

CURRICULUM VITAE

Mary Kay Camarillo, Ph.D., P.E.

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Associate Professor of Civil Engineering at the University of the Pacific. Areas of interest include produced water management, biomass energy, wastewater treatment, and water quality in agricultural landscapes, with focus on how these topics affect environmental management and policy in California.

EDUCATION

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| Ph.D. Civil and Environmental Engineering, University of California, Davis | 2009 |
| <i>Topic:</i> Removal and inactivation of microorganisms occluded in effluent wastewater particles using filtration and chlorine disinfection | |
| <i>Committee:</i> Frank J. Loge, Jeannie L. Darby, Timothy R. Ginn | |
| M.S. Civil and Environmental Engineering, University of California, Davis | 2004 |
| <i>Topic:</i> Pathogens and water reuse | |
| <i>Committee:</i> Jeannie L. Darby, George Tchobanoglous, Stefan Wuertz | |
| B.S. Civil Engineering, cum laude, University of Washington, Seattle, WA | 1996 |

HONORS

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| University of the Pacific, Faculty Research Lecturer Award | 2018 |
| University of the Pacific, School of Engineering and Computer Science,
Outstanding Faculty Member | 2016 |
| University of the Pacific, Excellence in Undergraduate Research Mentoring | 2016 |
| University of California, Davis, Tchobanoglous Scholarship | 2009 |
| University of California, Davis, Graduate Student Symposium, second place | 2009 |
| University of California, Davis, Carollo Scholarship in Environmental Engineering | 2005 |
| U.S. Geological Survey, Certificate of Appreciation | 1995 |
| University of Washington, Johnston Scholarship in Civil Engineering | 1994 |
| University of Washington, Certificate of High Scholarship and Tuition Waiver | 1992/3 |

PROFESSIONAL

LICENSURE

Professional Civil Engineer: California #72693 and Washington #37431

AFFILIATIONS

- American Society of Civil Engineers (ASCE)

EXPERIENCE

2013-present, Visiting Faculty, Lawrence Berkeley National Laboratory, Berkeley, CA

- Reviewed technologies used in the oil and gas industry to treat wastewaters produced during conventional oil and gas production. Evaluated how these technologies would be applied to treat of wastewaters produced during unconventional oil and gas production (e.g. hydraulic fracturing of tight shales). Investigated wastewater disposal practices associated with the oil and gas industry in California.
- Analyzed model output from the WARMF watershed model and the Link-Node estuary model that was applied to the San Joaquin River to study the factors contributing to low dissolved oxygen conditions in the Stockton Deep Water Ship Channel as part of the San Joaquin River Dissolved Oxygen Total Maximum Daily Load Project (DO TMDL).

2014-present, Associate Professor, Civil Engineering, University of the Pacific, Stockton, CA

2009-2014, Assistant Professor, Civil Engineering, University of the Pacific, Stockton, CA

- Teaching: Courses in environmental engineering and construction management, independent studies in environmental research
- Research: Projects focused on water, waste, and energy issues in California and the associated technological, management, and policy issues
- Service: Activities include CAPD committee membership, advisor for ASCE water treatment competition, instructor for FE review courses, University Marshall, and others

2003-2008, Graduate Student Researcher and Teaching Assistant, Civil and Environmental Engineering, University of California, Davis

- Assisted with teaching undergraduate courses in environmental engineering, sustainability, and groundwater systems.
- Investigated disinfection and filtration of microorganisms occluded in wastewater particles (project funded by the Water Environment Research Foundation) and issues associated with water reuse and pathogens (project funded by the WaterReuse Research Foundation). Performed laboratory disinfection experiments using chlorination and UV disinfection as well as conducting other laboratory tests to characterize wastewater particles. Modified a radial pore diffusion model (in FORTRAN) to be appropriate for modeling disinfection of microorganisms occluded in wastewater particles. Integrated use of UCODE parameter estimating software to automate calibration and perform post-processing statistical analyses.

1999-2003, Resident Engineer, MWH Americas, Portland, OR

- Provided engineering construction services for a variety of water and wastewater infrastructure projects. Duties included issuance of design clarifications, review of contractor's work to verify contract compliance, and coordination of specialty inspections. A representative project was the Marine Park Water Reclamation Facility Phase II Expansion and Outfall Extension, a project undertaken by the City of Vancouver, WA to expand an existing wastewater treatment facility from eight to 16 million gallons per day.
- Planned and designed water and wastewater infrastructure for a variety of projects. A representative project was the Water Treatment Plant Improvements Project for the City of Newberg, OR that involved retrofitting an existing drinking water filtration system and constructing a new chemical storage and feed system.

1996-1999, Junior Engineer, Wallis Engineering, Vancouver, WA

- Performed engineering calculations and prepared contract documents (plans and specifications) for bidding and construction of wastewater treatment and conveyance facilities for the cities of Washougal, Ridgefield, Battle Ground, and Yacolt in Washington State.
- Wrote capital facilities planning documents and assisted clients in environmental regulatory compliance and funding of public works projects.

1995, Associate, US Geological Survey (Environmental Careers Organization), Lemoyne, PA

- Investigated water quality of surface waters impacted by acid mine drainage in the anthracite region of Pennsylvania. Evaluated treatment of acid mine drainage using anoxic limestone drains.
- Performed field and laboratory work to support a variety of projects related to water quality in Pennsylvania.

1994, Undergraduate Research Assistant, University of Washington, Seattle, WA

- Conducted experiments to study the wave mechanics in order to gain a better understanding of tsunami waves.
- Analyzed experimental data using Igor software for evaluation of wave mechanics.

TEACHING

CLASSES TAUGHT AT UNIVERSITY OF THE PACIFIC

CIVL 060	Water Quality (includes laboratory)
CIVL 132	Introduction to Environmental Engineering (includes laboratory)
CIVL 151	Heavy Construction Methods
CIVL 236	Physical and Chemical Treatment Processes
CIVL 237	Biological Treatment Processes
CIVL 293	Environmental Systems Analysis
ENGR 030	Engineering and Computing Ethics in Society
ENGR 201	Techniques in Research
ENGR 293	Environmental Data Analysis

FACULTY ADVISOR - UNDERGRADUATE RESEARCH AND STUDY

- Cintia Cortez, *Environmental Data Science*, Fall 2021
- Emily Reynoso, *Aerial Photogrammetry and Stormwater Modeling*, Summer 2020
- Jacob Smith, *Chemical Indicators of Hydraulic Fracturing*, Summer 2020
- Gena Farley, *Improving Aerial Photogrammetry using Unmanned Aerial Vehicles*, Spring 2020
- Muhammad Khan, *Advances in Mapping Using Unmanned Aerial Vehicles*, Summer 2019
- Khuong Tran, *Unmanned Aerial Vehicles in Mapping of River Basins*, Spring 2019
- Emily Reynoso, *Geochemistry & Water Treatment*, Fall 2019
- Stefanos Word, *Advanced Water Treatment Process Design*, Fall 2019
- Tamara Turton, *Design of Biological Reactors*, Summer II 2017
- Maria Nguyen, *Solar Dehydrator Design and Testing*, Fall 2016
- Sara Weimer, *Bio Treatment Produced Water*, Summer III 2016
- Alisha Rodriguez, *Applied Chemical Analysis*, Summer II 2016
- Marielle Cortez, *Solar Dehydrator*, Spring 2016
- Dylan Dibble, *Grey Water Treatment System*, Fall 2013 (part of Ambassador Corps Program)
- Jason Jung, *Carbon Storage In Wetlands*, Summer 2013
- Linh Nguyen, *Stormwater Treatment Systems*, Fall 2011
- Jocelyn Gray, *Natural Treatment System Design Parameters*, Summer 2010
- Reviewer for Advisor Dean Jain, Independent Study, Josephine Trinh and James Edwards, *Sustainability and Water Systems*, Fall 2010
- John Romero, *Green Roof Demonstration Project at the San Joaquin County Office of Education*, Summer 2010
- Brianna Juhrend, *Green Roof Demonstration Project at the San Joaquin County Office of Education*, Spring 2010

COMMITTEE MEMBERSHIP - MASTER'S THESIS

- Chao Feng, *Treatment of Oil-Water Emulsion from the Machinery Industry by Fenton's Reagent*, Spring 2014
- Cyle Moon, *Zooplankton-Phytoplankton Interaction in the San Joaquin River, CA*, Fall 2013
- Stacy Costello, *Evaluation of a Passive Stormwater Treatment Device*, Fall 2012
- Chelsea Spier, *The Fate and Distribution of Subsurface Hydrocarbons Released During the 2010 MC252 Oil Spill in Deep Offshore Waters of the Gulf of Mexico*, Summer 2012
- Vikas Azad, *Modeling Distributed Energy System for California Electricity Production through 2050*, Spring 2012
- Christina Ramirez, *Water Security and its Importance in Protecting Public Health*, Spring 2012
- Kristen Shimizu, *Water Quality Monitoring of Biological Contaminants – Rapid, On-Site Detection Technologies*, Spring 2012

FACULTY ADVISOR - DIRECTED EXPERIENTIAL LEARNING (DEXL)

- Javier Rios-Farias, *Estimating Digester Gas Production Increase Due to Changes in Sludge Characteristics*, 2013
- John Romero, *Rehabilitation of Sewer Pipelines*, 2011
- Michelle Hawley, *Design of Stormwater System to Generate LEED Points*, 2010
- Jocelyn Gray, *Air Quality Monitoring at a Construction Site with Contaminated Soils*, 2010
- Josephine Trinh, *Co-Location of Desalination Plants Near Power Plants*, 2010
- James Edwards, *Use of Wetlands for Enhancement of Water Quality Objectives*, 2010

PROFESSIONAL DEVELOPMENT

2019-2020 Center for Teaching and Learning, Mentorship Program

2016-19 Writing in the Disciplines at Pacific: Thinking about Writing and Writing about Thinking, NIC Learning Community

2015 ASCE ExCEED Teaching Workshop Fellow, U.S. Military Academy, NY

RESEARCH

CURRENT AREAS OF INTEREST

- Environmental management oil/gas production
- Biomass energy
- Water quality in agricultural watersheds
- Unmanned aerial vehicle use in civil engineering
- Pedagogy and gender issues in engineering

PEER-REVIEWED PUBLICATIONS*

1. Stringfellow, W. T., and **M.K. Camarillo**. 2019. Flowback verses first-flush: new information on the geochemistry of produced water from mandatory reporting. *Environmental Science: Processes and Impacts* 21(2):370-383.
2. **Camarillo, M. K.** and W. T. Stringfellow. 2018. Biological treatment of oil and gas produced water: a review and meta-analysis. *Clean Technologies and Environmental Policy* 20(6): 1127-1146.
3. Stringfellow, W.T., **M.K. Camarillo**, J.K. Domen, and S.B.C. Shonkoff. 2017. Comparison of chemical-use between hydraulic fracturing, acidizing, and routine oil and gas development. *PLoS ONE* 12(4): e0175344.
4. Stringfellow, W.T., **M.K. Camarillo**, J.K. Domen, W.L. Sandelin, C. Varadharajan, P.D. Jordan, M.T. Reagan, H. Cooley, M.G. Heberger, and J.T. Birkholzer. 2017. Identifying chemicals of concern in hydraulic fracturing fluids used for oil production. *Environmental Pollution*, 220, 413-420.
5. **M.K. Camarillo**, J.K. Domen, and W.T. Stringfellow. 2016. Physical-chemical analysis of hydraulic fracturing chemicals in the context of produced water treatment. *Journal of Environmental Management*, 183:164-74.
6. **Camarillo, M.K.**, G.A. Weissmann, S. Gulati, J. Herr, S. Sheeder, and W.T. Stringfellow. 2016. Pairing high-frequency data with a link-node model to manage dissolved oxygen impairment in a dredged estuary. *Environmental Monitoring and Assessment*, 188(8):455 (1-18).
7. Gulati, S., A. Stubblefield, J. Hanlon, C. Spier, **M.K. Camarillo**, and W. Stringfellow. 2016. Mass balance analysis for salts, nutrients, and oxygen-demanding substances in the San Joaquin River. *Water Science and Technology*, 73(3): 654-61.
8. Feng, C., H. Sun, S. Li, **M.K. Camarillo**, W.T. Stringfellow, and Y. Liang. 2015. Treatment of oil-water emulsion from the machinery industry by Fenton's reagent. *Water Science and Technology*, 71(12): 1884-92.

9. Stringfellow, W.T., J.K. Domen, **M.K. Camarillo**, W.L. Sandelin, and S. Borglin. 2014. Physical, chemical, and biological characteristics of compounds used in hydraulic fracturing. *Journal of Hazardous Materials*, 275: 37-54.
10. Domen, J.K., W.T. Stringfellow, **M.K. Camarillo**, and S. Gulati. 2014. Fog water as an alternative and sustainable water resource. *Clean Technologies and Environmental Policy*, 16(2): 235-249.
11. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and E. Basha. 2013. Performance of sanitary sewer collection system odour control devices operating in diverse conditions. *Water Science and Technology*, 68(12): 2527-2533.
12. **Camarillo, M.K.**, W.T. Stringfellow, C.L. Spier, J.S. Hanlon, and J.K. Domen. 2013. Impact of co-digestion on existing salt and nutrient mass balances for a full-scale dairy energy project. *Journal of Environmental Management*, 128: 233-242.
13. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and K. Watson. 2013. Investigation of selective catalytic reduction for control of nitrogen oxides in full-scale dairy energy production. *Applied Energy*, 106: 328-336.
14. **Camarillo, M.K.**, W.T. Stringfellow, M.B. Jue, and J.S. Hanlon. 2012. Economic sustainability of a biomass energy project located at a dairy in California, USA. *Energy Policy*, 48: 790-798.
15. **Camarillo, M.K.**, F.J. Loge, J.L. Darby, T.R. Ginn, H. Basagaoglu, and L. Foglia. 2011. Modeling the inactivation of microorganisms occluded in effluent wastewater particles to enhance operation of filtration and disinfection systems. *Water Environment Research*, 83(4): 313-25.
16. Loge, F.J., J.L. Darby, T.R. Ginn, and **M.K. Camarillo**. 2010. Optimizing filtration and disinfection systems with a risk-based approach. Water Environment Research Foundation, Project WERF 04-HHE-5. International Water Association (IWA) Publishing. London, UK.
17. **Camarillo, M.K.**, F.J. Loge, and J.L. Darby. 2010. A model to quantify removal and inactivation of microorganisms occluded in effluent wastewater particles using filtration and disinfection systems. *Journal of Environmental Engineering – American Society of Civil Engineers (ASCE)*, 136(10): 1153-1160.

*Italics denote author was a student at University of the Pacific when the work was completed.

BOOK

1. Jain, R., **M.K. Camarillo**, and W.T. Stringfellow. 2014. Drinking water security for engineers, planners, and managers. Butterworth-Heinemann/Elsevier, Oxford, UK.

PRESENTATIONS WITH PEER-REVIEWED PAPERS **

1. **Camarillo, M.K.** and E. Basha. 2020. Integrated workflow for use of unmanned aerial vehicles in monitoring water resources. International Congress on Environmental Modeling and Software (iEMSs) Conference (virtual), Sept. 14-18.

2. **Camarillo, M.K.** and E. Basha. 2020. Integration of unmanned aerial vehicles and aerial photogrammetry into a civil engineering course. 2020 American Society for Engineering Education (ASEE) Annual Conference and Exposition (virtual), June 21-24.
3. **Camarillo, M.K.** and E. Camfield. 2020. Revising Roles: Enhancing an engineering capstone course to improve outcomes for women. 2020 American Society for Engineering Education (ASEE) Annual Conference and Exposition (virtual), June 21-24.
4. **Camarillo, M.K.**, W.T. Stringfellow, J. Herr, S. Sheeder, S. Gulati, G. Weissmann, and A. Stubblefield. 2014. Use of a one-dimensional link-node model to develop total maximum daily load strategies for the San Joaquin River Estuary. International Congress on Environmental Modeling and Software (iEMSs), San Diego, CA, June 15-19.
5. W.T. Stringfellow, J. Herr, S. Sheeder, S. Gulati, G. Weissmann, **M.K. Camarillo**, and M. Jue. 2014. Use of the WARMF model to identify sources of oxygen impairment and potential management strategies for the San Joaquin River Watershed. International Congress on Environmental Modeling and Software (iEMSs), San Diego, CA, June 15-19.
6. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and E. Basha. 2013. Performance of collection system odour control devices operating in diverse conditions. 5th International Water Association (IWA) Odours and Air Emissions Conference, San Francisco, CA, March 4-7.

**Underline denotes speaker.

EDITED PUBLICATION IN TRADE JOURNAL

1. **Camarillo, M.K.**, W.T. Stringfellow, R. Jain, J.S. Hanlon. 2014. Media mediation: Flow regulation reduces maintenance and media replacement in manhole cover odor control devices. *Water Environment and Technology*, 26(5): 54-57.

PRESENTATIONS WITH NON-REVIEWED PAPERS

1. **Camarillo, M.K.**, W.T. Stringfellow, J.K. Domen, and W.L. Sandelin. 2016. Screening treatment technologies for hydraulic fracturing wastes based on physical and chemical data. 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 14-17.
2. Gulati, S., A. Stubblefield, J. Hanlon, C. Spier, **M.K. Camarillo**, and W. Stringfellow. 2014. Mass balance analysis for salts, nutrients, and oxygen-demanding substances in the San Joaquin River. 13th International Water Association (IWA) Specialized Conference on Watershed and River Basin Management, San Francisco, CA, September 9-12.
3. **Camarillo, M.K.**, W.T. Stringfellow, and J.S. Hanlon. 2013. Use of flow regulation in manhole odor control devices to reduce maintenance and frequency of media replacement. Water Environment Federation 86th Annual Technical Exhibition and Conference (WEFTEC), Chicago, IL, October 5-9.

4. *Costello, S., R. Jain, and **M.K. Camarillo***. 2013. Removal of sediment from residential stormwater to improve water quality in Lake Tahoe. Water Environment Federation 86th Annual Technical Exhibition and Conference (WEFTEC), Chicago, IL, October 5-9.
5. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and M.B. Jue. 2012. Operating an anaerobic digestion and co-generation system with stringent air quality regulations to limit nitrogen oxides (NO_x) and sulfur oxides (SO_x) in stack gas emissions. Water Environment Federation 85th Annual Technical Exhibition and Conference (WEFTEC), New Orleans, LA, September 29-October 3.
6. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and M.B. Jue. 2012. Enhanced sustainability of dairy operations through implementation of a biomass energy project. American Society Agricultural and Biological Engineers (ASABE) Annual International Meeting, Dallas, TX, July 29-August 1.
7. **Camarillo, M.K.**, Stringfellow, W.T., and Jain, R. 2011. A review of major issues concerning drinking water security. An Integrated Water Security Summit Dedicated to Defense-in-Depth, San Francisco, CA, November 2-4.
8. **Camarillo, M.K.**, Loge, F.J., and Darby, J.L. 2010. Modeling inactivation of pathogens in effluent particles. Water Environment Federation 83rd Annual Technical Exhibition and Conference (WEFTEC), New Orleans, LA, October 4-6.
9. **Anuskiewicz (now Camarillo), M.K.**, Loge, F.J., and Darby, J.L. 2007. Optimizing the removal and disinfection of microorganisms occluded within wastewater particles. Water Environment Federation 80th Annual Technical Exhibition and Conference (WEFTEC), San Diego, CA, October 13-17.

TECHNICAL REPORTS

1. **Camarillo, M.K.**, and W.T. Stringfellow. 2021. Literature Review on Chemical Indicators of Hydraulic Fracturing. Prepared for: California Department of Conservation Geologic Energy Management (CalGEM) Division, Award Agreement 2017-011.
2. **Camarillo, M.K.**, and W.T. Stringfellow. 2021. Comparison of Data from Well Stimulation Treatments and Groundwater Monitoring Wells to Evaluate Chemical Indicators of Aquifer Contamination in California. Prepared for: California Department of Conservation Geologic Energy Management (CalGEM) Division, Award Agreement 2017-011.
3. **Camarillo, M.K.**, and W.T. Stringfellow. 2021. Well Stimulation Treatment in California: Evaluation of Disclosure Data, May 2015 – October 2019. Prepared for: California Department of Conservation Geologic Energy Management (CalGEM) Division, Award Agreement 2017-011.
4. **Camarillo, M.K.**, J. Hanlon, J.Y. Lee, and W.T. Stringfellow. 2017. Strategic Planning and Technical Support for Co-Digestion Evaluation and Optimization. Prepared for: E&J Gallo Winery.

5. **Camarillo, M.K.**, J.Y. Lee, B. Grafius, and W.T. Stringfellow. 2017. Biological Treatment of Reclaimed Produced Water for Beneficial Reuse. Prepared for: California Resources Corporation.
6. **Camarillo, M.K.**, J.Y. Lee, B. Grafius, and W.T. Stringfellow. 2017. Biological Treatment of Produced Water: A Literature Review. Prepared for: California Resources Corporation. In preparation.
7. Stringfellow, W.T., **Camarillo, M.K.**, and P. Jordan. 2017. Status of Well Stimulation in California since Implementation of SB-4 Regulations. Prepared by: Lawrence Berkeley National Laboratory, Berkeley, CA. Prepared for: Division of Oil, Gas, and Geothermal Resources (DOGGR). In preparation.
8. Stringfellow, W.T., and **M.K. Camarillo**. 2016. Final Memo for Scientific Support since November 2015, LWINE-Pomace Management. Prepared for: E&J Gallo Winery. Prepared by: Ecological Engineering Research Program, University of the Pacific, Stockton, CA. Submitted: November 11, 2016.
9. Stringfellow, W. T.; Cooley, H.; Varadharajan, C.; Heberger, M.; Reagan, M.; Domen, J. K.; Sandelin, W.; **Camarillo, M. K.**; Jordan, P.; Donnelly, K.; Nicklisch, S.; Hamdoun, A.; Houseworth, J. Chapter 2: Impacts of Well Stimulation on Water Resources. In: An Independent Scientific Assessment of Well Stimulation in California. Vol. II: Potential Environmental Impacts of Hydraulic Fracturing and Acid Stimulation. California Council on Science and Technology: Sacramento, CA, July 1, 2015.
10. Stringfellow, W.T., J. Hanlon, **M.K. Camarillo**, C. Spier, and J. Domen. 2015. Investigation of Anaerobic Digestion Winery Wastes to Support Optimized Operation of a Full-Scale System, Final Report. Prepared for: E&J Gallo Winery. Prepared by: Ecological Engineering Research Program, University of the Pacific, Stockton, CA. Submitted: February 6, 2015.
11. Stringfellow, W.T. and **M.K. Camarillo**. 2014. Synthesis of Results from Investigations of the Causes of Low Dissolved Oxygen in the San Joaquin River & Estuary in the Context of the Dissolved Oxygen Total Maximum Daily Load. Prepared for: California Fish and Wildlife, SJR DO Total Maximum Daily Load (TMDL) Project (E0883006). Prepared by: Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
12. Weissmann, G.A., W.T. Stringfellow, S. Gulati, S. Sheeder, J. Herr, and **M.K. Camarillo**. 2014. Report 4.8.5: Analysis of Link-Node model mass loading scenarios. Prepared for: California Fish and Wildlife, SJR DO Total Maximum Daily Load (TMDL) Project (E0883006). Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
13. Stubblefield, A., S. Gulati, **M.K. Camarillo**, J. Hanlon, and W. Stringfellow. 2013. Report 4.8.3: Mass balance analysis for the San Joaquin River from Lander Avenue to Vernalis. Prepared for: California Fish and Wildlife, SJR DO Total Maximum Daily Load (TMDL) Project (E0883006). Ecological Engineering Research Program, University of the Pacific, Stockton, CA.

14. Domen, J., M.I. Ebia, W.T. Stringfellow, **M.K. Camarillo**, and M. Jue. 2013. Egg waste and grape pomace as feedstocks for enhanced biogas production in dairy-based anaerobic co-digestion. Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
15. Domen, J., R. Jain, and **M.K. Camarillo**. 2013. Sewer Gas: A pervasive and serious health problem. Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
16. Stringfellow, W.T., **M.K. Camarillo**, J. Hanlon, M.B. Jue, and C. Spier. 2011. Fiscalini Farms Biomass Energy Project, Final report. Prepared for: Department of Energy, project DE-EE0001895. Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
17. Stringfellow, W.T., **M.K. Camarillo**, M.B. Jue, J. Hanlon, J. Graham, and C. Spier. 2011. Fiscalini Farms Biomass Energy Project, Economic sustainability analysis - Task 5 Report. Prepared for: Department of Energy, project DE-EE0001895. Ecological Engineering Research Program, University of the Pacific, Stockton, CA.
18. **Anuskiewicz (now Camarillo), M.K.** and J.L. Darby. 2005. Presence, removal and inactivation of pathogens in reclaimed water. Prepared for: WaterReuse Foundation, project WRF-03-001. University of California, Davis. Davis, CA.

PRESENTATIONS WITH ABSTRACTS

1. **Camarillo, M.K.**, W.T. Stringfellow, J.K. Domen, and W.L. Sandelin. 2016. Screening treatment technologies for hydraulic fracturing wastes based on physical and chemical data. American Chemical Society (ACS) 251st National Meeting & Exposition, San Diego, CA, March 13-7.
2. **Camarillo, M.K.**, W.T. Stringfellow, T. McKone, H. Cooley, C. Varadharajan, J. Houseworth, S.B. Shonkoff, P. Jordan, J.K. Domen, and W.L. Sandelin. 2015. Characterizing Environmental Hazards of Hydraulic Fracturing in California. Society of Women Engineers Region A Conference, Stockton, CA, February 20-22.
3. **Camarillo, M.K.**, J. Herr, S. Sheeder, G. Weissmann, S. Gulati, and W.T. Stringfellow. 2014. Application of an estuary model to quantify factors contributing to low dissolved oxygen conditions in the San Joaquin River Deep Water Ship Channel. Bay-Delta Science Conference, Sacramento, CA, October 28-30.
4. **Camarillo, M.K.**, W.T. Stringfellow J. Herr, S. Sheeder, S. Gulati and G. Weissmann. 2014. Modeling To Promote Stakeholder Involvement And Informed Decision-Making In A TMDL Program. 13th International Water Association (IWA) Specialized Conference on Watershed and River Basin Management, San Francisco, CA, September 9-12.
5. **Stringfellow, W.T.**, J.K. Domen, **M.K. Camarillo**, W.L. Sandelin, R. Tinnacher, P. Jordan, J. Houseworth, and J. Birkholzer. 2014. Characterizing compounds used in hydraulic fracturing: A necessary step for understanding environmental impacts. American Chemical Society (ACS) National Meeting, Hydraulic Fracturing Symposium, San Francisco, CA, August 10-14.

6. **Camarillo, M.K.**, W.T. Stringfellow, C.L. Spier, J.S. Hanlon, and *J. Domen*. 2013. Selection of co-digestate feedstocks based on evaluation of a full-scale biomass energy mass balance. Agricultural and Biological Engineers (ASABE) Annual International Meeting, Kansas City, MO, July 21-24.
7. *Domen, J., M. Ebia, M.K. Camarillo*, and W.T. Stringfellow. 2013. Egg waste and grape pomace as co-digestates for biogas production in anaerobic digestion. Agricultural and Biological Engineers (ASABE) Annual International Meeting, Kansas City, MO, July 21-24.
8. *Shimizu, K., M.K. Camarillo*, and R. Jain. 2012. Technology developments in the rapid detection of microbial contaminants in drinking water systems. 21st Century Water Utility: A Progress Report. California-Nevada American Water Works Association (AWWA) 2012 Annual Fall Conference, San Diego, CA, October 8-11.
9. **Camarillo, M.K.**, W.T. Stringfellow, J.S. Hanlon, and M.B. Jue. 2012. Economic sustainability of a dairy-based biomass energy project in California. The 27th International Conference on Solid Waste Technology and Management, Philadelphia, PA, March 11-14.
10. *Stringfellow, W.T., S. Borglin, J. Hanlon, C. Spier, J. Graham, M.K. Camarillo, C. Kendall, and S. Engelage*. 2010. Design challenges to the integration of ecosystem services into agricultural landscapes in arid ecosystems. Commission Internationale du Genie Rural, Québec City, Canada, June 16.
11. **Camarillo, M.K.** 2009. Removal and inactivation of microorganisms occluded in effluent wastewater particles. University of California, Davis 14th Annual Interdisciplinary Graduate Symposium, Davis, CA.

CONFERENCE POSTER PRESENTATIONS

1. **Camarillo, M.K.** and W.T. Stringfellow. 2016. Use of physical-chemical data to identify appropriate treatment technologies for oil-field wastewater containing hydraulic fracturing chemicals. Pacific Research Day, Stockton, CA, April 30.
2. **Camarillo, M.K.**, J.K. Domen, W.L. Sandelin, W.T. Stringfellow. 2015. Characterization of chemical additives used for hydraulic fracturing in California. Pacific Research Day, Stockton, CA, April 25.
3. W.T. Stringfellow, S. Gulati, A. Stubblefield, J. Hanlon, C. Spier, J. Herr, and **M.K. Camarillo**, 2014. Characterization of the mass flux of salts, nutrients, and oxygen-demanding substances from the San Joaquin River to the Estuary. Bay-Delta Science Conference, Sacramento, CA, October 28-30.
4. *Jung, J.Y.*, W.T. Stringfellow, **M.K. Camarillo**, Z.Y. Avdan, J. Hanlon, and C. Spier. 2014. Carbon storage in different wetland habitats. Pacific Undergraduate Research and Creativity Conference, Stockton, CA, April 26.

5. **Camarillo, M.K.**, W.T. Stringfellow, J. Domen, J. Hanlon, and C. Spier. 2014. Biomass energy for stabilizing agricultural wastes and producing renewable energy in California. Pacific Research Day, Stockton, CA, April 26.
6. Gulati, S., C. Spier, J. Hanlon, A. Stubblefield, M. Jue, **M.K. Camarillo**, W.T. Stringfellow, G. Weissmann, E. Garcia, J. Herr, and S. Sheeder. 2014. Methodologies to evaluate dissolved oxygen impairment in the San Joaquin River for watershed management. Pacific Research Day, Stockton, CA, April 26.
7. Stringfellow, W.T., J.K. Domen, W.L. Sandelin, and **M.K. Camarillo**. 2014. Characterization of chemical additives used in hydraulic fracturing fluid. Pacific Research Day, Stockton, CA, April 26.
8. Jung, J., W.T. Stringfellow, **M.K. Camarillo**, and C. Spier. 2014. Effects of wetland management on carbon storage in soil. National Conference on Undergraduate Research (NCUR), Louisville, KY, April 4.
9. Jung, J., W.T. Stringfellow, **M.K. Camarillo**, C. Spier, M. Burnell, and G. Litton. 2013. Toxic *Microcystis* blooms in the Sacramento-San Joaquin Delta Watershed. Pacific Undergraduate Research and Creativity Conference, Stockton, CA, April 20.
10. **Camarillo, M.K.**, W.T. Stringfellow, J. Domen, and M. Ebia. 2013. Encouraging sustainable agriculture through biomass energy. 2013 Pacific Research Day, Stockton, CA, March 25.
11. **Camarillo, M.K.**, W.T. Stringfellow, M.B. Jue, and J. S. Hanlon. 2012. Impact of co-digestion on salinity at a biomass energy project. International Water Association World Water Congress & Exhibition, Busan, Korea, September 16-21.
12. Hanlon, J.S., **M.K. Camarillo**, C. Spier, and W. T. Stringfellow. 2012. Developing a monitoring strategy for tracking environmental impacts of co-digested feedstocks in an anaerobic biomass energy project. The 8th National Monitoring Conference, Portland, OR, April 30-May 4.
13. Hanlon, J.S., **M.K. Camarillo**, A. Stubblefield, W.T. Stringfellow. 2012. Integration of routinely collected municipal monitoring data sets to supplement a regional dissolved oxygen total maximum daily load (TMDL) model. 8th National Monitoring Conference, Portland, OR, April 30-May 4.
14. Ebia, M., C. Spier, W.T. Stringfellow, **M.K. Camarillo**. 2012. Development of the total phosphorous mass balance using a modified persulfate digestion method. Pacific Undergraduate Research and Creativity Conference, Stockton, CA, April 21.
15. Juhrend, B., R. Jain, **M.K. Camarillo**, W.T. Stringfellow. 2012. Drinking water security and sustainability. Pacific Undergraduate Research and Creativity Conference, Stockton, CA, April 21.

FUNDED PROJECTS

1. Co-Principal Investigator (PI is William T. Stringfellow). 2016-2017. Strategic Planning & Technical Support for Co-Digestion Evaluation and Optimization, E & J Gallo Winery, Modesto, CA. Awarded November 2015, \$24,352.
2. Principal Investigator. 2016-7. Biological Treatment of Reclaimed Produced Water for Beneficial Reuse, California Resources Corporation, Los Angeles, CA. Awarded October 2016, \$50,003.
3. Co-Principal Investigator (PI is William T. Stringfellow). 2015-6. Strategic Planning & Technical Support for Pomace Management, E & J Gallo Winery, Modesto, CA. Awarded November 2015, \$17,337.
4. Co-Principal Investigator (PI is William T. Stringfellow). 2014. Investigation of Anaerobic Digestion of Winery Wastes to Support Optimized Operation of a Full-Scale System. E & J Gallo Winery, Modesto, CA. Awarded April 2014, \$100,000.
5. Principal Investigator. 2012. Process Control Strategies for Dairy Digesters Practicing Co-Digestion. University of the Pacific Eberhardt Research Fellowship, \$3,478.
6. Principal Investigator. 2009. Ultraviolet Disinfection of Spore-Forming Bacteria in Effluent Wastewater Particles. University of the Pacific Scholastic/Artistic Activity Award, \$3,103.
7. Co-Principal Investigator (with Professor Gary Litton). 2009. Addition of a Disinfection Laboratory to the Existing Civil Engineering Curriculum. University of the Pacific Committee for Academic Planning and Development (CAPD) Small Project Grant, \$3,492.

SERVICE

CIVL ENGINEERING DEPARTMENT

- Promotion Committee for Luke Lee, Civil Engineering, Fall 2016
- Faculty Advisor, American Society of Civil Engineers, Mid-Pacific Water Treatment Competition, 2011-2015
- Faculty Advisor, American Society of Civil Engineers, Mid-Pacific Water Research Paper Competition, Micaela Nino, "Nanotechnology as a treatment for waste streams produced by hydraulic fracturing", 2015
- Co-host with California State University, Fresno (responsible for overseeing water quality testing and the work of five graduate students), American Society of Civil Engineers, Mid-Pacific Water Treatment Competition, 2014
- Speaker, University of the Pacific Profile Day, 2011
- Speaker, University of the Pacific Preview Day, 2009, 2011
- Speaker, Civil Engineering Senior Design class, "Constructability and Design", Spring 2010
- Speaker, American Society of Civil Engineers Student Chapter, University of the Pacific, Fall 2009

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

- System Administrator Search Committee, 2021
- Delivered presentation as part of a series in SOECS, “Hydraulic Fracturing in California and Concerns over Water Resources” Fall 2020
- Administered a program to support undergraduate students working on research projects, funded by the Tchobanoglous Water Research Lecture series endowment, Summer 2020
- Delivered presentation as part of a series in SOECS, “Hydraulic Fracturing in California and Concerns over Water Resources” Fall 2020
- SOECS Scholarship Committee, 2016-2020
- SOECS Graduate Committee, 2015-2020
- Engineering Lab Technician Search Committee, 2019
- Chair, Engineering and Computer Science Council, 2018-19
- Women in Technology Committee, 2016
- Faculty Advisor, Society of Women Engineers, University of the Pacific, 2015-2016
- Conference Organizing Committee Member, Society of Women Engineers 2015 Region A Conference, and Coordinator for the Student Poster Session and Competition
- Speaker, School of Engineering and Computer Science, Dean’s Council, “Biomass Energy Research Program at Pacific”, Spring 2013
- Instructor, FE Review Courses
 - Engineering Economics: Spring 2010
 - Chemistry/Biology: Spring 2010, 2011
 - Chemistry: Fall 2011, Spring and Fall 2012, 2013
 - Probability and Statistics: Fall 2013
- Volunteer, University of the Pacific Cardboard Boat Race, 2009, 2011 – 2013
- Natural Resources Institute Self-Study Committee, Summer/Fall 2012
- Temporary Advisor, Society of Women Engineers, University of the Pacific, Spring 2010

UNIVERSITY OF THE PACIFIC

- Committee for Academic Planning and Development (CAPD), Fall 2020 – present
- CAPD Chair, Fall 2021
- Director of Strategic Research Development Search Committee, Fall 2021
- COVID in wastewater testing project, 2021
- Scientific Advisory Committee, Fall 2020 - present
- GE CORE 2 Planning Committee, Fall 2020 - present
- Committee for Academic Planning and Development (CAPD), Fall 2020 - present
- Delivered presentation as part of a series in Graduate Studies, “Scientific Study of Hydraulic Fracturing in California Improves Transparency and Oversight” Fall 2020
- Sustainability Committee (temporary replacement), Fall 2020
- ECS Council Charter Revision Ad-Hoc Committee, Fall 2020
- Promotion and Tenure Committee for Jiong Hu, Audiology, Fall 2020
- GE Revision Working Group, World Perspectives and Ethics, Summer 2020
- General Education Committee (temporary replacement), Spring 2020
- University Awards Committee, 2019-2020
- Promotion and Tenure Committee for Tara Thiemann, Biological Sciences, Fall 2018

- Academic Council Committee on Graduate Studies (replacement for Gary Litton), Spring 2017
- Speaker, McGeorge School of Law, Foundations of Water Law Course (LAW 232), “Introduction to Wastewater Treatment”, Spring 2017
- Faculty Compensation Committee, 2015-
- Speaker, Honors Freshmen Seminar, Fall 2015
- Tchobanoglous Water Lecture Series Organizing Committee, Fall 2015-present
- Water and Environmental Stewardship Initiative Committee, 2014-
- Promotion and Tenure Committee for Scott Larwood, Mechanical Engineering, Fall 2015
- Third Year Review Committee for Tara Thiemann, Biological Sciences, Fall 2015
- Committee for Academic Planning and Development (CAPD), Fall 2011 – Spring 2014
- Undergraduate Research Task Force, 2010 – 2015
- University Commencement Marshall, 2011 – 2014
- Speaker, McGeorge School of Law, Foundations of Water Law Course (LAW 232), “Introduction to Wastewater Treatment”, Fall 2012
- General Education Committee, Spring 2012
- Volunteer, Expanding Your Horizons Career Conference, University of the Pacific, 2009, 2011
- Speaker, REELL Community Meeting, “Natural Wastewater Treatment Systems,” Fall 2009
- Faculty Participant, CRC Etiquette Dinner, University of the Pacific, Fall 2009

COMMUNITY

- Expanding Your Horizons (San Joaquin), Workshop Leader, 2016-18
- Sewer Gas Odor Study, City of Stockton, 2012 – 2013
- Speaker, San Joaquin County Office of Education, “Green Roofs”, Spring 2010
- Speaker, Stockton Kiwanas Club, “California’s Water – Problems and Opportunities”, Fall 2009
- Speaker, Stockton Engineer’s Club, “Water Treatment – Then and Now”, Fall 2009

PROFESSIONAL

- NSF Reviewer, 2020, 2021, and 2022
- Organizing Committee and Abstract Reviewer, 13th International Water Association (IWA) Specialized Conference on Watershed and River Basin Management, San Francisco, CA, 2014
- Moderator, “Landfill 4” Session, 27th International Conference on Solid Waste Technology and Management, Philadelphia, PA, 2012