

Edwin Rivas Meraz

PhD Student, University of California, Merced

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Education

California State University, Fresno
B.S. Geology - Cum Laude

Fresno, CA
2015-2019

University of California, Merced
Ph.D. Environmental Systems

Merced, CA
2019-Present

Employment

GRADUATE STUDENT RESEARCHER

MAY 2019-PRESENT

Work closely with faculty, staff, and other graduate students to direct a team of undergraduate students in completion of research experiments

CENTRAL VALLEY WATER QUALITY CONTROL BOARD SCIENTIFIC AIDE

APRIL 2018-MAY 2019

Help professionals regulate potential water quality threats associated with agricultural activity through in-field inspections and database management

NATURAL RESOURCE CONSERVATION SERVICE INTERN

JUNE 2017-AUGUST 2017

Conducted brief experiment relating measured soil color values with the soil drainage properties using soil collected from the New Melones area

Conference Presentations and Papers

1. **Rivas Meraz, E.**, Seelos, M., Salas Hernandez, J., Anderson, T., Laquindanum, V., Martinez, D., Beutel, M., Traina, S.J., O'Day, P.A. 2021. Poster. Characterization of Manganese Oxide Amendments for Remediation of Mercury-Contaminated Sediments. *Waste Management Virtual Conference*
2. **Rivas Meraz, E.**, Seelos, M., Burmistrova, J., Beutel, M., Traina, S.J., O'Day, P.A. 2021. Poster. Remediation of Mercury-Contaminated Aquatic Sediments with Manganese(IV) Oxide and Activated Carbon Amendments. *American Chemical Society Spring 2021 Virtual Meeting*
3. O'Day, P.A., **Rivas Meraz, E.**, Burmistrova, J., Seelos, M., Beutel, M., Traina, S., Vlasopolous, D. 2020. [Paper](#). Novel Remediation of Mercury-Contaminated Sediments Using Manganese Oxide and Activated Carbon Amendments. *Waste Management Conference 2020*
4. Seelos, M., **Rivas Meraz, E.**, Burmistrova, J., O'Day, P.A., Beutel, M. 2020. Poster. Manganese Oxide and Activated Carbon Amendments for Porewater Mercury Remediation. *Waste Management Conference, Phoenix, AZ*
5. **Rivas Meraz, E.**, Burmistrova, J., Muranaka, H., Cisneros Castillo, S., Mercado, J., Aguilar, B., Martinez, D., Machado-Perez, F., Anderson, T., Seelos, M., Traina, S., Beutel, M., O'Day, P.A. 2019. [Poster](#). Redox Behavior of Manganese Oxide Amendments for Remediation of Mercury Contaminated Sediments. *Stanford Synchrotron Radiation Lightsource (SSRL)/ Linac Coherent Light Source Users' Meeting, Menlo Park, CA*

6. **Rivas Meraz, E.**, Steinert, T., Weinman, B., Wakabayashi, J. 2019. [Poster](#). Fractionation of Rare Earth Elements During Soil Formation Along Feather River Basin Hill Slopes in the California Sierra Nevada. *Geological Society of America Cordilleran Section Meeting, Portland, OR*

Research Projects

1. University of California, Merced 2019-Present

Advisors: Dr. O'Day, Dr. Beutel, and Dr. Traina

Project: (i)Manganese(IV) oxide and activated carbon were used as remediation amendments for mercury-contaminated sediment in two sets of incubated sediment slurries. (ii)The surface of activated carbon was modified with manganese oxide, with and without the addition of divalent metals and characterized. (iii)Products were compared with physical manganese oxide/ activated carbon mixtures in parallel sediment column flow-through experiments as a cost-effective tool for mercury remediation.

2. California State University, Fresno 2018-2019

Advisors: Drs. Weinman and Wakabayashi

Project: Rare earth elements were investigated as geochemical tracers by studying their fractionation pattern from the protolith rock and its derived saprolite and soil

Technical and Non-Technical Skills

Softwares	Instruments Operated	Spoken Languages
R	Micromeritics Tristar 3000	English (fluent)
Excel	SSRL Beamlines 2-3, 4-1	Spanish (native)
Geochemist Workbench	FEI Quanta 200 Scanning Electron Microscope	
Hydrus-1D	PANalytical Powdered X-Ray Diffractometer	
PHREEQC	MERX-T/ MERX-M Mercury Analyzer	
Adobe Illustrator	DMA-80 Mercury Analyzer	

Honors and Awards

CALIFORNIA STATE UNIVERSITY, FRESNO

Dale and Karla Reitz Scholarship	2017-2018 & 2018-2019
President's List	2016; 2019
Dean's List	2017-2018
Faculty Sponsored Student Research Award	2019
Outstanding Undergraduate Student	2019

Professional Memberships

Geological Society of America
American Chemical Society