar days after the end of each Federal fiscal quarter (October 30, January 30, April 30, and July 30). These reports should include a discussion of the activities conducted during the quarter and progress towards milestones, problems encountered and their resolution, and activities planned for the next quarter. In addition, CDPR will inform EPA as soon as problems, delays or adverse conditions become known which will materially impair the ability to meet the outputs/outcomes specified in the assistance agreement work plan. CDPR will report per national program guidance for Enforcement, C&T, and Pesticide Program Implementation. National Guidance includes reporting on national program measures (Enforcement and C&T). Within 90 days of the end of the project period, the recipient must submit a final report documenting project activities over the entire project period and the recipient's achievements with respect to the project's purposes and objectives.

P3. This grant includes the performance of environmental measurements; a Quality Assurance Program Plan must be prepared. The recipient should consult with the Region 9 Quality Assurance Office to determine what guidance should be followed. The QA Plan must be approved by the EPA Project Officer, the Region 9 Quality Assurance Manager, and the recipient's Quality Assurance Officer before measurement activities are undertaken. Contact the QA Office at 415-972-3411.

P4. Funds awarded under this cooperative agreement may not be used to purchase or pay for pesticide applications or pesticides.

P5. Unless the event(s) are specified in the approved workplan, the recipient agrees to obtain prior approval from EPA for the use of grant funds for light refreshments and/or meals served at meetings, conferences, training workshops, and outreach activities (events). The recipient must send requests for approval to the EPA Project Officer and include:

- (1) An estimated budget and description for the light refreshments, meals, and/or beverages to

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- be served at the event(s);
- (2) A description of the purpose, agenda, location, length and timing for the event.
 - (3) An estimated number of participants in the event and a description of their roles.

Recipients may address questions about whether costs for light refreshments, and meals for events are allowable to the recipient's EPA Project Officer. However, the Agency Award Official or Grant Management Officer will make final determinations on allowability.

Note: U.S. General Services Administration regulations define light refreshments for morning, afternoon or evening breaks to include, but not be limited to, coffee, tea, milk, juice, soft drinks, donuts, bagels, fruit, pretzels, cookies, chips, or muffins. (41 CFR 301-74.11)

P6. EPA may terminate the assistance agreement for failure of the recipient to make sufficient progress so as to reasonably ensure completion of the project within the project period, including any extensions. EPA will measure sufficient progress by examining the performance required under the workplan in conjunction with the milestone schedule, the time remaining for performance within the project period, and/or the availability of funds necessary to complete the project.

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