

TEACHING & SERVICE ACTIVITIES AND ACCOMPLISHMENTS
(June 2015 through May 2016)

I. Teaching

a. Instructional Innovation

Marshall, Jeffrey:

Natural Disasters (GSC 350): Developed new full set of PowerPoint lectures to replace outdated overhead transparencies. Also used Blackboard for the first time to upload course materials for student use. Continued to develop online activities for Hybrid section of this course.

Watershed Restoration (RS 414): Developed new PowerPoint lectures to replace overhead transparencies. Revised course schedule to provide more fieldwork time for Stream Team Restoration Project.

Geomorphology (GSC 323): Developed new PowerPoint lectures to replace overhead transparencies.

Murray, Bryan:

Developed new course material (lectures, examinations, field trips, laboratory assignments) for GSC 423/423L Sedimentary Geology, GSC 145L Megascopic Petrography, GSC 112/151L Earth, Time, & Life, and GSC 491L Field Module.

Nourse, Jonathan A.:

The Geology Department spent \$9,000 of grant funds and \$10,000 of donor funds to purchase a Smart Board and complete a major AV upgrade of heavily used classroom 4-A-608. Several GSC instructors have started utilizing the new board which has many additional touch-screen functionalities compared to the board we installed 2 years ago in 4-A-634. The level of student interaction with instructor has improved substantially.

Osborn, Stephen G.:

This year, I have continued using my virtual office hours for lower division classes (GSC 110). I've expanded the use of physical and mathematical models to describe and quantify physical phenomena in my instruction for all classes. The use of a physical model of an aquifer and watersheds really seems to connect with students and allows them to visualize physical phenomena. I have also incorporated the use of a smart board and more problem solving techniques into my curriculum.

Polet, Jascha:

Created new field-based learning modules using newly acquired geophysical equipment, for summer field geophysical class as well as Advanced Seismology, GSC 568 (Spring 2016) class. Created two new computational lab exercises using seismological software for Advanced Seismology, GSC 568 (Spring 2016) class. Co-developed new Volcanology lecture and lab (taught as GSC 499, Spring 2016).

Van Buer, Nicholas J.:

One new teaching technique I implemented this year was having Geotectonics students prepare informational handouts to go along with research presentations given in the field. The previous practice of having students present on geologic research topics in the field with poster-format visual aids had already proved to be a high-impact practice, allowing students to really cement their literature-research-based learning with a hands-on field

experience. This year, I compiled student-created handouts into thorough field guides, which were distributed to each of the students, giving students a memento and study guide they can use for years to come. This pedagogical change was not instituted in a sufficiently controlled experimental environment to distinguish a statistically significant “measurable impact”, but, anecdotally, the students appreciated having printed reference material to study from, which they were proud to have helped create. Also, fewer students got D’s and F’s this year, though again, it’s difficult to single out this one particular learning tool.

b. Teacher-Scholar Support Initiative

Marshall, Jeffrey:

The Teacher-Scholar Support Initiative has provided me with critical reassigned time for advancing scholarship and teaching innovation over the past two academic years (8 WTU each in 2014-2015 & 2015-2016). Please see other sections of this report for examples of outcomes.

Murray, Bryan:

Faculty Mini-grant 2015-2016 to purchase Jacob staffs & sediment grain-sizing cards: 10 sediment grain-sizing references cards were purchased using funds from this grant. These cards were successfully used by students in the field during my GSC 491L course to aid in describing the lithology of alluvial sedimentary rocks, and to relate sediment grain sizes in the rock outcrop to the energy of the environment at the time of deposition.

Nourse, Jonathan A.:

I received 8 WTU of release time from the Provost Teacher-Scholar Program during 2015-2016 to work on publications related to San Gabriel Mountains geochronology research. Multiple drawings, data plots, and data tables were completed for two manuscripts, and I presented a poster showing results of the Mesozoic ages at the Geological Society of America conference in Ontario, April 2016. This work has spawned renewed interest in collecting and dating additional rock samples from the San Gabriel Mountains. Two related MS theses, supported by several BS senior projects, are ongoing.

Osborn, Stephen G.:

I received a 2012-2014 Teacher-Scholar Award. During that time period, I received a multi-year NSF grant to conduct groundwater quality work in Midwestern States (Colorado, Montana, North Dakota, and South Dakota). This work has led to several peer reviewed journal articles in the Proceedings of the National Academy of Science, Environmental Science and Technology. Two more papers are currently in preparation for submittal (Summer 2016). Furthermore, I received a grant from the Bureau of Land Management (BLM) to conduct drought research in the Coachella Valley, California. This grant was awarded in large part due to initial work conducted during the teacher scholar period. I have also incorporated data generated from field and laboratory work supported by the teacher scholar opportunity into my curriculum. For example, I have used elemental and isotopic data from my research to teach contaminant transport and fate in my hydrogeology and isotope classes.

II. Service

a. Service to the Department

Marshall, Jeffrey:

Curriculum Committee (member)

Department Chair Evaluation Committee (member)

Department RTP Committee (Chair)

Graduate Committee (member)

Lecturer Evaluation Committee (member)
Scholarship Committee (member)

Murray, Bryan:

Alumni Reunion Committee (member)
Assessment Committee (member)
Cal Poly Pomona AAPG Imperial Barrel Award (IBA) team (advisor)
Curriculum Committee (member)
Graduate Committee (member)
Scholarship Committee (Chair)
Seminar Committee (Co-Chair)

Nourse, Jonathan A.:

Assessment Committee (Chair)
Curriculum Committee (Chair)
Graduate Committee (Chair)
Recruiting Committee (Chair)
Scholarship Committee (member)
Strategic Planning Committee (Chair)

Osborn, Stephen G.:

Alumni Reunion Committee (Chair)
Assessment Committee (member)
Curriculum Committee (member)
Department Chair Review Committee (Chair)
Department RTP Committee (member)
Geology Club (co-advisor)
Graduate Committee (member)
Lecturer Evaluation Committee (Chair)
Scholarship Committee (member)
Seminar Committee (member)

Polet, Jascha:

Alumni Reunion Committee (member)
Assessment Committee (member)
Curriculum Committee (member)
Department RTP Committee (member)
Geological Sciences Department Facebook page (administrator)
Graduate Committee (member and Associate Graduate Coordinator)
Lecturer Evaluation Committee (member)
Recruiting Committee (member)
Scholarship Committee (member)
Semester Conversion Committee (member)

Seminar on Graduate School, Internship and Scholarship Opportunities (presenter)

Van Buer, Nicholas J.:

Alumni Reunion Committee (member)
Assessment Committee (member)
Curriculum Committee (member)
Geology Club (co-advisor)
Graduate Committee (member)
Scholarship Committee (member)
Seminar Committee (Co-Chair)

b. Service to the College

Marshall, Jeffrey:

CEMaST NSF RESPeCT Teacher Professional Development Program (earth science content expert)
Center for Excellence in Math & Science Teaching (CEMaST) (faculty fellow)
Science Education Enhancement Services (SEES) (faculty advisor)

Nourse, Jonathan A.:

College Budget Advisory Committee (department representative)
College Curriculum Committee (department representative)
College of Science Department Chairs' Council (department representative)

Osborn, Stephen G.:

College of Science Dean Search Committee (member)

Polet, Jascha:

College of Science Distinguished Teaching Award Committee (Chair)

Van Buer, Nicholas J.:

College of Science Semester Conversion Advising Task Force (department representative)

c. Service to the University (CPP & CSU)

Marshall, Jeffrey:

Campus Water Initiative Task Force (member)
CSU Council on Ocean Affairs, Science, and Technology (COAST) Initiative (campus representative)
International Center Advisory Council (member)
Kellogg FuTURE Undergraduate Research Program: KUSP Scholarships & FuTURE Mini-Grants (Director)
Lyle Center for Regenerative Studies (adjunct faculty)
Teacher Scholar Task Force (member)
Undergraduate Research Faculty Advisory Council (URFAC) (*ex-officio* member)

Nourse, Jonathan A.:

University GE Assessment Committee (SCI representative)
University Graduate Council (Geology representative)
University Graduate Studies Development Committee (college representative)

Osborn, Stephen G.:

Academic Senate (Senator)
Campus Water Initiatives Committee (member)
Emergency Preparedness Committee (member) and building 4, floor A (EOC Marshal)
Environmental Sustainability Task Force (member)
Kellogg KUSP and FuTURE Mini-Grant Program (proposal reviewer)
Learning Communities Pilot Implementation Committee (member)
Research, Scholarship, and Creative Activity (RSCA) Review Committee (member)
Science, Technology and Society (STS) Advisory Board (member)
Undergraduate Research Faculty Advisory Council (URFAC) (member)

Polet, Jascha:

2015 Faculty Learning Community on Academic Leadership (member)
Academic Affairs Committee (Senator)
Academic Senate (Senator)
Incorporated Research Institutions for Seismology Consortium (primary representative and voting member)
Promoting Postbaccalaureate Opportunities for Hispanic Americans (PPOHA)/MENTORES Project (mentor)
Southern California Earthquake Center (institutional representative)
UNAVCO, a non-profit university-governed consortium that facilitates geoscience research and education using geodesy (institutional representative and submitted successful application for membership in 2016)
Undergraduate Research Faculty Advisory Council (URFAC) (non-voting member)
University Graduate Council (alternate Geology representative)
Western North America InSAR (WInSAR) Consortium (institutional representative)

Van Buer, Nicholas J.:

University Physical Planning Committee (member)

d. Service to the Profession

Marshall, Jeffrey:

Council on Undergraduate Research (CUR), Geosciences Division (nationally elected to 5th 3-year term Councilor and campus liaison)
Geological Society of America Cordilleran Section Meeting, April 2016, Undergraduate Research Poster Session (session Chair and judge)
NSF GeoPRISMS Program Education Advisory Committee (GEAC) (member)
NSF GeoPRISMS Program, *American Geophysical Union Fall Meeting*, December 2015, Graduate Student Talks and Posters (judge)
NSF GeoPRISMS Program, *Technical and Experimental Institute on Subduction Cycles and Deformation*, October 2015, Redondo Beach, CA (participant)

On behalf of the journals, *Revista Geológica de América Central* (January 2016) and *Geophysical Research Letters* (March 2016) (manuscript reviewer)

Presentation “Strategies for effective mentoring of independent undergraduate research projects: Council on Undergraduate Research (CUR)” December 2015, *Getting Started in Undergraduate Research Workshop for New, Future, and Current Faculty, American Geophysical Union (AGU) 2015 Fall Meeting*, San Francisco, CA (invited speaker)

UNAVCO - Open Topography, Imaging and Analyzing Active Faults with High Resolution Topography Short Course, April 2016, Boulder, CO (participant)

Murray, Bryan:

American Geophysical Union (AGU) (member)

Geological Society of America (GSA), Cordilleran Section, Sedimentary Geology Division, Structural Geology & Tectonics Division and Environmental & Engineering Geology Division (member)

Osborn, Stephen G.:

On behalf of the journals, *Proceedings of the National Academy of Sciences, USA*, *Applied Geochemistry*, *Environmental Science and Technology*, and *Hydrogeology* (reviewer)

Polet, Jascha:

Global Tsunami Model Working Group (member)

NSF Geophysics and Tectonophysics (invited proposal reviewer)

On behalf of the journals, *Bulletin of Seismological Society of America*, *Seismological Research Letters*, and *Journal of Pure and Applied Geophysics* (invited manuscript reviewer)

Seismological Society of America Communications Committee (member)

State Mitigation Assessment Response Team (member)

Van Buer, Nicholas J.:

Peer reviewed two journal articles (reviewer)

e. Service related to Academic Outreach to Students

Marshall, Jeffrey:

Cal Poly Pomona Summer Research Experience (SRE) (research mentor for two community college students)

Osborn, Stephen G.:

Water quality testing and outreach to Platteville (Colorado) Middle School (~50 students) (conductor)

Polet, Jascha:

Pasadena City College for Department of Education grant to create STEM Pathways in Environmental Sciences (project lead for subcontract)

f. Service to the Greater Community

Marshall, Jeffrey:

Boy Scouts of America, Troop 407, Claremont, CA (adult leader and committee member)

NSF Reinvigorating Elementary Science through a Partnership with California Teachers (RESPECT) Summer Professional Development Institute for Teachers, Cal Poly Pomona CEMaST & Pomona Unified School District, June 15-26 & July 13-24, 2015 (earth science content expert)

NSF Reinvigorating Elementary Science through a Partnership with California Teachers (RESPECT) Fall & Spring Study Group Workshops at 6 different schools, Pomona Unified School District, Sept. 2015-May 2016 (earth science content expert)

NSF Reinvigorating Elementary Science through a Partnership with California Teachers (RESPECT) Professional Development Leader Guide Writer, Cal Poly Pomona CEMaST, Grade 6 (Sun's Effect on Climate), Grade 2 & 4 (Earth's Changing Surface), Grade K (Weather), Jan. 2016- June 2016 (earth science content expert)

Pomona College Geology Department, Annual Woodford-Eckis Banquet & Lecture, February 17, 2016, Claremont, CA (invited guest and CPP representative)

Murray, Bryan:

Heal the Bay: Coastal Cleanup Day operations, northern Malibu site runner (assistant)

Presented "Citizen Scientist of the Decade" award in honor of 10 years of service

Reef Check California: Conducted ~30 underwater transects to assess ecology of rocky reefs in southern California (conductor)

Osborn, Stephen G.:

Inland Empire Waterkeeper organization (water quality outreach)

Mujeres de la Tierra, Inglewood Oil Field community outreach (scientific liaison)

Torres Martinez Desert Cahuilla Indians (water quality outreach)

Polet, Jascha:

Twitter account (CPP Geophysics) with ~3200 followers, on topics related to Geophysics on a global, regional and local (campus) scale (maintainer)

SCHOLARLY & CREATIVE ACTIVITIES AND ACCOMPLISHMENTS (January 2015 through May 2016)

III. Research, Scholarship and Creative Activity of Faculty Members Performed Individually or in Collaboration with Others Including Students.

a. Publications (Externally Peer Reviewed)

January 2015-May 2015:

Marshall, J., Barnhart[#], A., Butcher[#], A., Freimuth, C., Khaw[#], F., LaFromboise, E., Landeros[#], M., Morrish[#], S., Olson, E., Ritzinger[#], B., Stewart[#], D., Utick[#], J., Wellington[#], K., Wenceslao[#], L., Gardner, T., Harbor, D. & **Osborn, S.** (2015, May). Beachrock horizons of the Nicoya Peninsula, Costa Rica: Geomorphology, petrology, and neotectonic significance. In: P. Wang, J. D. Rosati & J. Cheng (Eds.), *Proceedings of the Coastal Sediments 2015, San Diego, CA*, pp. 2984-3003. World Scientific. ISBN: 978-981-4689-96-0.

Murray, B. P. & Busby, C. J. (2015, March). Epithermal mineralization controlled by synextensional magmatism in the Guazapares Mining District of the Sierra Madre Occidental silicic large igneous province, Mexico. *Journal of South American Earth Sciences*, 58, 54-71. doi:10.1016/j.jsames.2014.12.009.

Rodgers, J. D., Burke, T. L., **Osborn, S. G.** & Ryan, J. N. (2015, May). A framework for identifying organic compounds of concern in hydraulic fracturing fluids based on their mobility and persistence in groundwater. *Environmental Science and Technology Letters*, 2(6), 158-164. doi:10.1021/acs.estlett.5b00090.

Van Buer, N. J., Jagoutz, O., Upadhyay, R. & Guillong, M. (2015, March). Mid-crustal detachment beneath western Tibet exhumed where conjugate Karakoram and Longmu–Gozha Co faults intersect. *Earth and Planetary Science Letters*, 413, 144-157. doi:10.1016/j.epsl.2014.12.053.

June 2015-May 2016:

Hamilton, S. M., Grasby, S. E., McIntosh, J. & **Osborn, S. G.** (2015, June). The effect of long-term regional pumping on hydrochemistry and dissolved gas content in an undeveloped shale-gas-bearing aquifer in southwestern Ontario, Canada. *Hydrogeology Journal*, 23(4), 719-739. doi:10.1007/s10040-014-1229-7.

McIntosh, J., Hamilton, S. M., Grasby, S. E. & **Osborn, S. G.** (2015, December). Reply to Ryan et al. comment on "Origin, distribution and hydrogeochemical controls on methane occurrences in shallow aquifers, southwestern Ontario". *Applied Geochemistry*, 63, 446-450. doi:10.1016/j.apgeochem.2015.08.014.

Spotila, J. A., **Marshall, J.**, DePew, K., Prince, P. S. & Kennedy, L. (2016, March). Potential for geologic records of coseismic uplift and megathrust rupture along the Nicoya Peninsula, Costa Rica. *Journal of Coastal Research*, 32(2), 387-396. doi:http://dx.doi.org/10.2112/JCOASTRES-D-14-00151.1.

b. Publications (NOT Externally Peer Reviewed)

January 2015-May 2015:

McLarty^{##}, A. H. (2014). Structural reactivation and overprinting of the eastern rand thrust complex Mojave Desert, southern California (Master's thesis). California State Polytechnic University, Pomona, CA. (not reported in last year's report)

Perez^{##}, S. L. (2015, March). A GIS investigation of paired watersheds: Icehouse Canyon and upper San Antonio Canyon, eastern San Gabriel Mountains (Master's thesis). California State Polytechnic University, Pomona, CA.

June 2015-May 2016:

- Barba^{###}, M. (2015, July). Near-field post-seismic deformation of Mojave earthquakes using InSAR (Master's thesis). California State Polytechnic University, Pomona, CA.
- Brigham[#], K. M. & **Van Buer, N. J.** (2016, April). Geochemical analysis of late cretaceous intrusive rocks in the western Mojave Desert, CA. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274538.
- Chantrapornlert^{###}, K. (2016). Analysis of shallow resistivity profiles across the San Jose fault on the California State Polytechnic University, Pomona campus (Master's thesis). California State Polytechnic University, Pomona, CA.
- De Leon[#], A. E., **Van Buer, N. J.** & Santos, R. (2016, April). Geologic mapping of the northern calico mountains, Mojave Desert, California. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274542.
- Hatch^{###}, R. (2015, August). Dynamically triggered earthquakes and tremor: A study of western North America using two recent large magnitude events (Master's thesis). California State Polytechnic University, Pomona, CA.
- Ho^{###}, K. (2015, August). Determining site response from seismic noise measurements on Cal Poly Pomona campus (Master's thesis). California State Polytechnic University, Pomona, CA.
- Kunath^{###}, D., **Nourse, J. A.** & **Osborn, S. G.** (2016, April). Sources of salinity and water in a spring and natural oil/tar seep system in the Santa Susana Mountains, Newhall, California. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274761.
- Marshak^{###}, J. W. & **Nourse, J. A.** (2016, April). Employing middle Miocene mafic dike orientations in the eastern San Gabriel Mountains to resolve Miocene emplacement stress regimes and Cenozoic block rotations. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274581.
- Marshall, J.** & Spotila, J. A. (2015, August). Megathrust earthquakes and forearc uplift along the Nicoya Peninsula, Costa Rica. *MARGINS Funded Research Nuggets, 2015 NSF GeoPRISMS Program Review*, B2-44.
- McLarty^{###}, A. H. & **Nourse, J. A.** (2016, April). Role of the Rand Mountains in accommodating extension and transrotational strain near juncture of the central Garlock Fault and eastern California Shear Zone. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274660.
- Miranda^{###}, D. & **Nourse, J. A.** (2016, April). Real-time response of streamflow and spring discharge to precipitation recharge events in Icehouse Canyon Watershed, eastern San Gabriel Mountains, California. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274722.
- Morrish^{###}, S. C. (2015, June). Characterization and digital morphotectonic analysis of drainage basins in a deforming forearc, Nicoya Peninsula (Master's thesis). California State Polytechnic University, Pomona, CA.
- Murray, B. P.** & Busby, C. J. (2016, April). Late Oligocene magmatism and extensional basin development during the Mid-Cenozoic ignimbrite flare-up in the northern Sierra Madre Occidental silicic large igneous province, Chihuahua, Mexico. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274724.
- Nourse, J. A.** & Premo, W. R. (2016, April). New SHRIMP-RG U-Pb zircon and SR analyses from Jurassic and late cretaceous plutonic sheets in the east-central San Gabriel Mountains, California. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274654.

- Nourse, J. A.** (2016, April). Northeastward detachment of the Laramide El Creston mineral deposit, central Sonora, Mexico. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274661.
- Perez^{###}, S. L. & **Nourse, J. A.** (2016, April). Effects on baseflow recession and evapotranspiration rates using a GIS investigation of paired watersheds in the eastern San Gabriel Mountains. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274662.
- Shulaker^{###}, Z., Grove, M., Jacobson, C. E. & **Nourse, J. A.** (2016, April). Timing of rand detachment fault slip in the rand mountains, western Mojave Desert. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274625.
- Shulaker^{###}, Z., **Van Buer, N. J.**, Sharman, G. R., Lovera, O. M. & Grove, M. (2016, April). Detrital thermochronology reveals temporal changes in Eocene to Miocene erosion throughout the southern Sierra Nevada Batholith and northwest Mojave Desert region. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274583.
- Tafoya[#], C. J. & **Osborn, S. G.** (2016, April). Nitrate analysis of waters in the Winter Creek Watershed, San Gabriel Mountains, California. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274262.
- Van Buer, N.**, Brigham[#], K. M. & Soto[#], P. M. (2016, April). Late cretaceous high-flux magmatism in the western Mojave Desert. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274759.
- Vanderwey[#], T. (2016, April). Water quality survey of saline springs that rim the Williston Basin. Abstract presented at the 112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section, Ontario, CA. *Geological Society of America (GSA) Abstracts with Programs*, 48(4). doi:10.1130/abs/2016CD-274645.
- Wlodarczyk^{###}, M. (2016). Shallow aquifer geochemistry in areas of intense coal bed methane recovery within the Raton Basin, Colorado (Master's thesis). California State Polytechnic University, Pomona, CA.

c. Published Books/Chapter(s) in Books (as Author or Editor)

January 2015-May 2015: None reported.

June 2015-May 2016:

- Polet, J.** & Kanamori, H. (2016, May). Tsunami earthquakes (pp. 1-22). In R. A. Meyers (Ed.), *Encyclopedia of Complexity and Systems Science*. Springer Berlin-Heidelberg. ISBN: 978-3-642-27737-5. doi:10.1007/978-3-642-27737-5_567-3.

d. Presentations at Professional Conferences

January 2015-May 2015:

- Barba^{###}, M. (mentor: Peltzer, G.) (2015, March). Seismology from space: InSAR time-series analysis of recent Mojave earthquakes. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Bustos[#], O. (2015, April). Geomorphological analysis of Snowslide Canyon, Crystal Lake Campground, Azusa, California. *Water Resources Institute (WRI)*, CSU San Bernardino, CA. (S)

- Cheung[#], H. (mentor: **Nourse, J. A.**) (2015, March). Storm events of the sierra powerhouse. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Davila[#], G. (mentor: **Nourse, J. A.**) (2015, March). Geology in Guffy campground. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Hatch^{###}, R. L. & **Polet, J.** (2015, April). Dynamically triggered earthquakes and tremor: A look at western North America using two recent events. *Seismological Society of America Annual Meeting*, Pasadena, CA. (N*)
- Ho^{###}, K. Y. K. & **Polet, J.** (2015, April). Mapping of site characteristics using HVSR on Cal Poly Pomona campus. *Seismological Society of America Annual Meeting*, Pasadena, CA. (N*)
- Kang[#], J. & **Polet, J.** (2015, May). Preserving rock cores for potential Mars sample return. *10th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Kunath^{###}, D. (mentors: **Osborn, S. G. & Nourse, J. A.**) (2015, March). Sources of salinity and water in a spring and natural oil seep system in the Santa Susana Mountains, Newhall, California. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Kupferschmidt[#], L. (mentor: **Polet, J.**) (2015, March). Locations of new craters produced by observed lunar impacts. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Kupferschmidt[#], L., Moser, D., Suggs, R., Cooke, W. & **Polet, J.** (2015, May). Locations of new craters produced by observed lunar impacts. *10th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Marshall, J.**, Barnhart[#], A., Butcher[#], A., Freimuth, C., Khaw[#], F., LaFromboise, E., Landeros[#], M., Morrish[#], S., Olson, E., Ritzinger[#], B., Stewart[#], D., Utick[#], J., Wellington[#], K., Wenceslao[#], L., Gardner, T., Harbor, D. & **Osborn, S.** (2015, May). Beachrock horizons of the Nicoya Peninsula, Costa Rica: Geomorphology, petrology, and neotectonic significance. *Coastal Sediments 2015 Conference*, San Diego, CA. (N)
- Mundo[#], A. & **Nourse, J. A.** (2015, May). Analysis of mesoscale rapidly occluding storm causing severe atmospheric anomalies in southern California on February 28th, 2014. *10th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Mundo[#], A. (mentor: **Nourse, J. A.**) (2015, March). Analysis of mesoscale rapidly occluding storm causing severe atmospheric anomalies in southern California on February 28th, 2014. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Ng^{###}, R. (mentor: **Polet, J.**) (2015, March). Earthquake hazard in the Los Angeles Basin: Measurements of seismic amplification. *3rd Annual Cal Poly Pomona Student Research Conference*, Pomona, CA. (L/R)
- Ng^{###}, R., Barklage, M. & **Polet, J.** (2015, April). Seismic amplification in the Los Angeles Basin using spectral ratio analysis: Preliminary results from a temporary seismic deployment. *Seismological Society of America Annual Meeting*, Pasadena, CA. (N*)
- Seese[#], L. & **Osborn, S.** (2015, May). Water quality of the Big Tujunga Canyon watershed. *10th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Soto[#], P. M., **Nourse, J. A. & Osborn, S.** (2015, March). Discharge and geochemical characteristics of Evey Canyon and Icehouse Canyon Springs, San Gabriel Mountains, during extended drought. *Water Resources Institute (WRI)*, CSU San Bernardino, CA. (S)
- Tafoya[#], C. J., Heyer[#], G., Robles[#], T. & **Osborn, S.** (2015, May). Nitrate analysis of waters in the winter creek watershed, San Gabriel Mountains, California. *10th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)

June 2015-May 2016:

- Brigham[#], K. M. & **Van Buer, N. J.** (2016, April). Geochemical analysis of late cretaceous intrusive rocks in the western Mojave Desert, CA. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)

- Chacón, D., Chavez, J. & Stewart[#], D. (mentor: **Marshall, J.**) (2015, August). Geomorphology and topography of beachrock outcrops of the Nicoya Peninsula, Costa Rica. *1st Annual Creative Activities & Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Chantrapornlert^{###}, K. J. & **Polet, J.** (2015, September). Imaging the San Jose fault with resistivity on the California State Polytechnic University, Pomona campus. *Southern California Earthquake Center Annual Meeting*, Palm Springs, CA. (N*)
- Chantrapornlert^{###}, K. J. & **Polet, J.** (2015, September). Utilizing resistivity surveys to map the San Jose fault on the Cal Poly Pomona campus in southern California. *AAPG/SEG Student Expo*, Houston, TX. (N*)
- Chantrapornlert^{###}, K. J., **Polet, J.** & Colin[#], H. (2015, December). Shallow subsurface resistivity profiles across the San Jose fault as it transects the Cal Poly Pomona campus. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA. (N*)
- Chavez, J. (mentor: **Marshall, J.**) (2015, August). Morphology and mineralogy of beachrock cements along the Nicoya Peninsula, Costa Rica. *1st Annual Creative Activities & Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Cheiffetz^{###}, T. M. & **Polet, J.** (2015, September). Site response along the Hollywood fault zone. *Southern California Earthquake Center Annual Meeting*, Palm Springs, CA. (N*)
- Curry[#], B. (mentor: **Polet, J.**) (2015, November). Analysis of seismic resonance during the eruption cycle of lone star geyser, Yellowstone National Park. *Southern California Conferences for Undergraduate Research (SCCUR)*, Harvey Mudd College, Claremont, CA. (L/R)
- De Leon[#], A. E., **Van Buer, N. J.** & Santos, R. (2016, April). Geologic mapping of the northern calico mountains, Mojave Desert, California. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Dilloughery[#], B. S., Marietti[#], J., Rosenblum[#], M. & **Osborn, S.** (2016, May). Analysis of seep and spring water in Towsley Canyon State Park. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Garcia[#], A. J. & **Roumelis, E.** (2016, May). A close look at the silver spur graben: Faulting or landslide? *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Gonzalez[#], G. R. & **Osborn, S.** (2016, May). Monitoring water quality on the Cal Poly Pomona campus. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Heyer[#], G. (mentor: **Osborn, S.**) (2015, November). Water quality in San Anita Canyon. *Southern California Conferences for Undergraduate Research (SCCUR)*, Harvey Mudd College, Claremont, CA. (L/R)
- Kunath^{###}, D., **Nourse, J. A.** & **Osborn, S. G.** (2016, April). Sources of salinity and water in a spring and natural oil/tar seep system in the Santa Susana Mountains, Newhall, California. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Lavey[#], A. & **Polet, J.** (2016, May). Analysis of seismic site response for the Whittier fault using spectral ratio analysis of a short-term seismometer deployment. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Marshak^{###}, J. W. & **Nourse, J. A.** (2016, April). Employing middle Miocene mafic dike orientations in the eastern San Gabriel Mountains to resolve Miocene emplacement stress regimes and Cenozoic block rotations. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Marshall, J.** (2015, December). Strategies for effective mentoring of independent undergraduate research projects: Council on Undergraduate Research (CUR). *Getting Started in Undergraduate Research Workshop for New, Future, and Current Faculty*, American Geophysical Union (AGU) 2015 Fall Meeting, San Francisco, CA. (I*)
- Marshall, J.**, Spotila, J., Gardner, T., Protti, M., LaFromboise, E., Morrish^{###}, S., Robinson^{###}, M., Barnhart[#], A., Butcher[#], A., Khaw[#], F., Piestrzeniewicz[#], P., Ritzinger[#], B., Utick[#], J. & Wellington[#], K. (2015, December). Forearc morphotectonics and megathrust earthquakes along the Middle America convergent margin, Nicoya Peninsula, Costa Rica. *American Geophysical Union (AGU) 2015 Fall Meeting*, San Francisco, CA. (I*)

- Mayfield[#], K. & **Van Buer, N. J.** (2016, May). Effects of diffusion on metasomatic contacts between limestone and granite in Cal Portland's Mojave, CA Quarry. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- McLarty^{###}, A. H. & **Nourse, J. A.** (2016, April). Role of the Rand Mountains in accommodating extension and transrotational strain near juncture of the central Garlock fault and eastern California Shear Zone. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Miranda^{###}, D. & **Nourse, J. A.** (2016, April). Real-time response of streamflow and spring discharge to precipitation recharge events in Icehouse Canyon Watershed, eastern San Gabriel Mountains, California. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Miranda^{###}, D. (mentors: **Nourse, J. A. & Osborn, S.**) (2016, January). Response of streamflow and spring discharge from precipitation recharge events in Icehouse Canyon Watershed, eastern San Gabriel Mountains, California. *Water Resources Institute (WRI)*, CSU San Bernardino, CA. (S)
- Murray, B. P.** & Busby, C. J. (2016, April). Late Oligocene magmatism and extensional basin development during the Mid-Cenozoic ignimbrite flare-up in the northern Sierra Madre Occidental silicic large igneous province, Chihuahua, Mexico. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Ng^{###}, R. & **Polet, J.** (2015, December). Application of spectral ratio methods to an investigation of site response in the Los Angeles Basin. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA. (N*)
- Ng^{###}, R. & **Polet, J.** (2015, September). Seismic amplification in the Los Angeles Basin: Preliminary results using spectral ratio analysis. *AAPG/SEG Student Expo*, Houston, TX. (N*)
- Ng^{###}, R. & **Polet, J.** (2016, April). Implementation of the spectral ratio method on data from a high-density seismic experiment in the Los Angeles Basin. *Seismological Society of America Annual Meeting*, Reno, Nevada. (N*)
- Ng^{###}, R. & **Polet, J.** (2016, May). Implementation of the spectral ratio method on data from a high-density seismic experiment in the Los Angeles Basin. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Nourse, J. A.** & Premo, W. R. (2016, April). New SHRIMP-RG U-Pb zircon and SR analyses from Jurassic and late cretaceous plutonic sheets in the east-central San Gabriel Mountains, California. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Nourse, J. A.** (2016, April). Northeastward detachment of the Laramide El Creston mineral deposit, central Sonora, Mexico. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Owen, S. E., Simons, M., Hua, H., Fielding, E., Yun, S-H., Moore, A., Webb, F., Lundgren, P., Yue, H., **Polet, J.**, Sacco, G. F., Liang, C., Huang, M-H., Agram, P., Rosen, P., Riel, B., Liu, Z., Milillo, P., Manipon, G. & Cruz, J. (2015, September). Using SAR and GPS for hazard management and response: Progress and examples from the Advanced Rapid Imaging and Analysis (ARIA) project. *Southern California Earthquake Center Annual Meeting*, Palm Springs, CA. (N*)
- Owen, S. E., Fielding, E., Yun, S., Yue, H., **Polet, J.**, Riel, B., Liang, C., Huang, M., Webb, F., Simons, M., Moore, A., Agram, P., Barnhart, W., Hua, H., Liu, Z., Milillo, P., Sacco, G. F., Rosen, P. & Manipon, G. (2015, December). The Advanced Rapid Imaging and Analysis (ARIA) project's response to the April 25, 2015 M7.8 Nepal earthquake: Rapid measurements and models for science and situational awareness. *American Geophysical Union Fall Meeting*, San Francisco, CA. (N*)
- Panossian[#], L. T., Carey, E. M., Peters, G. H., Shiraishi, L. R. & **Polet, J.** (2016, May). Mechanical properties of rock analogs for the Mars2020 mission. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Pastrana[#], N. & Cheiffetz^{###}, T. (mentor: **Polet, J.**) (2015, November). Characterizing the shallow subsurface along the Hollywood fault zone. *Southern California Conferences for Undergraduate Research (SCCUR)*, Harvey Mudd College, Claremont, CA. (L/R)

- Perez^{##}, S. L. & **Nourse, J. A.** (2016, April). Effects on baseflow recession and evapotranspiration rates using a GIS investigation of paired watersheds in the eastern San Gabriel Mountains. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Petrashek[#], S. R., Rivera[#], E. & **Polet, J.** (2016, May). Investigation of the white point landslide area using electrical resistivity surveys. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Robles[#], T. (mentor: **Van Buer, N. J.**) (2015, November). Spring discharge and mineral deposits near Robert's mine exploratory tunnel in the San Gabriel Mountains. *Southern California Conferences for Undergraduate Research (SCCUR)*, Harvey Mudd College, Claremont, CA. (L/R)
- Shulaker^{##}, Z., Grove, M., Jacobson, C. E. & **Nourse, J. A.** (2016, April). Timing of rand detachment fault slip in the rand mountains, western Mojave Desert. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Shulaker^{##}, Z., **Van Buer, N. J.**, Sharman, G. R., Lovera, O. M. & Grove, M. (2016, April). Detrital thermochronology reveals temporal changes in Eocene to Miocene erosion throughout the southern Sierra Nevada Batholith and northwest Mojave Desert region. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Tafoya[#], C. J. & **Osborn, S. G.** (2016, April). Nitrate analysis of waters in the Winter Creek Watershed, San Gabriel Mountains, California. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Thio, H. K., **Polet, J.** & Ryan, K. (2015, December). Using DART-recorded Rayleigh waves for rapid CMT and finite fault analyses of large megathrust earthquakes. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA. (N*)
- Van Buer, N. J.** (2015, December). The heat budgets of magmatic arcs: Discrepancies between heat flow measurements, volatile fluxes, and interpretations of the geologic record. *American Geophysical Union (AGU) 2015 Fall Meeting*, San Francisco, CA. (I*)
- Van Buer, N. J.**, Brigham[#], K. M. & Soto[#], P. M. (2016, April). Late cretaceous high-flux magmatism in the western Mojave Desert. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Vanderwey[#], T. & **Osborn, S.** (2016, April). Water quality survey of saline springs that rim the Williston Basin. *112th Annual Meeting of the Geological Society of America (GSA) Cordilleran Section*, Ontario, CA. (N)
- Vanderwey[#], T., Ellis^{##}, R. & **Osborn, S.** (2016, May). Survey of ground water and saline springs that rim the Williston Basin. *11th Annual College of Science Research Symposium*, California State Polytechnic University, Pomona, CA. (L/R)
- Yue, H., Simons, M., Jiang, J., Fielding, E., Owen, S., Moore, A., Riel, B., **Polet, J.**, Duputel, Z., Samsonov, S. & Avouac, J-P. (2015, December). Kinematic rupture process of the 2015 Gorkha (Nepal) earthquake sequence from joint inversion of teleseismic, hr-GPS, strong-ground motion, InSAR interferograms and pixel offsets. *American Geophysical Union (AGU) Fall Meeting*, San Francisco, CA. (N*)

IV. Grant Activities

a. Extramural Grants (New)

- Marshall, J.** Collaborative Research: Controls on along-strike variations in locked and creeping megathrust behavior at the Hikurangi convergent margin, National Science Foundation (NSF), Integrated Earth Studies Program, \$378,087. Aug. 2016-July 2020. (F)
- Nourse, J. A.** Sally Lane Gifts, Lane Trust: Student support and remodeling of the Lane Paleontology Laboratory (4-A-608), \$13,000. Oct. 2015-Nov. 2015. (F)
- Osborn, S. G.** Source of fluids and salinity at Dos Palmas Springs and Nature Preserve, Bureau of Land Management, \$16,275. Feb. 2016-May 2016. (F)

- Owen, S. (PI-JPL), with Co-PI, **Polet, J.** Rapid imaging of natural hazards, National Aeronautics and Space Administration (NASA) ROSES, \$60,014 subaward to CPP. Oct. 2015-Sept. 2017. (F)
- Polet, J.** Analysis of a dense broadband survey across the Los Angeles basin, University of Southern California/National Science Foundation (NSF) subaward \$13,885. Jan. 2016-Dec. 2016. (F)
- Polet, J.** Pasadena City College-Cal Poly Pomona STEM Pathways in Environmental Sciences, Pasadena City College/United States Department of Education (Yr 5), \$317,484. Sept. 2015-Aug. 2016. (F)
- Polet, J.** Using DART-buoy recorded Rayleigh waves for rapid CMT and finite fault analyses of large megathrust earthquakes: Collaborative research with AECOM and California State Polytechnic University in Pomona, National Earthquake Hazard Reduction Program, \$29,309. Sept. 2016-Sept. 2017. (NF)

b. Extramural Grants (Ongoing)

- Osborn, S. G.** (PI) Routes to sustainability for natural gas development and water and air resources in the Rocky Mountain Region, National Science Foundation (NSF), Sustainability Research Networks (SRN), subaward from University of Colorado Regents, \$448,793. Oct. 2012-Sept. 2017.
- Persaud, P.** 3-D seismotectonic-velocity model of the salton trough region based on seismicity and explosive shots from the salton seismic imaging project, United States Department of the Interior, USGS Science for a Changing World Program, \$53,129. Apr. 2015-Apr. 2016.
- Polet, J.** Contributions to the ARIA-EQ system development, National Aeronautics and Space Administration (NASA) to Caltech/JPL with subaward of \$137,904 to CPP. Sept. 2011-Sept. 2015.
- Polet, J.** Pasadena City College-Cal Poly Pomona STEM Pathways in Environmental Sciences, Pasadena City College/United States Department of Education (Yr 4), \$351,897. Sept. 2014-Aug. 2015.
- Polet, J.** Rapid finite fault inversion for earthquakes in southern California: Using the Cybershake Library of 3D Green's Functions: Collaborative Research with URS Group, Inc. and California State Polytechnic University in Pomona, United States Department of the Interior, National Earthquake Hazard Reduction Program, \$29,294. Sept. 2014-July 2017.
- Wickler, N. I. Z.** (PI), with Co-PIs, **Beardsley P., Caine, A., Roth, K** (BSCS), and contributions from **Marshall, J., Page, M. F. Z., Riggs, L., Sadaghiani, H., Valsey, J., Winicki-Landman, G.** & Baker, S. (PUSD). Reinvigorating Elementary Science through a Partnership with California Teachers (RESPECT): Sustainable, research-based professional development with teacher leaders in a high-needs district, National Science Foundation (NSF) Math Science Partnership (MSP) program, \$7,659,637. Sept. 2013-Aug. 2018.

c. Intramural Grants (New)

- Marshall, J.** (PI), with Co-PIs, **Smith, J. R. & Conway-Gomez, K.** Death & taxa: Monitoring seismic cycle ground deformation using rocky intertidal zone mortality, Nicoya Peninsula, Costa Rica, 2016/2017 Strategic Interdisciplinary Research Grant (SIRG) Program, \$19,583. June 2016-June 2017. (F)
- Marshall, J.** 2015/2016 Provost's Teacher-Scholar Award, 8 WTU assigned time. Sept. 2015-May 2016. (F)
- Marshall, J.** 2016/2017 Provost's Teacher-Scholar Award, 4 WTU assigned time. Sept. 2016-May 2017. (F)
- Murinda, S.** (PI), with Co-PIs, **Murry, M., Sharbat, A. & Osborn, S.** Microalgae for a synergistic approach to agricultural nutrient recovery, 2016/2017 Strategic Interdisciplinary Research Grant (SIRG) Program, \$19,833. June 2016-June 2017. (F)
- Murray, B. P.** Stratigraphic section measurement and sedimentary lithology analysis, 2016 Faculty Professional Development Mini-Grant Program, \$1,000. Jan. 2016-June 2016. (F)
- Nourse, J. A.** Preparation of manuscripts related to geochronology research in the San Gabriel Mountains, 2015/2016 Provost's Teacher-Scholar Award, 8 WTU assigned time. Sept. 2015-May 2016. (F)
- Nourse, J. A.** Scouting, new field sites, editing student videos, and manuscript preparation, 2016/2017 Provost's Teacher-Scholar Award, 4 WTU assigned time. Sept. 2016-May 2017. (F)

Polet, J. Exceptional Levels of Service to Students, 4 units of assigned time. March 2016- May 2017. (F)

Van Buer, N. J. 2015/2016 Faculty Early Career Summer Support Program (formerly Provost's Teacher Scholar Program), Summer 2015 (\$5,000) and Summer 2016 (\$6,000) stipends. (NF)

d. Intramural Grants (Ongoing)

Marshall, J. 2014/2015 Provost's Teacher-Scholar Award, 8 WTU assigned time. Sept. 2014-May 2015.

Marshall, J. Earthquake and tsunami hazards of the Hikurangi subduction margin, North Island, New Zealand, 2014/2015 President's Research, Scholarly, and Creative Activity (RSCA) Program, W. K. Kellogg Foundation, \$5,000 summer stipend and \$5,000 undergraduate student supplement. July 2014-Oct. 2015.

Marshall, J. Megathrust earthquake and tsunami hazards of the Hikurangi subduction margin, North Island, New Zealand, 2015 Faculty Professional Development Mini-Grant Program, \$1,000. Jan. 2015-June 2015.

Marshall, J. Sustainability for undergraduate research funding: Kellogg Undergraduate Scholars Program & FuTURE Mini-Grants, W.K. Kellogg Foundation: Kellogg Legacy Project Endowment, \$70,000. July 2014-June 2016.

Marshall, J. Transformative undergraduate research engagement (Kellogg FuTURE Program): W. K. Kellogg Foundation: Kellogg Legacy Project Endowment, \$130,000. July 2011-June 2015.

Nourse, J. A. Interactive smart board for room 4-A-634, 2014/2015 Special Projects for Improving the Classroom Experience (SPICE) Classroom Modernization Program, \$6,949. July 2014-June 2015.

Osborn, S. G. Source of waters and salinity at the Dos Palmas Springs Preserve, President's Research, Scholarship, and Creative Activities (RSCA) Program, W. K. Kellogg Foundation, \$8,389. July 2013-June 2016.

Polet, J. Imaging the Los Angeles Basin with a dense seismic survey, 2014/2015 President's Research, Scholarly, and Creative Activity (RSCA) Program, W. K. Kellogg Foundation, \$10,000 Minigrant and undergraduate student supplement. July 2014-June 2016.

V. Professional Awards and Honors to Faculty Members

Nourse, J. A. (May 2015). Outstanding Faculty Member, Veterans Resource Center, Cal Poly Pomona.

Osborn, S. (2015). The Best of the Best Award in 2015 for a co-authored journal in *ES&T Journal*.
<http://pubs.acs.org/doi/10.1021/acs.estlett.6b00113>.

Polet, J. (2016). Invited to present at the International Nathiagali Summer College (INSC) on Seismology, to be held in Nathiagali near Islamabad, Pakistan, on 25-30 July, 2016. INSC offered to cover all travel and subsistence costs. Declined invitation due to time conflict.

Polet, J. (2016). Invited to review meeting of project: "Probabilistic TSUnami Hazard MAPS for the NEAM Region" (TSUMAPS-NEAM) in Athens (Greece) on June 29th, July 1st, 2016 and to follow-up meeting in Rome from 4th to 6th July, 2016, to discuss possible interactions of TSUMAPS-NEAM with Global Tsunami Model organization. TSUMAPS-NEAM project will cover all travel and subsistence costs.

Polet, J. (May 2016). 2015/2016 College of Science Outstanding Faculty Advisor, Cal Poly Pomona.

Van Buer, N. J. (June 2016). 2015/2016 College of Science Distinguished Teaching Award Finalist, Cal Poly Pomona.

VI. Scholarship with Students

a. Research Involving Students as Researchers

Marshall, Jeffrey:

Chacón, David (Citrus College UG). 2015. Geomorphology and topography of beachrock outcrops of the Nicoya Peninsula, Costa Rica.

- Chávez, Julia (Cypress College UG). 2015. Morphology and mineralogy of beachrock cements along the Nicoya Peninsula, Costa Rica.
- Morrish, Shawn (G). 2012-2015. Digital morphotectonic analysis and characterization of drainage basins in a deforming forearc, Nicoya Peninsula, Costa Rica.
- Popel, Elliott (G). 2015/2016. Identifying suitable sites for Olympia oyster restoration through GIS modeling. Cal Poly Pomona, Lyle Center for Regenerative Studies.
- Robinson, Melissa (G). 2014-2016. G.I.S. mapping of uplifted coastal terraces using digital terrain models, Nicoya Peninsula, Costa Rica.
- Stewart, Dustin (UG). 2013-2015. Stratigraphic architecture of an anomalous Holocene beachrock outcrop, Playa Garza, Nicoya Peninsula, Costa Rica.

Murray, Bryan:

- Angenent, Janine (UG). 2015/2016. Sierra Madre Occidental ignimbrite stratigraphy.
- Dykstra, Michael (UG). 2016. Glendora Volcanics, Pomona, CA.
- Yaralian, David (UG). 2016. Buzzard Peak conglomerate, Pomona, CA.

Nourse, Jonathan A.:

- Agunwah, Reggie (G). Analysis of hogback landslide, San Gabriel Mountains, CA.
- Cheung, Herman (UG). 2015. Analysis of historic precipitation records from Rain Gauge 619, San Antonio Canyon, CA.
- Craig, Kenneth (UG). 2015. Geochemical analysis of graphite deposits, San Gabriel Mountains, CA.
- Davila, Gustavo (UG). 2015. Geological mapping of pelona schist on near guffy campground, San Gabriel Mountains, CA.
- Kunath, Debbie (G). 2014-2016. Sources of salinity and water in a spring and natural oil/tar seep system in the Santa Susana Mountains, Newhall, California.
- Lenhert, Lucas (UG). 2015. Hydrogeology of Evey Canyon, San Gabriel Mountains, CA.
- Maldonado, Jeanette (UG). 2015. Hydrogeology of Evey Canyon, San Gabriel Mountains, CA.
- Marshak, Jon (G). 2014-2016. Structural and GIS analysis of middle Miocene mafic-intermediate dike swarm in the San Gabriel Mountains, CA.
- Mundo, Alejandro (UG). 2015. Case study of mesoscale rapidly occluding storm causing severe atmospheric anomalies in Southern California on Feb. 28th, 2014.
- Perez, Susan (G). 2013-2015. A GIS investigation of paired watersheds: Icehouse Canyon and Upper San Antonio Canyon, Eastern San Gabriel Mountains, CA.
- Soto, Paula (UG). 2016. Hydrologic and geochemical comparison of Evey Canyon and Icehouse Canyon Watersheds, San Gabriel Mountains, CA.
- Zylstra, Scott (G). 2015/2016. Metasediments of Ontario Ridge, San Gabriel Mountains, California: Stratigraphy, structure and geochronology, CA.

Osborn, Steve:

- Anelli, Deanna (UG). Source of trace metals in spring discharge Chantry Flats, San Gabriel Mountains.
- Blount, Joseph (UG). Spring discharge in Winter Creek Canyon.
- Cartwright-Robles, Taylor (UG). Trace metal analyses spring discharge near abandoned mining operations, San Gabriel Mountains.
- Clowdus, Austin (UG). Water quality of Winter Creek Canyon stream.
- Craig, Kenneth (G). Soil gas survey near porter ranch gas leak, California.

Creegan, Emily (G). Use of compost for improved plant growth, nutrient availability, and water capacity in soils.

Dillroughy, Brendan (UG). Source of fluids in saline springs, Towsley Canyon.

Ellis, Rob (G). Source of fluids in shallow aquifers of the Williston Basin, North Dakota and Montana.

Espinoza, Ashley (UG). Effect of El Nino on drought, California.

Garcia, Kevin (G). Source of fluids and salinity ad Dos Palmas Springs and Natural Preserve.

Giberson, Brian (G). Source of high arsenic from spring discharge, San Gabriel Mountains.

Gonzalez, Gloria (UG). Monitoring water quality on the Cal Poly campus.

Heyer, Gabriel (UG). Water quality of Santa Anita Canyon watershed.

Kunath, Debbie (G). Source of fluids in springs and oil seeps Santa Susanna, California.

Marrietti, Jenna (UG). Water quality of waters discharging from oil seeps, Towsley Canyon, California.

McClain, Nicole (G). Non-native *Arundo Donax* L. Vs. Native *Typha Latifolia* L.: A comparison of biomonitors for heavy metals.

Rosenblum, Matt (UG). Trace metal geochemistry of saline oil seep discharge, Towsley Canyon.

Tafoya, Chris (UG). Investigation of High Nitrate, Winter Creek Canyon, San Gabriel Mountains.

Vail, Tyler (UG). Soil gas survey near abandoned gas wells, California.

Vanderwey, Tara (UG). Survey of groundwater and spring salinity, Williston, Basin, North Dakota.

Wlodarczyk, Max (G). Source of dissolved gas in a shallow coal bearing aquifer, Raton Basin, Colorado.

Wright, Kyle (G). Evaluation of high nitrate in springs discharging at the base of the San Gabriel Mountains.

Yerkes, Tamara (G). Pience Basin groundwater quality.

Zohbe, Noah (G). Survey of shallow aquifer dissolved gases cross basin comparisons.

Polet, J.:

Agoncillo, Kristina (UG). 2016. Seismic response analysis of the site of the future student housing buildings on Cal Poly Pomona campus.

Barajas, Mayra (UG). 2016. Measurements of resonance frequency near and in the CLA building on Cal Poly Pomona campus.

Barba, Magali (G). 2015/2016. Postseismic deformation after Mojave earthquakes.

Barragan, Christina (UG). 2016. Are ongoing seismic swarms susceptible to dynamic triggering from teleseismic earthquakes?

Butcher, Amber (G). 2015/2016. Shallow anisotropy in the Los Angeles Basin.

Chantrapornlert, Kevin (G). 2015/2016. Resistivity profiles across the San Jose fault.

Cheiffetz, Terry (G). 2015. Geophysical investigation of the Hollywood fault zone.

Curry, Brittany (UG). 2015. Geophysics of lone star geyser.

De Cristofaro, Jason (G). 2016. Structure from motion of traces of the Hilton Creek fault system.

DelaRosa, Angel (UG). 2015. Site response near the Hollywood fault (Hollywood area).

Gage, Nicole (UG). 2015/2016. Intermediate depth earthquakes in the Mariana subduction Zone.

Hatch, Rachel (G). 2015. Dynamic triggering of earthquakes in Southern California.

Herrman, Michael (G). 2015/2016. Improving seismic velocity models of the Los Angeles Basin.

Ho, Kennis (G). 2015. Amplification and resonance frequency of CPP campus.

Hodges, Michael (G). 2015. Static triggering in two recent Southern California aftershock sequences.

Lacy, Amber (UG). 2016. Topography and magnetics of the Hilton Creek fault system.

Lavey, Andrew (UG). 2015/2016. Spectral ratio measurements across the Whittier fault.

Leiva, Julie (G). 2015/2016. A new tsunami magnitude scale.

Levario, Jonathan (G). 2015/2016. The Pomona earthquake sequence, as recorded by a seismic deployment in the San Gabriel Mountains.

Macy, Kyle (UG). 2016. Swarm-like behavior of the seismicity of the Hilton Creek fault system.

Ng, Raymond (G). 2015/2016. Site response across the Los Angeles Basin from a dense temporary seismic network.

Nguyen, Rosa (G). 2015/2016. Strain partitioning in global subduction zones.

Pastrana, Nahtaly (UG). 2015. Site response near the Hollywood fault (Griffith Park area).

Petrashek, Stacey (UG). 2016. Time dependent resistivity of the white point landslide area.

Quimpo, Stephen (G). 2015. Revisiting bath's aftershock law.

Rivera, Erick (UG). 2016. Time dependent resistivity of the white point landslide area.

Ruddy, Brad (G). 2015/2016. Magnetics of the extension of the Garlock fault.

Schroeder, Sean (UG). 2015. Shallow seismic velocity structure near the CLA building.

Sutkowski, Chloe (UG). 2016. Verification of the deepest earthquakes in the Los Angeles Basin.

Terrones, Aaron (UG). 2016. Seismic response analysis of the site of the future student housing buildings on Cal Poly Pomona campus.

Zhan, Dandan (G). 2015/2016. Geophysical investigation of the Ventura fault.

Van Buer, Nicholas J.:

Alvarado, William (UG). 2015/2016. Contact metamorphism and economic geology of the Palen Pass gypsum deposit.

Brigham, Kelly (UG). 2015/2016. XRF geochemical study of western Mojave Cretaceous supervolcano-related granitoids.

Davis, Jessilyn (G). 2015. Satellite-based mapping of geologic features possibly related to the 2014-2015 NW Nevada earthquake swarm.

De Leon, Aura (UG). 2015/2016. Geologic mapping of the northern Calico Mountains.

Dossey, Mason (UG). 2016. How does a brittle granite fold? Field-based study in the Soda Mountains, CA.

Maldonado, Jessica (UG). 2015. XRF analysis for geological correlation of archaeological samples.

Mayfield, Kendall (UG). 2016. Can mineralogical tracers of limestone contamination by contact metamorphism be used to streamline mining operations in an active cement quarry?

Robles, Taylor (UG). 2015/2016. Interaction between ore deposits and hydrology in the San Gabriel Mountains.

Schramm, Dustin (UG). 2015. Magnetic susceptibility mapping of western Mojave Cretaceous supervolcano-related granitoids.

Soto, Paula (UG). 2015/2016. Petrological study of western Mojave Cretaceous supervolcano-related granitoids.

Zylstra, Scott (G). 2016. Metasediments of Ontario Ridge, San Gabriel Mountains, California: Stratigraphy, structure and geochronology.

b. Awards and Honors Earned by Students

Baca, Austin (UG). June 2015. Commencement 2015 Geological Sciences Banner Carrier, Cal Poly Pomona (mentor: Nourse, J. A.)

Barba, Magali (G). September 4-8, 2015. Selected to participate in the 3rd international summer school on Earthquake Science at Lake Yamanaka, Japan, with full financial support from organizers (mentor: Polet, J.)

Brigham, Kelly (UG). June 2015. Henderson-Valles Memorial Fund Scholarship recipient, \$750 (mentor: Nourse, J. A.)

Brown, Riley (UG). May 2016. Hastings Triplet Hand Lens Award, \$50 value each (mentor: Nourse, J. A.)

Chantrapornlert, Kevin (G). Awarded \$450 from CPP administrative fund to present at 2015 SEG/AAPG Conference (mentor: Polet, J.)

Craig, Kenneth (UG). June 2015. Peter K. Valles AGI Glossary of Geology Award recipient, \$75 value (mentor: Nourse, J. A.)

Craig, Kenneth (UG). May 2016. American Association of Petroleum Geologist, James E. Hooks Memorial grant, \$2,750 (mentor: Osborn, S.)

Davis, April (UG). April 2015. Caltech Summer Undergraduate Research Fellowship (mentor: Van Buer, N. J.)

De Leon, Aura (UG). June 2015. Hastings Triplet Hand Lens Award recipient, \$50 value (mentor: Nourse, J. A.)

De Leon, Aura (UG). May 2016. Randal Burns Brunton Compass Award recipient, \$450 value (mentor: Nourse, J. A. & Van Buer, N. J.)

Dossey, Mason (UG). June 2015. Peter K. Valles AGI Glossary of Geology Award recipient, \$75 value (mentor: Nourse, J. A.)

Dykstra, Michael (UG). June 2015. Hastings Triplet Hand Lens Award recipient, \$50 value (mentor: Nourse, J. A.)

Herrman, Michael (G). Winter 2016. Awarded a \$7,000 PPOHA MENTORES Fellowship (mentor: Polet, J.)

La Beau, Tony (UG). May 2016. Hastings Triplet Hand Lens Award, \$50 value (mentor: Nourse, J. A.)

La Beau, Tony (UG). May 2016. Peter Valles AGI Glossary Award recipient, \$75 value (mentor: Nourse, J. A.)

Larry, James (UG). May 2016. Henderson-Valles Scholarship Award recipients, \$750 (mentor: Nourse, J. A.)

Leiva, Julie (G). AY 2015/2016. COAST Graduate Student Research Award, \$3,000 (mentor: Polet, J.)

Leiva, Julie (G). Mar. 2015-Sept. 2016. Scholarships and Stipends for water related research, PPOHA (Promoting Postbaccalaureate Opportunities for Hispanic Americans) Project MENTORES, \$3,000 (mentor: Nourse, J. A.)

Leiva, Julie (G). Spring 2015. PPOHA Graduate Student Research Award, \$7,000 (mentor: Polet, J.)

Leiva, Julie (G). Summer 2016. Selected to participate in the COAST Summer 2016 internship program with Remote Sensing Solutions, Inc. in Pasadena, \$4,000 stipend (mentor: Polet, J.)

Macy, Kyle (UG). May 2016. Henderson-Valles Scholarship Award recipients, \$750 (mentor: Nourse, J. A. & Polet, J.)

Mayfield, Kendall (UG). June 2015. Randal Burns Brunton Compass Award recipient, \$450 value (mentor: Nourse, J. A.)

Miranda, Danny (G). Mar. 2015-Sept. 2016. Scholarships and Stipends for water related research, PPOHA (Promoting Postbaccalaureate Opportunities for Hispanic Americans) Project MENTORES, \$3,000 (mentor: Nourse, J. A.)

Mundo, Alejandro (UG). June 2015. Margaret Claire Van Buskirk Memorial Scholarship recipient, \$750 (mentor: Nourse, J. A.)

Murphy, Clark (UG). May 2016. Hastings Triplet Hand Lens Award, \$50 value (mentor: Nourse, J. A.)

Murphy, Clark (UG). May 2016. Henderson-Valles Scholarship Award recipient, \$750 (mentor: Nourse, J. A.)

Ng, Raymond (G). 2015 Fall. Awarded \$450 from administrative fund to present at 2015 Fall AGU Conference (mentor: Polet, J.)

Ng, Raymond (G). Awarded \$700 from Presidential Travel fund to present at 2016 SSA Conference (mentor: Polet, J.)

Ng, Raymond (G). May 2016. Granted research distinction by the Cal Poly Pomona Office of undergraduate research (mentor: Polet, J.)

Panossian, Lara (G). Awarded \$1000 from Presidential Travel fund to present at 2016 Lunar Conference (mentor: Polet, J.)

Pestana, Steven (UG). Fall 2015. Selected to participate in Fall 2015 SIRI internship program at Jet Propulsion Laboratory (mentor: Polet, J.)

Pestana, Steven (UG). June 2015. Ernest Prete Jr. Geosciences Scholarship recipient, \$1,000 (mentor: Nourse, J. A.)

Prizlow, Allison (UG). May 2016. Grayce M. Teale Scholarship Award recipient, \$750 (mentor: Nourse, J. A.)

Rivera, Erick (UG). May 2016. Ernest Prete Jr. Scholarship Award recipient, \$1,000 (mentor: Nourse, J. A.)

Soto, Paula (UG). June 2015. Henderson-Valles Memorial Fund Scholarship recipient, \$750 (mentor: Nourse, J. A.)

Vanderway, Tara (UG). May 2016. Peter Valles AGI Glossary Award recipient (mentor: Nourse, J. A.)

Vanderway, Tara (UG). June 2015. Grayce M. Teale Memorial Scholarship recipient, \$500 (mentor: Nourse, J. A.)

Vanderway, Tara (UG). June 2016. Commencement 2016 Geological Sciences Banner Carrier, Cal Poly Pomona (mentor: Nourse, J. A.)

Vermillion, Karissa (UG). May 2016. Hastings Triplet Hand Lens Award (mentor: Nourse, J. A.)

Yaralian, David, Taylor (UG). May 2016. Margaret Van Buskirk Scholarship Award recipient, \$750 (mentor: Nourse, J. A.)

Yerkes, Tamara (G). Mar. 2015-Sept. 2016. Scholarships and Stipends for water related research, PPOHA (Promoting Postbaccalaureate Opportunities for Hispanic Americans) Project MENTORES, \$3,000 (mentor: Nourse, J. A.)

Zhang, Dandan (G). March 2016. Selected to participate in the 4th Annual Seismology Student Workshop held March 17-18, 2016 at the Lamont-Doherty Earth Observatory in Palisades, New York, with full financial support from organizers (mentor: Polet, J.)