

CONTRACTS/GRANTS AWARDED 2010-2011

AECOM

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| H. Lenihan | | |
| SB110068 | 2/1/11-12/31/11 | \$31,525 |
| Determining Risk Factors for 3 Zero Valent Iron Materials. | | |

California Coastal Conservancy

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| L. Stratton | | |
| 10-037 | 5/2/11-9/30/12 | \$175,000 |
| Campus Lagoon Accessway New | | |

California Department of Water Resources

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| T. Dunne | | |
| 460007708 | 6/1/11-11/30/13 | \$14,182 |
| San Joaquin River Restoration Program | | |

California Energy Commission

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| F. Davis, D. Stoms | | |
| 20101173 | 3/7/11-9/9/13 | \$383,787 |
| Cumulative Biological Impacts Framework for Solar Energy Projects in the California Desert. | | |

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| L. Hannah | | |
| POCE01-T06 | 6/15/10-12/31/11 | \$71,769 |
| Statewide Climate Change Impact Assessment for Conservation and Biodiversity | | |

California Energy Commission Subtotal **\$455,556**

City of Santa Barbara

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| P. Holden | | |
| 383517 | 3/1/10-2/28/11 | \$15,000 |
| Canine Scent and Microbial Source Tracking in Santa Barbara, CA. | | |

Conservation International

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| F. Davis | | |
| SB090056 | 6/1/10-5/31/11 | \$18,000 |
| | 7/1/10-6/30/11 | \$3,000 |

Climate and Land Use Change

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| F. Davis | | |
| SB110084 | 2/1/11-6/30/11 | \$13,000 |
| Madagascar Crop Suitability Change Modeling. | | |

Conservation International Subtotal **\$34,000**

Department of Agriculture

C. Jones, D. Roberts
06-JV-11272165-057 11/1/10-6/30/11 \$25,000
Analysis of Santa Ana Climatology for Southern California.

Department of Energy

J. Boles
DE-SC0003676 2/1/11-1/31/12 \$96,770
Fault-Related CO2 Degassing, Geothermics, & Fluid Flow in Southern California Basins---
Physiochemical Evidence & Modeling

Department of Interior

R. Archuleta
10600014 1/1/11-12/31/12 \$72,170
Strong Ground Motions in Salt Lake City and Other Metropolitan Areas From Large Earthquakes
on the Wasatch Fault.

Electric Power Research Institute

A. Keller
EP-P34405/C15680 1/1/11-12/31/11 \$30,000
Targeted Watersheds Grant for Water Quality Trading in Ohio River Basin.

Exxon Mobile Corporation

S. Suh
SB100081 1/3/11-1/2/12 \$112,000
Incorporating Water Quality and Quantity in Water-Use Impact Assessment Modeling for Life
Cycle Assessment: With Case Studies of Coal and Natural Gas-powered Electricity Generation

Goleta Valley Land Trust

L. Stratton
SB110028 6/16/10-12/31/11 \$32,000
Restoration of Bluff Edge at West Campus Bluffs

Jet Propulsion Laboratory

L. Hess
1367520 3/16/09-3/31/12 \$120,000
An Inundated Wetlands Earth System Data Record: Global Monitoring of Wetland Extent and
Dynamics

J. Ohlmann
1360271 12/1/08-3/31/12 \$27,496

Impact of NASA Satellite Data and Models on U.S. Coast Guard's Decision Support Tool for Search and Rescue in the Northeastern Pacific Ocean.

Jet Propulsion Laboratory Subtotal **\$147,496**

Kearney Foundation

C. Tague
2009.030 1/1/11-6/30/12 \$27,133
Optimized Soil Moisture Sampling Design to Represent the Impact of Annual Climate Variability on Dominant Ecohydrological Processes in Snow-Dominated Watersheds.

Nascent Water Technologies, Inc.

A. Keller
SB110051 1/1/11-12/31/12 \$549,519
Developing Mag-PCMA's for Commercial Application.

National Aeronautics and Space Administration

B. Bookhagen, G. Fisher
NNX09AO24H 9/1/10-8/31/11 \$30,000
ASTER-Derived River Widths and Spatial Implications for Erosion in the Tectonically Active Himalaya.

J. Dozier, K. Rittger
NNX09AN75H 10/1/10-9/30/11 \$30,000
Improving Runoff Forecasting with Enhanced Estimates of Snow Properties.

S. Maritorena, D. Siegel
NNX11AE87G 2/8/11-2/7/12 \$130,404
From UV to Fluorescence, a Semi-analytical Ocean Color Model for MODIS and Beyond.

S. Maritorena, D. Siegel
NNX11AH74G 4/19/11-4/18/12 \$48,615
Bio-optical algorithm studies for ACE: Benefits of UV bands to discriminate between CDM and phytoplankton light absorption in oceanic waters and other sensitivity analyses.

S. Maritorena, D. Siegel, J. Frew, N. Nelson
NNX08AP36A 5/12/10-5/11/11 \$576,293
5/12/11-5/11/13 \$570,467
Beyond Chlorophyll: Implementation and Distribution of Innovative Ocean Color Earth Science Data Records.

J. Melack, L. Hess, S. MacIntyre

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| NNX10AB66G | 1/1/11-12/31/11 | \$128,608 |
| Analysis and Synthesis of Carbon Dynamics on Amazon Floodplains. | | |
| N. Nelson, C. Carlson, D. Siegel | | |
| NNX09AL09G | 5/29/10-5/28/11 | \$72,859 |
| | 5/29/10-5/28/11 | \$102,001 |
| Ocean Color Observations on CLIVAR: Inherent Optical Properties and Community Structure on Trans-Ocean Sections. | | |
| N. Nelson, D. Siegel | | |
| NNX11AE99G | 2/8/11-2/7/12 | \$233,439 |
| Bermuda Bio-Optics Project: Enhancement of Measurements for New Ocean Color Applications. | | |
| J. Shi | | |
| 1360781 | 12/1/08-6/30/11 | \$41,683 |
| | 12/1/08-12/31/11 | \$42,214 |
| Technical Development for SMAP Soil Moisture Retrieval. | | |
| D. Siegel | | |
| NNX11AG80G | 3/1/11-2/29/12 | \$50,000 |
| Proposal for an ACE Ocean Productivity and Carbon Cycle (OPCC) Workshop. | | |
| D. Siegel, R. Lawson | | |
| NH10AP28H | 9/1/10-8/31/11 | \$30,000 |
| Phytoplankton Community Composition and Inherent Optical Properties (IOP) in a Complex Coastal Environment. | | |
| D. Siegel, N. Nelson | | |
| NNX11AF63G | 4/1/11-3/31/12 | \$192,064 |
| A Mechanistic Approach Towards the Remote Assessment of Carbon Export by Sinking Particles in the Open Ocean. | | |
| D. Siegel, J. Watson | | |
| NNX08AV01H | 9/1/10-8/31/11 | \$30,000 |
| Integrating Satellite Observations into Fisheries Science: Quantifying Abiotic and in-flight Biotic Larval Mortality as a Means to Better Predict Population Connectivity. | | |
| Z. Wan | | |
| NNX11AG43G | 3/11/11-3/10/13 | \$200,227 |
| Science Data Analysis Including TIR BRDF Retrieval for Improvements of the MODIS Land-Surface Temperature/Emissivity Products in Long-term Accuracy and Consistency. | | |
| National Aeronautics and Space Administration Subtotal | | \$2,508,874 |

National Oceanic & Atmospheric Administration

I. Leifer
UAF 10-0081 3/1/10-2/29/12 \$101,735
Long-term monitoring of submerged, permafrost methane emissions

L. Carvalho, C. Jones
NA10OAR4310170 8/1/10-7/31/11 \$113,229
An Integrated View of the American Monsoon Systems: Observations, Models and Probabilistic Forecasts.

National Oceanic and Atmospheric Administration Subtotal \$214,964

National Science Foundation

C. Busby
0711181 7/1/10-6/30/12 \$32,747
Geological Constraints on Landscape Evolution of the Sierra Nevada, California: Paleochannels, Magmatism and Structure

C. Busby
EAR-1019559 3/15/11-5/31/13 \$226,036
Steady State to Flare-Up ARC Magmatism in the Largest Cenozoic Silicic Igneous Province on Earth: The Sierra Madre Occidental (Mexico)

L. Carvalho, C. Jones
AGS-1126804 7/1/11-6/30/12 \$30,000
Decadal Variability of the American Monsoons: An Assessment of CMIP5 Simulations.

J. Clark
7003595 9/1/10-8/31/11 \$26,658
Collaborative Research: Large-scale, Long-term, Multi-directional, Cross-hole Experiments in the Upper Oceanic Crust Using a Borehole Observatory Network.

J. Cottle
1050043 5/1/11-4/30/12 \$64,931
Collaborative Research: Improving the Accuracy and Precision of Monazite and Allanite Geochronology via ID Th-Pb Ages for Reference Materials.

F. Davis
EF-1065864 6/1/11-5/31/16 \$2,286,655
Collaborative Research: Do Micro-environments Govern Macro-ecology?

J. Dozier

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| EAR-1015057 | 10/1/10-9/30/12 | \$18,740 |
| Rapid Quantitative Snow Stratigraphy for Avalanche Forecasting Using Near-Infrared Photography. | | |
| R. Geyer, F. Davis, D. Stoms CBET-0932369 | 10/1/10-9/30/11 | \$109,198 |
| Spatially-explicit Life Cycle Assessment Tools for Environmental Sustainability. | | |
| S. Gordon, B. Hacker EAR-1008760 | 6/1/11-5/31/12 | \$24,134 |
| Collaborative Research: The Suturing Process: Insight from the India-Asia Collision Zone. | | |
| B. Hacker 0708934 | 7/1/11-6/30/12 | \$49,390 |
| Collaborative Research: How is Rifting Exhuming the Youngest HP/UHP Rocks on Earth? | | |
| B. Hacker 0838264 | 2/1/11-1/31/12 | \$78,575 |
| Collaborative Research: Testing Channel-Flow Models Using Middle-Crustal Rocks of North Himalayan Gneiss Domes | | |
| A. Keller, P. Holden, H. Lenihan, B. Harthron, G. Stucky, R. Nisbet, B. Cardinale, J. Schimel, W. Freudenburg, E. McCauley SB090050 | 9/1/10-8/31/11 | \$1,713,631 |
| | 9/1/10-8/31/11 | \$121,861 |
| CEIN-Predictive Toxicological Assessment and Safe Implementation of Nanotechnology in the Environment. | | |
| S. MacIntyre DEB-0919603 | 9/1/09-8/31/12 | \$7,494 |
| Collaborative Research: Arctic to the Amazon: Physical Processes Controlling Gas Exchange from Freshwater Ecosystems. | | |
| J. Melack DEB-0614207 | 3/1/11-2/28/13 | \$84,623 |
| Responses of high elevation, aquatic ecosystems to interannual climate variability and trends in nutrient inputs (LTREB Program). | | |
| J. Melack DEB-0614207 | 3/15/07-2/28/11 | \$7,500 |
| Responses of High Elevation, Aquatic Ecosystems to Interannual Climate Variability and Trends in Nutrient Inputs(LTREB Program - REU Supplement). | | |

Water Quality Modeling of the Ohio State Component of the Ohio River Basin Water Quality Trading Program.

Oklahoma State University

A. Simms
AA-5-31560 7/1/10-9/30/12 \$123,084
New Approaches to Unraveling the Climatic and Sea-Level History of the Northwestern Gulf of Mexico

A. Simms
AA-5-30220 7/1/10-6/30/12 \$91,087
Constraining the Deglaciation of the Antarctic Peninsula Using OSL Dated Beach Deposits

Oklahoma State University Subtotal \$214,171

Oregon State University

J. Ohlmann
S1364A-A 3/15/11-3/14/12 \$151,965
DYNAMics of the Madden-Julian Oscillation / DYNAMO Subsurface Fluxes.

C. Tague
S1343H-A 7/1/11-6/30/12 \$41,765
Ecohydrological Component of Willamette Water 2100 Project.

Oregon State University Subtotal \$193,730

Purdue University

J. Steidl
NEES-4101-31902 10/1/10-9/30/11 \$83,140
10/1/10-9/30/11 \$266,047
10/1/10-9/30/11 \$149,651
10/1/09-9/30/11 \$40,000

NEES Consortium Operations: 2004-2014.

Purdue University Subtotal \$538,838

Southern California Coastal Water Project (SCCWP)

P. Holden
7965 7/1/10-6/30/13 \$573,500
SIPP

Southern California Wetlands Recovery Project

L. Stratton

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| SB110009 | 11/5/10-10/1/11 | \$24,000 |
| UCSB San Nicholas Wetland Enhancement | | |

UC Sea Grant College Program

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| T. Dunne, E. Bray | | |
| R/SF-49 | 4/1/11-3/31/13 | \$102,876 |
| Effect of Direct and Interactive Disturbances of the Streamflow Regime of the Middle San Joaquin River on Key Instream Abiotic Drivers of Chinook Salmon (<i>Oncorhynchus tshawytscha</i>) Habitat. | | |

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| H. Lenihan | | |
| R/FISH-213EPD-TR | 7/1/10-6/30/11 | \$33,288 |
| MPA-Based Collaborative Techniques to Improve Management of Nearshore Fisheries. | | |

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| H. Lenihan | | |
| 20101258 | 7/1/10-6/30/11 | \$1,512 |
| MPA-Based Collaborative Techniques to Improve Management of Nearshore Fisheries. | | |

UC Sea Grant College Program Subtotal **\$137,676**

University of California

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| R. Archuleta | | |
| 20110295 | 11/1/10-10/31/12 | \$60,000 |
| Peer NGA-EAST Finite Fault Simulations. (UCB, DOE flow-through) | | |

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| R. Nisbet | | |
| 20110022 | 10/1/10-6/30/12 | \$107,989 |
| Investigations in Fisheries Ecology. (UCSC, NOAA flow-through) | | |

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| J. Ohlmann | | |
| SB090036 | 7/1/10-6/30/12 | \$54,000 |
| Observations of Surface Current Trajectories from the Inshore California Current Region. (UCSD, NOAA flow-through) | | |

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| J. Ohlmann | | |
| SB110079 | 2/1/11-1/31/12 | \$18,338 |
| Improving the Understanding of Submesoscale Eddies, Fronts, and Filaments with Coincident Satellite, in situ, and Aircraft Measurements (UCLA, NASA flow-through) | | |

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| C. Tague | | |
| 73720-00-09 | 10/1/10-9/30/11 | \$57,151 |
| Water Security and Climate Change (IGPP) | | |

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| C. Tague | | |
| EAR 0725097 | 9/1/10-8/31/11 | \$80,919 |
| The California Critical Zone Observatory (UC Merced, NSF flow-through) | | |

University of California Subtotal **\$378,397**

University of Nebraska

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| B. Luyendyk | | |
| 25-0550-0004-003 | 11/1/09-10/31/10 | \$53,080 |
| ANDRILL: Investigating Antarctica's Role in Cenozoic Global Environmental Change-Coulman High Project | | |

University of North Carolina, Charlotte

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| C. Tague | | |
| 20100588-01-UCS | 9/1/10-8/31/11 | \$17,515 |
| Influence of Stormwater Management Structures on Ecological Function in Urban Streams. | | |

University of Southern California

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| R. Archuleta | | |
| 120044 | 2/1/10-1/31/12 | \$35,000 |
| SCEC3: Prediction of Broadband Time Histories | | |

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| R. Archuleta | | |
| 120044 | 2/1/07-1/31/12 | \$8,000 |
| A Collaborative Project: Rupture Dynamics, Validation of the Numerical Simulation Method. | | |

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| R. Archuleta | | |
| 120044 | 2/1/07-1/31/12 | \$24,000 |
| Rupture Dynamics on Sulti-Segment Faults New | | |

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| R. Archuleta | | |
| 120044 | 2/1/07-1/31/12 | \$24,000 |
| Stress Drop and Source Description for Earthquakes 4 M 5.5 in Southern California. | | |

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| R. Archuleta, J. Carlson, J. Langer | | |
| 20110062 | 2/1/10-1/31/12 | \$20,000 |
| Earthquake Dynamics with STZ Friction: A Statistical Physics Approach to Dynamic Weakening, Energy Partitioning, and Fault Evolution. | | |

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| R. Archuleta, J. Carlson, J. Langer | | |
| 120044 | 2/1/07-1/31/12 | \$21,000 |
| Multi-Statistical Theories for Frictional Weakening and Variability in Earthquakes. | | |

R. Archuleta, C. Ji
120044 2/10/07-1/31/12 \$24,000
A Comprehensive Kinematic Investigation of 2010 Mw 7.3 El Mayor Earthquake by Joint
Inverting Teleseismic, Strong Motion.

R. Archuleta, D. Rood
120044 2/1/07-1/31/12 \$20,053
Evolution of Precariously Balanced Rocks in the Mojave Desert: Constraints on San Andreas
Fault Rupture and Hazard Models.

R. Archuleta, J. Steidl
120044 2/1/07-1/31/12 \$15,000
SCEC3 Participation: SCEC Borehole Instrumentation Center

R. Archuleta, J. Steidl
120044 2/1/07-1/31/12 \$15,000
SCEC3 Participation: The SCEC Portable Broadband Instrument Center.

C. Ji
120044 2/1/10-1/31/11 \$20,000
SCEC3 Participation: Finite fault parameterization of intermediate and large earthquakes in
Southern California

J. Steidl
120044 2/1/07-1/31/12 \$30,000
SCEC3 Participation: SCEC Borehole Instrumentation Program.

J. Steidl
120044 2/1/10-1/31/11 \$30,000
SCEC3 Participation: SCEC Borehole Instrumentation Center

University of Southern California Subtotal \$286,053

US Department of Agriculture

J. Dozier
58-5362-8-415 9/1/08-9/30/11 \$5,500
Using a Modeling System to Extend Hydrologic parameters and Processes from Experimental
Watersheds to larger Regions Within Mountainous Regions of the Western US.

S. Sweet
2010-CS-11052007-113 9/10/10-3/31/12 \$45,644
Conservation status of California Amphibians and Reptiles

US Department of Agriculture Subtotal **\$51,144**

Washington State University (Pullman, WA)

C. Tague
115320 G002931 4/1/11-3/31/16 \$403,484
Collaborative Research: Type 2: Understanding Biogeochemical Cycling in the Context of
Climate Variability Using a Regional Earth System Modeling Framework.

WateReuse Association (Foundation)

J. Clark
WRF-09-11 10/1/10-2/1/14 \$110,875
Development of New Tracers for Determining Travel Time Near MAR Operations.

Grand Total **\$13,765,748**