Angélica Vázquez-Ortega, Ph.D.
School of Earth, Environment and Society
Bowling Green State University
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I. Academic Degrees

2013	Ph.D. in Soil, Water and Environmental Sciences University of Arizona, Tucson, Az
2008	M.S. in Soil, Water and Environmental Sciences University of Arizona, Tucson, Az
2002	B.S. in Environmental Sciences University of Puerto Rico, San Juan, PR

II. Academic Positions

2023-present	Associate Professor - Bowling Green State University, Bowling Green, OH
2017-2023	Assistant Professor - Bowling Green State University, Bowling Green, OH
2014-2017	Postdoctoral Research Associate - University of Notre Dame, South Bend, IN
2013-2014	Postdoctoral Research Associate - University of Arizona, Tucson, Az
2008-2013	Graduate Research Associate - University of Arizona, Tucson, Az

III. Teaching Experiences

A. Classroom Teaching *(number of times taught)*

1. Undergraduate Courses

Bowling Green State University
ENVS 1010 - Introduction to Environmental Studies (9)
ENVS 3040 - Water Quality in the Environment (3)

2. Undergraduate-Graduate Courses

Bowling Green State University *(number of times taught)*
SEES 4800/5800: Introduction to Biogeochemistry (1)
SEES 4800/5800: Soils (2)
SEES 4800/5800: Soils Seminar (1)
GEOL 4310/5310: Aqueous Geochemistry (2)
SEES 4600/GEOL 5600: Soil Science (1)

3. Graduate Courses

Bowling Green State University *(number of times taught)*
GEOL 6810: Geochemistry Seminar (2)

B. Membership on Thesis Committee (9)

(years correspond to graduation year)
Emmanuel Ladapo (MS Geology, expected 2023, BGSU)
Wolfgang Ebersole (MS Biology, 2023, BGSU)
Carly Tolle (MS Biology, 2021, BGSU)

Caroline Dunkel (MS Geology, 2020 BGSU)
Mallory Gerzan (MS Geology, 2020 BGSU)
Margaret Duffy (MS Biology, 2020 BGSU)
Erica Lynn Forstater (MS Biology, 2020 BGSU)
Josephine Lindsey-Robbins (MS Biology, 2019, BGSU)
Tharindu Hasantha (MS Geology, 2018, BGSU)

C. Mentoring Undergraduate Students (15)
(years indicate mentoring period)
Alyssa LaCava (BS Environmental Science, 2022, BGSU)
Madisyn Rex (BS Geology, 2022, BGSU)
Daniel Burggraf (BS Environmental Science, 2022, BGSU)
Mackenzie Haynes (Honors College, 2022, BGSU)
Katarina Keiffer (BS Geology, 2021, BGSU)
Margaret Rettig (BS Biology, 2021, BGSU)
Jacob Tatum (BS Environmental Science, 2020, BGSU)
Emily Manner (BS Environmental Science, 2019, BGSU)
Hannah Bebinger (BS Environmental Science, 2019, BGSU)
Sara Honeck (BS Philosophy, Politics, Economics and Law, 2019, BGSU)
Adam Swint (BS Environmental Science, 2019, BGSU)
Mathew Franks (BS Geology, 2018, BGSU)
Madison Brown (BS Environmental Science, 2018, BGSU)
Samuel Jeffers (BS Environmental Science, 2018, BGSU)
Lydia Archambo (BS Environmental Science, 2018, Ohio Northern University)

D. Student Thesis Advising (17)
(years correspond to graduation year)
Shikshya Gautam (PhD Biology, 2027 BGSU, co-advising with Dr. Xu)
Salim Shamsu (MS Biology, expected 2025 BGSU, co-advising with McCluney)
Lakshan Beligala (MS Biology, expected 2025 BGSU, co-advising with McCluney)
Richmond Said (MS Geology, expected 2025, BGSU, co-advised with Dr. Soto)
Saratendra Bajal (MS Geology, expected 2025, BGSU)
Caleb Agyei (MS Geology, expected 2024, BGSU)
Katarina Keiffer (MS Geology, expected 2024, BGSU)
Olusola Oyewumi (MS Geology, expected 2023 BGSU)
Caroline Barth (MS Biology, expected 2023 BGSU, co-advising with McCluney)
Steven Diaz (MS Geology, expected 2023 BGSU)
Shikshya Gautam (MS Biology, 2023 BGSU, co-advising with Dr. Xu)
Samira Rifat Prova (MS Geology, 2023 BGSU)
Umme Fatema (MS Geology, 2022 BGSU)

Mathew Franks (MS Geology, 2020 BGSU)
Russell Brigham (MS Geology, 2020 BGSU)
Melissa Wyderka (MS Geology, 2020 BGSU)
Bidisha Faruque (MS Geology, 2019, BGSU, co-advised with Dr. Liu)

IV. Curriculum Development

2021	Course Proposal SEES 4600/GEOL 5600: Soil Science (In catalog after Fall 2022)
2021	Designed GEOL 6810: Geochemistry Seminar
2020	Redesigned ENVS 3040 - Water Quality in the Environment
2019	Designed GEOL 4310/5310: Aqueous Geochemistry
2019	Designed SEES 4800/5800: Soil Seminar
2018	Designed SEES 4800/5800: Soil
2018	Modified ENVS 3040 - Water Quality in the Environment
2017	Designed SEES 4800/5800: Introduction to Biogeochemistry

V. Professional Development

A. Teaching Grants ($9,210)

2018 **A.Vázquez-Ortega (PI)**. *Solving Real-World Environmental Problems in the Classroom with Active Learning Strategies.* BGSU, SEA Change Ventures: Improving Instruction & Enhancing Student Success in STEM Disciplines. Internal Grant. $9,210.

B. Workshops

2018-2020	Center for Faculty Excellence: Connecting Learning Expectations with Assessment; Using Formative Assessment to Provide Ongoing Feedback; Inclusive pedagogy; Inclusive Pedagogy in Online Learning; A Virtual Conference on Teaching in an Elastic Fall; Hybrid Hurdle Workshop BGSU Allies Project: Faculty Allies Training Workshop; Beyond Bystander Intervention: Enacting Everyday Ally Actions; "Secret Service": Addressing Inequities in Faculty Service A&S College Faculty Mentoring Program – Mentee SciFri Lunches Faculty 180 training Wetland mitigating HABs Workshop
2017-2018	The Collab Lab: Water Quality and Sustainability Workshop Remote Sensing for Water Quality Monitoring Workshop A&S College: Faculty Career Stage Workshop Navigating the NSF System Workshop
2016-2017	Kaneb Center for Teaching and Learning (University of Notre Dame): Foundation of Teaching; Gathering Early Semester Student Feedback; Writing Effective Multiple-Choice Questions; Interactive Lectures for Engaged Learning; Creating Visually Effective Course Materials; Engaging Students with Active Learning Strategies; Teaching With Current Events

C. Webinars

2016-2022 National Center for Faculty Development & Diversity: Every semester needs a plan; Align your time with your priorities; How to develop a daily writing practice; Mastering academic time management; Every summer needs a plan; Moving from resistance to writing; Teaching in no time; The art of saying "No"; Cultivating your network of mentors, sponsors and collaborators; Building a publishing pipeline: Concrete strategies for increasing your writing productivity; 5 secrets to a super productive semester; How to engage in healthy conflict; Strategies for Dealing with Stress and Rejection; The Role of Self-Care in Productivity, How To Write Papers That Get Cited And Proposals That Get Funded; Drama-Free Collaborations: How to Develop and Sustain Healthy Partnerships with Co-Authors; Collaboration: How to Work with Others without Losing Your Friends or Your Mind; How to Engage in Healthy Conflict; What Happens When You Promise Time and Energy You Don't Have?; Academic Life: What's Mindfulness and Compassion Got To Do With It?; Micro-Aggressions, Micro-Resistance, and Ally Development in the Academy; Bully in the Ivory Tower: How Aggression and Incivility Erode American Higher Education; Being Lazy and Slowing Down; Successful Strategies for Faculty Diversity: Valuing Faculty Work that Promotes Equity; Resting to Rise: Reduce Burn Out, Find Your Joy for Writing and Life, and Create a Just Academia; Turbulent Times Q&A (COVID-19); Moving from Associate to Full Professor; How to Challenge Race and Gender Bias in Student Evaluations; How to Manage Chronic Illness and Academic Life; Core Conversations: Protecting Your Boundaries and Well-Being; Core Conversations: Managing Stress in Stressful Times; Strategies for Centering Instructor Identity in STEM Education; Empowered Teaching Toolkit: Beginning to Find Joy as an Academic; Supporting Faculty During and After the COVID-19 Pandemic; Turning Chutes into Ladders for Women Faculty: A Roadmap to Equity in Academia; How to Be a Strong Sponsor and Advocate for Faculty; Teaching with Empathy and for Equity at the Graduate Level; How to Translate Your Research for a General Audience; Mentorship: Efficient and Effective Practices; Equitable, Accessible, and Inclusive Teaching Practices; Indigenous Time Management; Exposing the Hidden Curriculum: Cultivating Structural and Systemic Change for Mid-Career Faculty Advancement; What I Wished I Would Have Known After Earning Tenure; Post-Tenure Pathfinders Program Preview Call; Navigating Faculty Career Transitions: Getting to Mid-Career and Beyond Academia; Presumed Incompetent: Race, Gender, and Class in Academia; Presumed Incompetent II: Lessons from the Struggles and Victories of Women of Color; Rising Above Burnout; How to Maximize Your Sabbatical: From Application Through Completion; Live Strategy Session: 5 Tips for Avoiding the Summer Slump; Maximizing Your Sabbatical: An Integrated Approach to Purposeful Planning, Reflection, and Re-entry

D. Certificates

2017-2023 BGSU Radiation Safety
BGSU Laboratory Safety for PIs
BGSU Driver Safety Training
BGSU Active Learning Classroom Certification

E. Conferences, Panels and Others

2019-2023	International Association for Great Lakes Research Conference (IAGLR)
2022	ASA, CSSA, SSSA International Annual Meeting
2017-2022	Understanding Algal Blooms: State of the Science Conference
2021	Sustainable Agronomy Conference Virtual Event & Conservation in Action Tour Series
2017-2019	Forecast for Harmful Algal Blooms in Lake Erie
2018	Ohio Dredged Material Summit
2018	Re-imagining teaching at BGSU, University House
2017	American Geophysical Union Fall Meeting, New Orleans, Louisiana
2017	The Blanchard River Demonstration Farms Network Bus Tour
2017	Fall 2017 NSF Grants Conference
2017	Faculty Mentoring Program Welcome Orientation - College of Arts and Sciences

VI. Academic Advising

VII. Research Interests

Current and future research focuses on:

- Determining the nutrient and carbon distribution in agricultural soils subjected to different best management practices.
- Determine the parameters that enhance or reduce phosphate removal from agriculture tile drainage employing edge-of-field practices (e.g., Fe-oxide filters).
- Identify the effects of lake sediments on crop yield, organic and inorganic contaminant bioaccumulation in grains, soil health, and nutrient export into waterways.

VIII. Research Projects and Grants

A. Funded Grants ($2,201,107)

2023-2026 Furgal, J. (PI, BGSU), **Vázquez-Ortega, A. (co-PI)**, and others. *High Resolution Mass Spectrometry for Humeomic, Toxin, and Pollutant Determinations in Agricultural Lands and their Watershed Environments*. USDA-NIFA Equipment Grants Program. $482,000, approved.

2022-2024 **Vázquez-Ortega, A. (PI),** Soto C.D., McCluney K., and others. *Assessing dissolved reactive phosphorus sequestration onto farm soils amended with Lake Erie dredged sediments: implications on hydrological budgets and HAB occurrences.* HABRI. $601,078.

2022-2027 Martin, J. (PI, OSU), **Vázquez-Ortega, A. (co-PI)**, and others. *Linking land management changes to water quality outcomes*. NRCS-RCPP-AFA, USDA. $16M (BGSU, $686,152).

2021-2023 **Vázquez-Ortega, A. (PI)** and Signorini G (OSU). *Strategic positioning plan for lake sediments as a specialty crop amendment.* USDA Specialty Crop Block Grant. $135,000.

2021-2023 **Vázquez-Ortega, A. (PI)** and Platt C. (Coldwater Consulting LLC). *Beneficially using dredged material as farm amendments to improve soil health and crop yield: a farm demonstration project.* Lucas SWCD. $75,000.

2021 **Vázquez-Ortega, A. (PI).** *Investigating the feasibility of Black River dredged sediment blends as farm soil amendment.* Coldwater Consulting LLC. $6,380.

2020-2023 **Vázquez-Ortega, A. (PI)**, Pelini, S., Xu, Z., Phuntumart, V., and McCluney, K. *Dredged material blended with organic rich sources to amend farm soils.* Ohio Sea Grant's Large Grants Program. $120,000.

2018-2020 Xu, Z. (PI) and **Vázquez-Ortega, A. (co-PI)**. *Dynamics of microbial communities in agricultural soil amended with dredged material.* Ohio Sea Grant's Small Grants Program. $10,000.

2018-2020 **Vázquez-Ortega, A. (PI)**. *Enhancing nutrient removal from agricultural tile drainage by understanding the role of organic carbon quality.* Ohio Sea Grant's Small Grants Program. $9,997.

2018-2020 **Vázquez-Ortega, A. (PI)** and Pelini S. *Dredged material benefits for crop production.* Lake Erie Protection Fund. $50,000.

2018-2020 Diesch, B. (Lucas Soil and Water Conservation District, PI), **Vázquez-Ortega, A. (Co-PI)** and others. *Smart2Genius: Catalyzing farmer adoption of strategic best practices*. Great Lakes Protection Fund. $200,000 (BGSU Funds $15,500), planning grant.

2017-2018 **Vázquez-Ortega, A. (PI)**. *Characterization of agricultural soils and tile drainage discharge from farms participating in the implementation of agricultural best management practices in Midwestern Ohio.* BGSU Building Strength, Mid to Major Research Project Grant, Internal Grant. $10,000.

B. Pending Grants

C. Declined

2023 Comas, X. (PI), **Vázquez-Ortega, A. (co-PI)**, and others. *Collaborative Research: Next generation near-surface geophysical imaging to characterize weathering front propagation in the critical zone along a climate gradient.* NSF-FRES. $3M (BGSU, $222,834).

2022 Furgal, J. (PI), **Vázquez-Ortega, A. (co-PI),** Ward C. *Keeping Nano/Microplastics Out of Lake Erie. Lake Erie Protection Fund.* $50,000.

2021 **Vázquez-Ortega, A. (PI),** Gomezdelcampo E., Ward C., and others. *Assessing the Potential of Lake Sediments as Farm Amendments to Improve Farm Soil Health and Sustainability Throughout the Great Lakes Region*. Foundation for Food & Agriculture Research. $949,034.

2021 Furgal J. (PI), **Vázquez-Ortega, A. (co-PI),** Ward C., McCluney K, and Midden R. *The role of wetland organic matter, microbial communities, and vegetation on nutrient filtration in restored and natural wetlands.* Ohio Sea Grant. $160,000.

2021 Ward C., **Vázquez-Ortega, A. (co-PI)**, and others. *Optimus Prime: optimizing DOM degradation to CO2 via novel process of microbiome priming.* DOE Bioenergy Technologies Office. Funds not determined for the pre-proposal.

2020 **Vázquez-Ortega, A. (PI).** *Employing Dredged Material as Farm Amendment to increase Soil Resilience and Crop Yields in Rural and Urban Farms.* Sustainable Agriculture Research and Education (SARE). $249,819.72.

2020 Scheckelhoff, B. (PI, OSU), **Vázquez-Ortega, A. (co-PI).** *Accelerating the Transition to Continuous No-till to Improve Soil Health and Water Quality on Midwest Farms.* USDA-NRCS Conservation Innovation Grants. $799,247 (BGSU, $285,224).

2020 Ender, J. (PI, The Chef's Garden, Inc.), **Vázquez-Ortega, A. (co-PI).** *Revitalization of Conventionally Farmed Soils.* Foundation for Food and Agriculture Research. $499,353 (BGSU, $287,806).

2020 **Vázquez-Ortega, A. (PI),** Gomezdelcampo, E. and Payne, K. *Rural Drinking Water: Localized presence and sources of contaminants, and their upscale for improving community environmental health decisions.*

Robert Wood Johnson Foundation, Interdisciplinary Research Leaders. $350,000.

2020 Furgal, J. (PI), **Vázquez-Ortega, A. (co-PI)**, Xu Z. Nanoplastic Leaching from Farm Fields Applied with Biosolids. Lake Erie Protection Fund. $50,000.

2020 **Vázquez-Ortega, A. (PI)**, Xu, Z., McCluney, K., Gomezdelcampo, E., and Cardinal, A. *Employing Dredged Sediments as Farm Amendments to reduce Phosphate and Nitrogen Inputs into Waterways and increase Crop Yields.* USEPA-STAR. $1M.

2020 Hoorman, J. (The University of Akron, PI), **Vázquez-Ortega, A. (co-PI).** *Integrated Vegetation-Based Technologies for Nutrient Runoff & Soil Health Management.* HABRI. $224,336.

2018 **Vázquez-Ortega, A. (PI)** and Midden, W.R. *Assessment of slow release manure on soil health and nutrient losses from farms in Ohio*. Ohio Water Resources Center. $20,341, pre-proposal.

2018 Kovach, M. (PI, Lake Erie Coastal Conservancy) and **Vázquez-Ortega, A. (Co-PI)**. *Water quality and quantity assessment at the Toledo Dredged Innovation Center*. Lake Erie Protection Fund. $50,000.

2018 Confesor, R. (PI, Heidelberg University), **Vázquez-Ortega, A. (Co-PI)**, McCluney, K., and Stevenson, L. *Smart Farms: Catalyzing adoption of new and existing approaches to manage water, nutrients, and pesticides in the Great Lakes Region.* Great Lakes Protection Fund. $1,072,459.

2018 Mitsch, W.J. (PI, Florida Gulf Coast University), **Vázquez-Ortega, A. (BGSU Co-PI)** and others. Wetlaculture experiments in the Great Lakes Basin for sustainably reducing HABs in aquatic ecosystems and fertilizer use. Great Lakes Protection Fund. $890,000, pre-proposal.

2018 **Vázquez-Ortega, A. (PI)**. *Opening the Black Box: Enhancing nutrient removal.* Lake Erie Protection Fund. $49,630.

2018 **Vázquez-Ortega, A. (PI)**. *Enhancing nitrate removal from tile drainage employing woodchip bioreactors by understanding the role of organic carbon quality.* Ohio Sea Grant's Small Grants Program. $15,000.

IX. A. Publications and Equivalencies

A. Publications

1. Journal Articles

Refereed Articles

2022 Dunkel, C., **Vázquez-Ortega A.**, and Evans, J. *Black Shale—Gray Shale Transitions in a Late Devonian Shale Succession, Central Appalachian Basin (Northern Ohio): Sedimentary and Geochemical Evidence for Terrestrial Organic Matter Driving Anoxia Events.* Palaeogeography, Palaeoclimatology, Palaeoecology. 608(15), 111271.

2022 Perdrial, N., **Vázquez-Ortega, A.**, Reinoso-Maset, E., O'Day, P. and Chorover, J. *Effects of flow on uranium speciation in soils impacted by acidic waste fluids.* Journal of Environmental Radioactivity. 251-252, 106955.

2022 Abesh, B., Liu, G., **Vázquez-Ortega, A.**, Gomezdelcampo, E., and Bullerjahn, G. *Cyanotoxin transport from surface water to groundwater: Simulation scenarios for Lake Erie.* Journal of Great Lakes Research. 48(3), 695-706.

2021 **Vázquez-Ortega, A.**, Perdrial, N., Reinoso-Maset, E., Root, R., O'Day, P.A., and Chorover, J. *Phosphate controls uranium release from acidic waste-weathered Hanford sediments.* Journal of hazardous materials. 416, 126240.

2021 Brigham, R., Pelini, S., Xu, Z., and **Vázquez-Ortega A.** *Assessing the Effects of Lake-Dredged Sediments on Soil Health: Agricultural and Environmental Implications on Northwestern Ohio*. Journal of Environmental Quality. 50(2), 494-503

2021 Franks, M., Duncan, E., King, K., **Vázquez-Ortega, A.** *Role of Fe- and Mn-(oxy)hydroxides on carbon and nutrient dynamics in agricultural soils: A chemical sequential extraction approach.* Chemical Geology 561, 120035.

2019 Lindsey-Robbins, J., **Vázquez-Ortega, A.**, McCluney, K., Pelini, S. *Effects of Detritivores on Nutrient Dynamics and Corn Biomass in Mesocosms*. Insects, 10, 453.

2019 Abeysinghe, T., Simic Milas, A., Arend, K., Hohman, B., Reil, P., Gregory, A., and **Vázquez-Ortega, A.** *Mapping Invasive Phragmites australis in the Old Woman Creek Estuary Using UAV Remote Sensing and Machine Learning Classifiers.* Remote Sens., 11, 1380.

2018 Perdrial, J., Brooks, P.D., Swetnam, T., Lohse, K.A., Rasmussen, C., Litvak, M., Harpold, A.A., Zapata-Rios, X., Broxton, P., Mitra, B.,

Meixner, T., Condon, K., Huckle, D., Stielstra, C., **Vazquez-Ortega, A**., Lybrand, R., Holleran, M., Orem, C., Pelletier, J., Chorover, J. *A net ecosystem carbon budget for snow dominated forested headwater catchments: linking water and carbon fluxes to critical zone carbon storage.* Biogeochemistry 138 (3), 225-243.

2018 Perdrial, N., **Vázquez-Ortega, A.**, Wang, G., Kanematsu, M., Reinoso-Maset, E., Mueller, K.T., Um, W., O'Day, P.A. and Chorover, J. *Uranium speciation in acid-weathered sediments: The role of aging and phosphate amendments.* Applied Geochemistry, 89, 109-120.

2017 McIntosh, J., Schaumberg, C., Perdrial, J., Harpold, A., **Vázquez-Ortega, A.**, Rasmussen, C., Vinson, D., Zapata-Rios, X., Brooks, P., Meixner, T., Pelletier, J., Derry, L., and Chorover, J. *Geochemical evolution of the Critical Zone across variable time scales informs concentration-discharge relationships: Jemez River Basin Critical Zone Observatory.* Water Resources Research, 53, 4169–4196.

2017 **Vázquez-Ortega, A.** and Fein, J. *Thermodynamic modeling of Mn(II) adsorption onto manganese oxidizing bacteria.* Chemical Geology, 464, 147–154.

2016 Huckle, D., Ma L., McIntosh, J., **Vázquez-Ortega, A.**, Rasmussen, C., Chorover, J. *U-series isotopic signatures of soils and headwater streams in a semi-arid complex volcanic terrain.* Chemical Geology, 445, 68-83.

2016 **Vázquez-Ortega, A.**, Huckle, D., Perdrial, J.N., Amistadi, M.K., Rasmussen, C., McIntosh, J. and Chorover, J. *Solid-phase redistribution of rare earth elements in hillslope pedons subjected to different hydrologic fluxes.* Chemical Geology, 426, 1-18.

2015 **Vázquez-Ortega, A.**, Perdrial, J.N., Harpold, A., Zapata-Rios, X., Rasmussen, C.**,** McIntosh, J., Schaap, M., Pelletier, J.D., Amistadi, M.K., and Chorover, J. *Rare earth elements as reactive tracers of biogeochemical weathering in forested rhyolitic terrain.* Chemical Geology, 391, 19-32.

2014 **Vázquez-Ortega, A.**, Hernandez-Ruiz, S., Amistadi, M.K., Rasmussen, C. and Chorover, J. *Fractionation of dissolved organic matter by oxy-hydroxide-coated quartz sand: competitive sorbate displacement during reactive transport.* Vadose Zone Journal, 13, 1-13.

2014 Perdrial, J.N., Perdrial, N., **Vázquez-Ortega, A.**, Porter, C., Leedy, J., and Chorover, J. *Experimental assessment of fiberglass passive capillary wick sampler (PCap) suitability for sampling inorganic soil solution constituents.* Soil Science Society of America Journal, 78, 486-495.

2013 Heckman, K., Welty-Benard, A., **Vázquez-Ortega, A.**, Schwartz, E., Chorover, J. and Rasmussen, C. *The influence of goethite and gibbsite on soluble nutrient dynamics and microbial community composition.* Biogeochemistry. 112, 179-195.

2011 Heckman, K., **Vázquez-Ortega, A.**, Gao, X., Chorover, J., and Rasmussen, C. *Changes in water extractable organic matter during incubation of forest floor material in the presence of quartz, goethite and gibbsite surfaces.* Geochimica et Cosmochimica Acta, 75, 4295-4309.

In preparation Gautam, J., Wolfgang, E., Brigham, R., Junfeng, S., **Vázquez-Ortega A.**, and Xu, Z. *Dredged Material promotes Microbial Diversity in Farm Soils without altering the Overall Microbiome Structures.* Journal of Environmental Quality.

In preparation Fatema, U. and **Vázquez-Ortega, A.** *The role of dissolved organic matter on phosphorous sorption onto iron-enhanced activated alumina media using in-field and flow-through column experiments*. Agriculture, Ecosystems and Environment.

In preparation Duffy, M., Marshall, M., Metzner, G., **Vázquez-Ortega, A.**, Pelini, S., and McCluney, M. *Determining the Biological Turnover Rate of Phosphate in Agricultural Soils Using Stable Oxygen Isotopes*. Journal of Environmental Quality.

2. Abstracts

Refereed abstracts

2022 Oyewumi, O., **Vazquez-Ortega, A.**, Sequeira-Lezama, J.P., and Signorini, G. *Assessment of Lake-Dredged Sediments as Farm Soil Amendment on Specialty Crops Food Safety and Soil Health.* ASA, CSSA, SSSA International Annual Meeting.

2022 Sequeira-Lezama, J.P., and Signorini, G., Oyewumi, O., **Vazquez-Ortega, A. 2.** *Evaluation of Lake Erie Sediment as a Soil Amendment in an Open Field Production of Lettuce (Lactuca sativa L.) Cv. Romaine and Carrot (Daucus carota) Cv. Mokum.* ASA, CSSA, SSSA International Annual Meeting.

2022 Sequeira-Lezama, J.P., and Signorini, G., Oyewumi, O., **Vazquez-Ortega, A. 3.** *Evaluation of Lake Erie Sediment as a Soil Amendment in Greenhouse Production of Lettuce (Lactuca sativa L.) Cv. Romaine and Carrot (Daucus carota) Cv. Mokum.* ASA, CSSA, SSSA International Annual Meeting.

2021 **Vázquez-Ortega, A.** *Assessing the Effects of Lake-Dredged Sediments as Farm Soil Amendments on Soil Health: Agricultural and Environmental Implications.* ASA, CSSA, SSSA International Annual Meeting. (Attended Virtually).

2020 Brigham, R., Pelini, S., Xu, Z., and **Vázquez-Ortega A.** *Assessing the Effects of Lake Dredged Sediments on Soil Health: Agricultural and Environmental Implications in Midwest Ohio.* 2020 ASA-CSSA-SSSA International Annual Virtual Meeting.

2019 Abesh, B., Liu, G., **Vázquez-Ortega, A.**, and Gomezdelcampo, E. *Modeling and understanding groundwater contamination caused by cyanotoxins from harmful algal blooms in Lake Erie*. Joint 53rd Annual South-Central/53rd North-Central/71st Rocky Mtn GSA Section Meeting.

2016 **Vázquez-Ortega A.** and Fein J. *Thermodynamic modeling of Mn(II) adsorption onto manganese oxidizing bacteria*. American Chemical Society.

2015 **Vázquez-Ortega A.** and Fein J. *Thermodynamic modeling of Mn(II) adsorption onto manganese oxidizing bacteria*. Midwest Geobiology Symposium.

2014 Chorover J. and **Vázquez-Ortega A.** *Soil carbon (de)stabilization under changing climate: Scaling from micropores to catchments*. American Chemical Society. (Speaker)

2014 Perdrial N., **Vázquez-Ortega A.**, Reinoso-Maset E., O'Day P. and Chorover J. *Acid-weathering and uranium speciation: reaction kinetics and phosphate additions*. Goldschmidt Conference.

2012 Rasmussen, C., Meding, S.M., **Vazquez-Ortega, A.**, Chorover, J. *Domes, Ash, and Dust: Controls on Soil Genesis in a Montane Catchment of the Valles Caldera*. American Geophysical Union.

2011 Perdrial J.N., Perdrial N., Harpold A., Peterson A., **Vázquez-Ortega A.**, and Chorover J. *Probing dissolved organic matter in the critical zone: a comparison between in situ sampling and aqueous soil extracts*. American Geophysical Union.

2010 **Vázquez-Ortega A.**, Hernández Ruíz S., Rasmussen C., and Chorover J. *Characterization of dissolved organic matter during reactive transport: A column experiment with spectroscopic detection.* American Geophysical Union.

2010 Dolan E., Perdrial J.N., **Vázquez-Ortega A.**, Hernández-Ruiz S., and Chorover J. *Testing the application of Teflon/quartz soil solution samplers for DOM sampling in the Critical Zone: Field and laboratory approaches.* American Geophysical Union.

Non-refereed abstracts

2022 Gautam, S., **Vazquez-Ortega, A.,** and Xu Z. *Analyzing the Effect of Lake Dredged Sediments as Farm Soil Amendment on Corn and Soil Health.* IAGLR's 66th Annual Conference on Great Lakes Research.

2022 Kieffer, K., Rifat-Prova, S., and **Vazquez-Ortega, A.** *Characterizing the molecular composition of extractable humic material in a farm soil and lake dredged sediments.* IAGLR's 66th Annual Conference on Great Lakes Research.

2022 **Vazquez-Ortega, A.** and Oyewumi, O. *Assessment of Lake-Dredged Sediments as Farm Soil Amendment growing Specialty Crops*. IAGLR's 66th Annual Conference on Great Lakes Research.

2022 Barth, C., **Vazquez-Ortega, A.** and McCluney K. *Cycling of phosphate in farm soils amended with dredged materials: Insights from oxygen isotopes.* IAGLR's 66th Annual Conference on Great Lakes Research.

2021 **Vázquez-Ortega A.**, Franks M., Duncan E., King K. *Role of Fe- and Mn-(oxy)hydroxides on Carbon and Nutrient Dynamics in Agricultural Soils.* International Association for Great Lakes Research Virtual Conference. May 17-21.

2020 Brigham, R., Pelini, S., Xu, Z., and **Vázquez-Ortega A.** *Assessing the Effects of Lake Dredged Sediments on Soil Health: Agricultural and Environmental Implications in Midwest Ohio.* International Association for Great Lakes Research Virtual Conference. June 9-11.

2019 **Vázquez-Ortega A.**, Pelini, S. and Brigham, R. *Dredged Material Benefits for Crop Production and Environmental Implications.* International Association for Great Lakes Research - 62nd Annual Conference.

2019 Matthew F. and **Vázquez-Ortega A.** *The role of soil organic matter in agriculture: Implications on soil health and nutrient retention.* International Association for Great Lakes Research - 62nd Annual Conference.

2018 Matthew F. and **Vázquez-Ortega A.** *The effect of no-tilling versus moderate tilling practices on soil quantity and quality in Northwest Ohio:*

Implication on nutrient retention. Understanding Algal Blooms: State of the Science Conference.

X. Service

A. School

2022-current	Geography Major Undergraduate Committee member
2022-current	SEES Graduate Committee member
2020-2022	Geology Major Undergraduate Committee member
2021	Sciences Spotlight Day
2018-2022	Service-Learning Coordinator for ENVS 1010
2018, 2020	Academic Unit Merit Committee member
2018	SEES Seminar Series coordinator
2017, 2018	STEM Day
2018, 2019, 2022	Preview Day
2018, 2021, 2022	Provide peer evaluation letter

B. College

2021-current	Arts and Sciences Council, Math & Natural Sciences Division representative (3-year term)
2021	Dean of Arts and Sciences Search Committee Member
2021	Environmental Toxicology Search Committee Member
2021	CAS Diversity and Inclusion Faculty – Focus Group member to support the efforts in implementing the 2019 CAS Diversity Action Plan (Goal 3.1 and Strategy 3.1.1)
2019	Art and Science Diversity Committee member
2018-2019	Academic Investment in Math and Science (AIMS) Program, Advisory Board member
2019	Aquatic Microbiologist Search Committee Member

C. University

2022	Campus Sustainability Month, invited speaker
2022	Panel on The Erie Situation documentary, panelist
2021	BGSU Science Café, BGSU Center for Public Impact
2020	Library Advisory Committee
2020	CURS Spring Symposium Judge
2019	Search Committee Member for Research Development Officer, Research and Economic Engagement Office
2019	Faculty Development Committee member
2019	The Future of Lake Erie: Panel Discussion
2017	Faculty Research Committee member - Building Strength Mid to Major Research Project Grant reviewer
2017-2021	Honors College - Great Ideas and Desserts Event, moderator in student panel discussion (3)

D. Professional

2022	2022 ASA, CSSA, SSSA International Annual Meeting. Student Presentation Awards - volunteer judge
2019, 2020, 2021, 2023	Session chair, International Association for Great Lakes Research (IAGLR)
2021, 2022	IAGLR 2021, 2022 Student Presentation Awards - volunteer judge
2017-current	Reviewer for Chemosphere, Hydrological Processes, Geochimica et Cosmochimica Acta, Chemical Geology, Environmental Science & Technology, Journal of Plant Nutrition and Soil Science, Frontiers in Earth Science, Geoderma; Journal of Dredging
2018	External PhD dissertation reviewer – Fabio Sposito, University of Palermo, Italy

E. Community

2018-current	Share with Ohioan stakeholders' fact sheets on the benefits of using dredged sediments on agriculture. Documents shared with Metroparks Toledo, CIFT, UT, Ohio EPA, Lucas SWCD, ODNR, TMACOG, and Lake Erie Commission
2021	Presenter on CIFT Agribusiness Forum
2021	Coordinating an Agribusiness Forum on Dredged Sediment Benefits on crop row. March 18, 2021
2019, 2020, 2021	Presenter and panel member on Girl Power Event at Imagination Station
2022	Crim Elementary School - Present to 3rd graders an activity on rocks and minerals
2019	Invited speaker, Oak Openings Conservation Summit
2019	Invited speaker, Stone Laboratory, The Ohio State University's Island Campus, Sustainable Land and Water Systems class
2019	Panel member on Wetland mitigating HABs Workshop, Ohio Wetlands Association
2018-current	Invited speaker, Dredge Research and Innovation in Farming Team meeting, Ohio Lake Erie Commission
2018	2018 Ohio Dredged Material Summit - Inform Ohioan stakeholders about the beneficial use of dredged material on farming.
2018	Drones in Agriculture Seminar at BGSU. Co-organizer. Inform Ohioan stakeholders about current drone technology and agriculture applications.
2018	Crim Elementary School - Present to 2nd graders an activity on water quality.
2018	Ohio EPA Conference call - Serve in a panel to help identify priorities related to the beneficial uses of Lake Erie dredged material

XIII. Research or Professional Consultantships

XIV. Membership in Professional Organizations

Current	Soil Science Society of America
Current	International Association for Great Lakes Research American

XV. Honors and Awards

2017-2022	Faculty Development Fund Award, College of Arts and Sciences ($500)
2007	Alfred P. Sloan Foundation Scholarship
2007	Ivanhoe Foundation Fellowship

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