

# ERIK CHRISTIAN PORSE, PhD

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California Institute for Water Resources  
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## RESEARCH AREAS

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- Water Resources Management and Policy
- Systems Analysis
- Environmental Planning
- Urban Sustainability
- Utility and Local Government Management and Finance

## EDUCATION

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2011-2014 University of California, Davis, Ph.D., Civil and Environmental Engineering  
*National Science Foundation IGERT Trainee: Ecology and Rapid Environmental Change*

2003-2005 George Mason University, Master of Public Policy (Science and Technology Policy)

1999-2002 University of Hartford, B.S. in Engineering. Summa Cum Laude (Acoustical Engineering and Music)

1997-1999 Virginia Tech University, Biology Major, 87 credits completed.

## ACADEMIC APPOINTMENTS

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Director	California Institute for Water Resources, University of California Division of Agriculture and Natural Resources (Jan. 2023 to present)
Associate Cooperative Extension Specialist	University of California Division of Agriculture and Natural Resources (Jan. 2023 to present)
Research Engineer III	OWP at Sacramento State; U.S. Environmental Protection Agency Region 9 Environmental Finance Center (Oct. 2020 to Jan. 2023)

Assistant Adjunct Professor	UCLA Institute of the Environment and Sustainability (Nov. 2020 to Jan. 2023)
Lecturer	Sacramento State Department of Environmental Studies (Nov. 2020-present)
Research Engineer II	OWP at Sacramento State; U.S. Environmental Protection Agency Region 9 Environmental Finance Center (Oct. 2017 to Oct. 2020)
Visiting Assistant Researcher	UCLA Institute of the Environment and Sustainability (Oct. 2017 to Oct. 2020)
Associate Research Director	UCLA California Center for Sustainable Communities (Sept. 2016 - Sept. 2017)
Postdoctoral Scholar	UCLA California Center for Sustainable Communities (Sept. 2014 - Sept. 2016)
PhD Fellow	Technical University of Denmark (DTU) (Aug. 2014 - Sept. 2014)
Adjunct Professor	Earlham College (June 2009 - January 2010)
Adjunct Professor	George Mason University (Sept. 2005 - May 2007)

## PUBLICATIONS

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### PEER-REVIEWED ARTICLES

36. **Porse, Erik**. "[Systems analysis of metropolitan-scale reuse with effects on water supply resilience and water quality](#)." *Civil Engineering and Environmental Systems* (2023): 1-23.
35. **Porse, Erik**, Jonathan Kaplan, Harold Leverenz, Caitlyn Leo, Dakota Keene, David Babchanik, Erick Eschker, and Jonathan Kaplan. (2023). "[Adapting Wastewater Systems in California for Water Conservation and Climate Change](#)." *Sustainable and Resilient Infrastructure*.
34. **Porse, Erik**, Chingwen Cheng, Sara Hughes, and N. Claire Napawan. (2022). [Urban water management, planning, and design: Links, opportunities, and challenges](#). *Frontiers in Water*, 4, 1010318.
33. **Porse, Erik C.**, Maureen Kerner, Joel Shinneman, Jonathan Kaplan, Samuel Stone, and Mary Cadenasso. (2022). "[Stormwater Utility Fees and Household Affordability of Urban Water Services](#)". *Water Policy*.
32. Babchanik, David, Danielle Salt, Brian Currier, Maureen Kerner, and **Erik Porse**. (2022). "[Municipal Spending for Stormwater Management in California: Categorization and Trends Analysis](#)". *Environmental Management*. 69(6), 1053-1065.

31. **Porse, Erik C.**, Cristina Poindexter, Christian Carleton, and Michael Stephens. (2021). "[Climate Change Risk Assessment and Adaptation Costs for Stormwater Management in California Coastal Parklands.](#)" *Sustainable and Resilient Infrastructure*. 1-14.
30. Li, Dongyue, Ruth Engel, **Erik Porse**, Jonathan Kaplan, Steve Margulis, Dennis Lettenmaier. (2021). "[Stay-at-home orders during the COVID-19 pandemic reduced urban water use.](#)" *Environmental Science and Technology Letters*. 431-436.
29. **Porse, Erik C.**, Eric Fournier, Dan Cheng, Hannah E. Gustafson, Felicia Federico, and Stephanie Pincetl. (2020). "[Net Solar Generation Potential from Urban Rooftops in Los Angeles.](#)" *Energy Policy*. 142. July 2020.
28. **Porse, Erik C.**, Kathryn B. Mika, Alvar Escriva-Bou, Eric Fournier, Kelly T. Sanders, Edward Spang, Jennifer Stokes-Draut, Felicia Federico, Mark Gold, and Stephanie Pincetl. (2020). "[Energy Use for Urban Water Management by Utilities and Households in Los Angeles](#)". *Environmental Research Communications*. 2020: 2.1
27. **Porse, Erik.** (2019). "[Merging Network Governance and Systems Analysis for Urban Water Management.](#)" *Civil Engineering and Environmental Systems*. 2019: 1-19.
26. Fournier, Eric, Felicia Federico, **Erik Porse**, and Stephanie Pincetl. (2019) "[Effects of building size growth on residential energy efficiency and conservation in California.](#)" *Applied Energy*. Volume 240. 446-452.
25. Pincetl, Stephanie, Thomas W. Gillespie, Diane E. Pataki, **Erik Porse**, Shenyue Jia, Erika Kidera, Nick Nobles, Janet Rodriguez, and Dong-ah Choi. (2019) "[Evaluating the effects of turf-replacement programs in Los Angeles.](#)" *Landscape and Urban Planning*. 185: 210-221.
24. Shuang, Qing, Hui Jie Liu, and **Erik Porse**. "[Review of the Quantitative Resilience Methods in Water Distribution Networks.](#)" *Water* 11.6 (2019): 1189.
23. **Porse, Erik** and Stephanie Pincetl. (2018). "[Effects of Stormwater Capture and Use on Urban Streamflows.](#)" *Water Resources Management*. 33.2 (2019): 713-723.
22. Pincetl, Stephanie, **Erik Porse**, Kathryn B. Mika, Elizabeth Litvak, Kim Manago, Kartiki Naik, Terri Hogue, Mark Gold, Tom Gillespie, and Diane Pataki. (2018). "[Adapting Urban Water Systems to Manage Scarcity in the 21<sup>st</sup> Century: The Case of Los Angeles.](#)" *Environmental Management*. 63.3. pgs 293-308
21. **Porse, Erik**, Mika, K. B., Williams, R., Gold, M., Blomquist, W., & Pincetl, S. (2018). "[Groundwater Exchange Pools and Urban Water Supply Sustainability: Modeling Directed and Undirected Networks.](#)" *Journal of Water Resources Planning and Management*, 144(8), 04018040.
20. **Porse, Erik**, Kathryn B. Mika, Elizaveta Litvak, Kimberly F. Manago, Terri S. Hogue, Mark Gold, Diane E. Pataki, and Stephanie Pincetl. (2018). "[The Economic Value of Local Water Supplies in Los Angeles.](#)" *Nature Sustainability*, May. doi:10.1038/s41893-018-0068-2.

19. **Porse, Erik**. (2018). "[Open Data and Stormwater Infrastructure in Los Angeles: Implications for Green Infrastructure and Sustainability](#)". *Local Environment*. 1-13.
18. Derenski, Joshua. **Erik C. Porse**, Hannah Gustafson, Dan Cheng, and Stephanie Pincetl. (2018). "[Spatial and Temporal Analysis of Aggregated Energy Use Data in Los Angeles Schools](#)." *Energy Efficiency*. 11(2). P. 485-497.
17. **Porse, Erik C.**, Kathryn B. Mika, Elizabeth Litvak, Kim Manago, Kartiki Naik, Madelyn Glickfeld, Terri Hogue, Mark Gold, Diane Pataki, and Stephanie Pincetl. (2017). "[Systems Analysis and Optimization of Local Water Supplies in Los Angeles](#)." *Journal of Water Resources Planning and Management*. 143(9).
16. **Porse, Erik C.**, Joshua Derenski, Hannah Gustafson, Zoe Elizabeth, and Stephanie Pincetl (2016). "[Structural, Geographic, and Social Factors in Building Energy Use: Analysis of Aggregated, Account-Level Consumption Data in a Megacity](#)". *Energy Policy*. Vol. 96. September 2016. Pg. 179.
15. Pincetl, Stephanie, **Erik C. Porse**, and Deborah Cheng (2016). "[Fragmented Flows: Water Supply in Los Angeles County](#)". *Environmental Management*. 58(2). Pg. 208-222
14. **Porse, Erik C.**, Madelyn Glickfeld, Keith Mertan, and Stephanie Pincetl. (2015) "[Pumping for the Masses: Evolution of Groundwater Rights in Metropolitan Los Angeles](#)." *Geojournal*. DOI: 10.1007/s10708-015-9664-0.
13. **Porse, Erik C.**, and Jay Lund. (2015) "[Network Analysis and Visualizations in California Water: Linking connectivity and resilience](#)." *Journal of Water Resources Planning and Management*. 142.1 (2015).
12. Farzan, Shahla, Derek Young, Allison Dedrick, Gabriel Sampson, Matt Hamilton, **Erik Porse**, and Peter Coates. (2015) "[Western Juniper Management: Assessing Policies for Improving Greater Sage-Grouse Habitat and Rangeland Productivity](#)." *Environmental Management*. 56:675-683.
11. **Porse, Erik C.**, and Jay Lund (2015). "[Network Structure, Complexity and Adaptation in Water Resource Systems](#)." *Civil Engineering and Environment Systems* (Special issue on Resilience). 32(1-2). 143-156.
10. **Porse, Erik C.**, Samuel Sandoval Solis, Belize Lane. (2015). "[Integrating Environmental Flows into Multi-Objective Reservoir Management for a Transboundary, Water-Scarce River Basin: Rio Grande/Bravo](#)." *Water Resources Management*. February 2015. 2471-2484.
9. **Porse, Erik C.** (2014). "[Risk-based Zoning for Urbanizing Floodplains](#)." *Water Science and Technology*. Volume 70, Issue 11. (Special Issue on Urban Water Management). Pg. 1755-1763.
8. Lane, Belize. A., Samuel Sandoval-Solis, and **Erik Porse** (2015). "[Environmental Flows in a Human-Dominated System: Evaluating Integrated Water Management Strategies in the Big Bend Reach of the Rio Grande/Bravo Basin](#)." *River Research and Applications*. 31(9). Pgs. 1053-65.

7. **Porse, Erik C.** (2013). "[Stormwater Governance in Future Cities.](#)" *Water*. Volume 5, Issue 1. March 2013. Pg. 29-52.
6. **Porse, Erik C.** (2007). "[Measurement of Music Production and Innovation Networks: Case Studies from Seattle, Austin, and Nashville.](#)" *Journal of the Music and Entertainment Industry Association (MEIEA)*. Volume 7, No. 1.
5. Simpson, Harry J., Carl K. Frederickson, Brian H. Houston, **Erik C. Porse.** (2007). "[Measurements of Sound Propagation in a Littoral Environment Using a Vertical Synthetic Array.](#)" *Journal of the Acoustical Society of America*. Volume 121, Issue 1, pp. 85-97.
4. **Porse, Erik C.** (2006). "[MLB and Lobbying: A Perennial Favorite.](#)" *Outside the Lines, Journal of the Society for American Baseball Research (SABR)*. Volume XII Issue 3. Fall 2006.
3. Soukup, Raymond J. Jon M. Collis, William L. Siegmann, Michael D. Collins, Harry J. Simpson, and **Erik C. Porse.** (2005). "[Tank experiments and model comparisons of shallow water acoustics over an elastic bottom.](#)" *Journal of the Acoustical Society of America*. April 2005; 117:4; p. 2576.
2. Simpson, Harry J., Carl K. Frederickson, Brian H. Houston, **Erik C. Porse,** Larry A. Kraus, Alain R. Berdoz, Philip A. Frank, and Steve W. Liskey. (2003). "[Very-low-frequency Scattering Experiments from Proud Targets in a Littoral Environment Using a 55-m Rail.](#)" *Journal of the Acoustical Society of America*. October 2003. Volume 114, Issue 4, p. 2313.
1. **Porse, Erik C.** (2002). "[MTBE: Examining the Oxygenate Requirement and Remediation Costs: A Study in Science and Technology Policy Implementation.](#)" *SAE International*. 2002-01-1268.

#### UNDER REVIEW AND IN PRESS

1. Shuang, Qing, **Erik C. Porse.** "Spatial Analysis and Predictive Modeling of Leak Risk in Water Supply Distribution Networks." (Submitted).

#### IN PREPARATION

2. **Porse, Erik,** Harold Leverenz, Caitlyn Leo, Dakota Keene, David Babchanik, Erick Eschker, Patrick Maloney, Khalil Lezzaik, John Johnston, and Jonathan Kaplan. "Urban Water Conservation Forecasting and Effects on Wastewater Management in California."
1. **Porse, Erik,** Jonathan Kaplan. "Long-term Trends in Urban Water Demand in California."

#### BOOK CHAPTERS

3. Muller, Brook, Adell Amos, Joshua F. Cerra, Chingwen Cheng, David L. Feldman, Tatum Lau, Noelwah R. Netusil, and **Erik Porse.** "Redrawing our urban waters: merging design, law, and policy in advancing distributed water systems". In Yang, Y., & Taufen, A. (Eds.). (2022). *The Routledge handbook of sustainable cities and landscapes in the Pacific Rim*. Routledge.

2. **Porse, Erik**, and Stephanie Pincetl. "The Co-Evolution of Infrastructure, Governance, and Urban Ecology." In Pragmatic Sustainability: Theoretical and Practical Tools (2<sup>nd</sup> Ed). Editor: Steven Moore. Routledge. 2017.
1. Lund, Jay, Rui Hui, Alvar Escriva, **Erik Porse**, Lauren Adams, James Connaughton, Laila Kasuri, Ben Lord, Lucas Siegfried, Reed Thayer, Samuel Sandoval-Solis, Sooyeon Yi. "Reservoir Operation Design," in V. Singh (ed.), Handbook of Applied Hydrology. 130.1-131.1. McGraw Hill. 2017.

### CONFERENCE PROCEEDINGS

1. **Porse, Erik C.** (2013). Assessing Infrastructure Decisions to Manage Water Resources in the Valle de México. Conference Proceedings: World Wide Workshop for Young Environmental Scientists (WWW-YES). Arcueil, Paris, France: École Nationale des Ponts et Chaussées.

### BOOKS

1. Pincetl, Stephanie, Hannah Gustafson, Felicia Federico, Eric Daniel Fournier, Robert Cudd, and **Erik Porse**. Energy Use in Cities: A Roadmap for Urban Transitions. Palgrave Macmillan. 978-3-030-55600-6. 2020.

### TECHNICAL REPORTS

27. California Institute for Water Resources. (2023). *The Climate Smart Agriculture Program at UC ANR: 2019-2022 Report*. (Co-Author). Prepared by the California Institute for Water Resources. Prepared for the California Department of Food and Agriculture. June 2023.
26. Environmental Finance Center at Sacramento State (2022). [The California Clean Water State Revolving Fund: Review of Loan Award and Disbursement Process](#). Prepared for the California State Water Resources Control Board. July 2022.
25. Office of Water Programs at Sacramento State. (2022). *Proposed Regulations for Urban Water Retailers under AB 1668-SB 606: Standardized Regulatory Impact Assessment (SRIA)*. (Co-Author). Prepared by the Office of Water Programs at Sacramento State, the University of California Los Angeles, the University of California Davis, and California Polytechnic Institute and State University, Humboldt. Prepared for the California State Water Resources Control Board. June 2022.
24. Office of Water Programs at Sacramento State. (2022). [Task 5 Report, Summary of Environmental Effects for AB 1668-SB 606: Evaluating effects of urban water use efficiency standards \(AB 1668-SB 606\) on urban retail water suppliers, wastewater management agencies, and urban landscapes \(trees and urban parklands\)](#). Prepared by the Office of Water Programs at Sacramento State, the University of California Los Angeles, the University of California Davis, and California Polytechnic Institute and State University, Humboldt. Prepared for the California State Water Resources Control Board. January 2022.

23. Office of Water Programs at Sacramento State. (2021). *Long-term Urban Water Demand Trends in California* (Lead Author). Policy Brief prepared for the California State Water Resources Control Board. Sacramento, CA.
22. California State Water Resources Control Board. (2021). [2021 Drinking Water Needs Assessment: Informing the 2021-22 Safe & Affordable Drinking Water Fund Expenditure Plan](#) (Project Team Member and Contributing Author). Sacramento, CA.
21. Office of Water Programs at Sacramento State. (2019). [Benefits and Costs in Stormwater Management: Evaluating Municipal Spending in California](#). (Lead Author). Report prepared as technical analysis by the US EPA's Region 9 Environmental Finance Center.
20. Office of Water Programs at Sacramento State. (2019). [Benefits and Costs in Stormwater Management: Methods and Challenges](#). (Lead Author). Report prepared as technical guidance by the US EPA's Region 9 Environmental Finance Center.
19. Office of Water Programs at Sacramento State. (2019). [Guidance for Low-Impact Development in Schools](#). (Co-Author). Report prepared for the California State Water Resources Control Board.
18. Office of Water Programs at Sacramento State. (2019). [Watershed Analysis and Investigation of Bacteria Sources and Mitigation Options for Los Trancos Creek at Crystal Cove State Park](#). (Lead Author). Report prepared for the California Department of Parks and Recreation.
17. Office of Water Programs at Sacramento State. (2019). [Barriers to Stormwater Capture and Use](#). (Co-Author). Report prepared for the California State Water Resources Control Board.
16. Office of Water Programs at Sacramento State. (2019). [An Open-Source Asset Management Toolkit for Stormwater Financing](#). (Contributing Author).
15. Hall, A., Berg, N., Reich, K., et. al. (2019). [California's Fourth Climate Change Assessment Report. Regional Reports: Los Angeles Region](#). State of California. Report #: SUM-CCCA4-2018-013. Published January 16, 2019. (Co-Author).
14. Pincetl, Stephanie Thomas Gillespie, Diane Pataki, Erik Porse, Shenyue Jia, Erika Kidera, Nick Nobles, Janet Rodriguez, and Dong-ha Choi. (2017). [Evaluating the effects of turf replacement programs in Los Angeles](#). Report to the Metropolitan Water District of Southern California.
13. Mika K, Gallo E, Porse E, et al (2018) [LA Sustainable Water Project: Los Angeles City-Wide Overview](#). UCLA Sustainable LA Grand Challenge, UCLA Institute of the Environment and Sustainability, Colorado School of Mines, Los Angeles, CA
12. Porse, Erik, Eric Fournier, Dan Cheng, Hannah Gustafson, Claire Hirashiki, Felicia Federico, and Stephanie Pincetl. (2017). *Prioritizing the Local of Distributed Solar Electricity Generation in Los Angeles County*. Report to the California Energy Commission



11. Porse, Erik C., Kathryn B. Mika, Elizabeth Litvak, Kim Manago, Kartiki Naik, Madelyn Glickfeld, Terri Hogue, Mark Gold, Diane Pataki, and Stephanie Pincetl. (2017). [\*Artes: A Model of Water Resources Management in Los Angeles\*](#). UCLA Institute of the Environment and Sustainability.
10. Pincetl, Stephanie, Erik Porse, Hannah Gustaffson, and Joshua Derenski (2016). *Implementing Energy Efficiency Programs in California: A Data-Driven Approach*. UCLA Institute of the Environment and Sustainability.
9. Stephanie Pincetl, Madelyn Glickfeld, Deborah Cheng, Miriam Cope, Kartiki Naik, and Erik Porse, Kristen Holdworth, and Celine Kuklowski (2015). *Water Management in Los Angeles County; a Research Report*. Presented to the John Randolph Haynes and Dora Haynes Foundation. UCLA Institute of the Environment and Sustainability.
8. Elizabeth Weitzel, Alea German, and Erik Porse. *Performance of a Hot-Dry Climate Whole-House Retrofit*. Davis Energy Group. 2014.
7. Porse, Erik C. (2013). *Managing Arroyos in Los Cabos: Analysis of integrated strategies for sustainable water management and development in Baja California, Sur*. Sustainable Cities International.
6. Mark Berman, Jeremy Springer, Pepper Smith, and Erik Porse. *Expert Meeting Report: Energy Savings You Can Bank On*. Alliance for Residential Building Innovation. February 2013.
5. [\*California Zero Net Energy Buildings Cost Study\*](#). Report written by Davis Energy Group under contract to Pacific Gas and Electric. December 19, 2012. (contributing author).
4. Berman, M.; Smith, P.; Porse, E. (2012). *Strategy Guideline: Mitigation of Retrofit Risk Factors*. National Renewable Energy Laboratory. 29 pp.; NREL Report No. SR-5500-56669; DOE/GO-102012-3811.
3. Porse, Erik C. (2005). *Technology, Innovation, and Telecommunications Policy in Mexico*. George Mason University.
2. Soukup, Raymond J., Harry J. Simpson, Erik C. Porse, Jason E. Summers, and Robert F. Gragg. *Geoacoustic Physical Modeling Rough Surface Scattering 2 Experiment*. November 24, 2004. NRL/MR-MM/7140--04-8827.
1. Soukup, Raymond J., Harry J. Simpson, and Erik C. Porse. *Geoacoustic Physical Modeling Elastic Parabolic Equation 1 Experiment*. November 24, 2004. NRL/MR-MM/7140--04-8826.

### **CONFERENCE PRESENTATIONS, POSTERS, AND WORKSHOPS**

39. **Porse, Erik** and Jonathan Kaplan. *Integrative Modeling for Urban Water Use Efficiency and Conservation in California*. American Water Resources Association. November 7, 2022.



38. **Porse, Erik**, Boniface Michael, Samuel Stone, Maureen Kerner, and David Alderete. *Program Evaluation of the California Clean Water State Revolving Fund*. Presentation to the California State Water Resources Control Board. August 17, 2022.
37. **Porse, Erik**, Joanna Solins, Julia Skrovan, Robert Cudd. [\*How forthcoming efficiency standards may impact urban trees and parklands\*](#). Virtual workshop with stakeholders sponsored by the California State Water Resources Control Board. August 12, 2022.
36. **Porse, Erik**, Harold Leverenz, and Caitlyn Leo. [\*How forthcoming efficiency standards may impact local wastewater management\*](#). Virtual workshop with stakeholders sponsored by the California State Water Resources Control Board. May 11, 2022.
35. **Porse, Erik** and Jonathan Kaplan. *Environmental and Economic Impacts of Urban Water Use Efficiency in California: Integrative multi-disciplinary modeling of urban water demand, wastewater management, and landscape irrigation*. ASCE Environment and Water Resources Institute (EWRI) International Congress. June 8, 2022. Atlanta, GA.
34. **Porse, Erik**, Christian Carleton, and Cristina Poindexter. *Climate Change Risk and Adaptation Costs for Stormwater Management in California Coastal Parklands: Evaluating Economic and Managerial Uncertainty*. ASCE Environment and Water Resources Institute (EWRI) International Congress. June 6, 2022. Atlanta, GA.
33. **Porse, Erik**, Joanna Solins, Julia Skrovan, Robert Cudd. *Environmental Impacts of Urban Water Use Conservation on Urban Trees and Landscapes*. Virtual workshop to stakeholders sponsored by the California State Water Resources Control Board. December 3, 2021.
32. **Porse, Erik**, Harold Leverenz, and Caitlyn Leo. *Environmental Impacts of Urban Water Use Conservation on Wastewater Management*. Virtual workshop to stakeholders sponsored by the California State Water Resources Control Board. December 2, 2021.
31. **Porse, Erik** and Khalil Lezzaik. *Evaluating Groundwater Contamination Risk in California*. American Geophysical Union (AGU) Annual Conference. December 9, 2019. San Francisco. CA.
30. **Porse, Erik** and Brian Currier. *Effects of Stormwater Capture and Use on Urban Water Management*. American Geophysical Union (AGU) Annual Conference. December 11, 2019. San Francisco. CA.
29. **Porse, Erik** and Maureen Kerner. *Resources to Assess Benefits and Costs in Stormwater Management*. California Stormwater Quality Association Annual Conference. October 9, 2019. Monterey. CA.
28. **Porse, Erik**. *Hydroeconomic Modeling of Direct Potable Reuse in Los Angeles*. WaterReuse Association Annual Conference. September 10, 2019. San Diego. CA.
27. **Porse, Erik** and Khalil Lezzaik. *Evaluating Groundwater Contamination Risk in California*. California Water Data Symposium. August 20, 2019. Davis. CA.

26. **Porse, Erik** and Khalil Lezzaik. *Evaluating Groundwater Contamination Risk in California*. Water Resources and Underserved Communities Conference. California State University Water Resources and Policy Initiatives. May 9, 2019. Los Angeles, CA.
25. **Porse, Erik**. *A Toolkit for Asset Management in Stormwater Systems*. California Stormwater Quality Association annual conference. October 17, 2018. Riverside, CA.
24. **Porse, Erik**. *Paying for Water Conservation*. California Water Data Symposium. August 2018. Los Angeles, CA.
23. **Porse, Erik**. *Modeling Energy-for-Water Requirements in Los Angeles*. International Environmental Modeling and Software Symposium. June 2018. Fort Collins, CO.
22. **Porse, Erik**. *Modeling Landscape Water Needs and Hydroeconomics in Los Angeles*. International Environmental Modeling and Software Symposium. June 2018. Fort Collins, CO.
21. **Porse, Erik C.** *Modeling Hydroeconomics and Landscape Water Needs in Los Angeles*. American Society of Civil Engineers, Environment and Water Resources Institute (EWRI) International Congress. June 4, 2018. Minneapolis, MN.
20. **Porse, Erik C.** *Effects of Stormwater Capture and Use on Urban Streamflows*. California Water Environmental Modeling Forum. May 2018. Folsom, CA.
19. **Porse, Erik C.** *Managed Aquifer Recharge in the Big Picture of Los Angeles Water Supply*. 16<sup>th</sup> Biennial Symposium on Managed Aquifer Recharge (BSMAR 16). 2018. San Diego, CA.
18. **Porse, Erik C.** *Managing Recharge at Multiple Scales in a Watershed*. American River Basin Stormwater Management Conference. 2018. Sacramento, CA.
17. **Porse, Erik C.** *The Dollars and Sense of Local Water Supplies in Los Angeles*. UCLA Sustainable LA Grand Challenges Water Research Symposium. 2017. Los Angeles, CA.
16. **Porse, Erik C.** *Dynamic Centrality in an Urban Resource Network*. International Society for Industrial Ecology. 2017. Chicago, IL.
15. **Porse, Erik C.** *Energy Efficiency in Los Angeles Schools*. International Society for Industrial Ecology. 2017. Chicago, IL.
14. **Porse, Erik C.** *Systems Analysis for Local Water Reliance in Los Angeles: The Artes Project*. ASCE Environment and Water Resources International Congress. 2017. Sacramento, CA.
13. **Porse, Erik C.** and Stephanie Pincetl. *Social and Political Dimensions of Urban Water Use in Los Angeles*. Urban Water Demand Research Roundtable workshop. 2017. Denver, CO.
12. **Porse, Erik C.** and Stephanie Pincetl. *Can Smart Cities Exacerbate Inequality?* Invited presentation: Smart + Sustainable Cities. American Association of Geographers 2016 Annual Meeting. 2016. San Francisco, CA.

11. **Porse, Erik C.** *Local Water Use in Los Angeles*. 2016 NSF Water, Sustainability, and Climate Pls Workshop. 2016. Washington, D.C.
10. **Porse, Erik C.** *Evolving Groundwater Rights and Management in Metropolitan Los Angeles: Implications for Water Supply and Stormwater*. (Poster). 2015 American Geophysical Union (AGU) Fall Meeting. December 15, 2015. San Francisco, CA.
9. **Porse, Erik C.** *Evolution of Groundwater Rights in Metropolitan Los Angeles*. (Poster). 2015 NSF Water, Sustainability, and Climate Pls Workshop. Feb. 9-11, 2015. Washington, D.C.
8. **Porse, Erik C.** *Network Visualization and Analysis for Water Distribution Systems*. 2014 ASCE Environment and Water Resources Institute (EWRI) International Congress. June 1-5, 2014. Portland, OR.
7. **Porse, Erik C.** *Targets, Risks, and Runoff: Metropolitan Scale Stormwater Management*. (Poster). 2014 ASCE Environment and Water Resources Institute (EWRI) International Congress. June 1-5, 2014. Portland, OR.
6. **Porse, Erik C.** *Connectivity in California Water Resources Infrastructure*. California Water and Environmental Modeling Forum. February 24-26, 2014. Sacramento, CA.
5. **Porse, Erik C.** Climate Change and the Future of Groundwater in California. (Moderator). April 16, 2014. Davis, CA.
4. Josue Medellin-Azuara, Andrew Bell, Alvar Escriva-Bou, Quinn Hart, Rui Hui, Jay R. Lund, **Erik Porse**, Samuel Sandoval Solis, Nicholas Santos, and David Waetjen. *The HOBBS Project at Year One*. California Water and Environmental Modeling Forum. February 24-26, 2014. Sacramento, CA.
3. Dedrick, Allison, Shahla Farzan, Matt Hamilton, **Erik Porse**, Gabriel Sampson, and Derek Young. *Managing Juniper for Multiple Goals*. (Speaker and Co-Organizer). REACH IGERT Stakeholder Conference. September 2013. University of California, Davis. Davis, CA.
2. **Porse, Erik C.** *Integrated Decision Modeling for Groundwater Management in the Valle de México*. Worldwide Workshop for Young Environmental Scientists. June 2013. Paris, France.
1. Sandoval Solis, Samuel; **Porse, Erik C.** *Optimizing Human, Environmental and International Water Management for the Rio Grande/Rio Bravo Basin: The Big Bend National Park*. ASCE Environment and Water Resources Institute (EWRI) International Congress. May 2013. Cincinnati, OH.

Over 75 presentations given to policymakers and high-level political appointees (2005-07)

### **INVITED SPEAKER, PANELIST AND TRAINER EVENTS**

32. *Water and Housing in California*. (Invited Panelist). California Association of Realtors Center for California Real Estate Webinar. July 20, 2023.
31. *Urban Water Resources Research & Water Education and Training Programs*. (Invited Panelist). California Water Association Annual Conference. May 11, 2023.
30. *Forecasting Long-Term Trends in California Water Management Agricultural, Municipal, and Industrial Water Use*. (Invited Speaker). UC ANR Thelma Hansen Symposium. May 23, 2023.
29. *Urban Water Resources Research & Water Education and Training Programs*. (Invited Panelist). California Water Association Annual Conference. May 12, 2023. Sacramento, CA.
28. *The Future of Water in California: Drought, Water Infrastructure and Research in California*. (Invited Speaker). University of California Office of the President (UCOP) Earth Week. Sponsored by the Sustainability Employee Resource Group. April 20, 2023.
27. *Agricultural, Municipal, and Industrial Water Use*. (Invited Speaker). University Industry Consortium Spring Workshop. April 19, 2023. Sioux Falls, SD.
26. *Forecasting Urban Water Conservation and Impacts in California for Statewide Policy Development*. UC ANR Water Seminar Series. March 27, 2023.
25. *Local Efforts to Achieve Regional Water Independence: 21st Century Water Management in Southern California*. (Invited Speaker). Los Angeles Regional Collaborative for Climate Action and Sustainability. December 8, 2022.
24. *Water Conservation Planning and Forecasting*. (Trainer). Environmental Finance Center Network. November 18, 2022.
23. *Asset Management and GIS for Wastewater Systems in Kentucky*. (Trainer and Workshop Organizer). Environmental Finance Center Network. November 3, 2022.
22. *Asset Management and GIS for Drinking Water Systems in Ohio*. (Trainer and Workshop Organizer). Environmental Finance Center Network. November 2, 2022.
21. *SB 552 and Drought Planning*. (Trainer and Workshop Organizer). California State Water Resources Control Board and Environmental Finance Center Network. August 24, 2022.
20. *Rate Setting for Water Systems*. (Trainer and Workshop Co-Organizer). Arizona Department of Environmental Quality and Environmental Finance Center Network. June 21, 2022.
19. *The 21<sup>st</sup> Century of Water Management in Southern California: Living Within Means*. (Invited Presentation with Stephanie Pincetl). Southern California Water Dialogue. May 9, 2022.

18. *Using Stormwater Annual Reports to Evaluate Municipal Stormwater Management Spending in California*. (Panelist: Stormwater Funding in California). California Stormwater Quality Association Annual Conference. October 27, 2021. Virtual Webinar.
17. *Urban Water Use Efficiency and Conservation in California*. UCLA Water Resources Group. (Panelist: Urban Water Conservation in a Drought: What We've Learned, What We Haven't and Paths Forward). December 1, 2021.
16. *An Overview of Asset Management, Estimating Costs, and Funding*. (Training). Virtual forum sponsored by the U.S. EPA, Nevada Department of Environmental Protection, and the Environmental Finance Center at Sacramento State. May 18, 2021.
15. *Financial Resources for Resilience Planning and Climate Change Adaptation*. (Invited Speaker). U.S. EPA: Building Resilience and Adapting to Climate Change Impacts for Water and Wastewater Utilities. Virtual webinar. May 18, 2021.
14. *Developing an Integrated Surface-to-Groundwater Model in Los Angeles: Analysis of Groundwater Water Modeling and Panel Discussion*. (Workshop Organizer, Presenter, and Moderator). UCLA and State Water Resources Control Board. February 23, 2021.
13. *Environmental and Water Resources Management in California with Climate Change*. (Invited Speaker). California State University, Sacramento, Environmental Studies-Geology Colloquium. February 16, 2021.
12. *Developing an Integrated Surface-to-Groundwater Model in Los Angeles: Overview and Analysis of Surface Water Modeling*. (Workshop Organizer, Presenter, and Moderator). UCLA and State Water Resources Control Board. December 8<sup>th</sup>, 2020.
11. *The Water Policy of Managed Wetlands in the Central Valley*. (Moderator). Speaker: Ellen Wehr. OWP at Sacramento State Water Seminar Series. November 20, 2020. Sacramento, CA (virtual webinar).
10. *Flood-MAR: Harnessing Flood Waters for Aquifer Replenishment*. (Moderator). Speaker: Kamyar Guivetchi. OWP at Sacramento State Water Seminar Series. October 2, 2020. Sacramento, CA (virtual webinar).
9. *Estimating Benefits of Costs of Stormwater Management in California: Evaluating Reported Spending Through Data Integration*. (Invited Speaker). California State Water Resources Control Board STORMS Seminar Series. August 26, 2020. Sacramento, CA (virtual webinar).
8. *QGIS for Water Utility Management: Getting Started with GIS for Free*. (Training). US EPA Environmental Finance Center Network. August 5, 2020. Sacramento, CA. (nationwide training webinar).
7. *Public-Private Partnerships*. (Invited Speaker and workshop Co-Organizer). US EPA Region 9 Infrastructure Finance Forum Workshop. January 20, 2020. Honolulu, HI.

6. *Asset Management for Stormwater Finance*. (Speaker and workshop Co-organizer). EPA Region 9 workshop on Stormwater Asset Management. June 14, 2019. Sacramento, CA.
5. *Cost Resources for Stormwater Programs in California*. (Invited Speaker). Presentation to the Los Angeles Regional Water Quality Control Board. Culver City, CA. April 11, 2019.
4. *Energy Use Effects of Water Conservation and Local Supply in Los Angeles*. (Invited Speaker). Pacific Gas and Electric Water Conservation Showcase. March 14, 2019. San Francisco, CA. Pacific Energy Center.
3. Porse, Erik C. *Managing Water Scarcity in Future Cities: What Makes Sense to Sense?* (Invited Speaker). Center for Information Technology Research in the Interest of Society (CITRIS). Special seminar series on Resilience. April 22, 2015. University of California, Berkeley.
2. UC-Davis Science Communication Workshop. Co-Organizer. March 5, 2014. Davis, California.
1. *Environmental Informatics*. TEDx Sacramento Cities 2.0 event. October 2012. Sacramento, CA.

## TEACHING AND MENTORING

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### UNIVERSITY COURSES AND CONTINUING EDUCATION

2017-present Sacramento State- Sacramento, CA

Department of Environmental Studies: Lecturer

*Courses Taught:*

ENVS 135, Water and Society (Spring 2021)

ENVS 144, Sustainability Science and Policy (Fall 2021)

ENVS 10: Introduction to Environmental Science (Spring 2022)  
Human Development and Population Module

ENVS 190: Senior Thesis Advisor (Fall 2021-Spring 2022)

ENVS 195: Environmental Internship (Fall 2022)

Environmental Finance Center: U.S. Environmental Protection Agency Region 9

*Training Topics:*

Utility operations, asset management, water rates, and GIS  
Stormwater planning

2009 Earlham College- Tanzania and Richmond, Indiana

Adjunct Professor and East Africa Program co-leader (\$150,000 budget)

*Courses:*

Urban and Rural Development

Ecology and Animal Behavior

- 2005-2007 George Mason University- Fairfax, VA  
Adjunct Professor, Public and International Affairs  
Courses:  
GOVT 300: Research Methods (undergraduate, 4 semesters)
- 2004-2005 George Mason University School of Public Policy- Arlington, VA  
Graduate Teaching Assistant  
Courses:  
Public Policy Evaluation (graduate)

### **GUEST LECTURES**

- Integrated Modeling of Urban Water Use Efficiency and Conservation in California: Technological, Social, and Climate Factors*. UC Davis, Graduate Student Course in Water Resources. March 1, 2022.
- Urban Water Management and Conservation in California*. California State University, Sacramento, Hydrology Research Experience Course. Department of Geology. February 21, 2022.
- Environmental and Water Resources Management in California with Climate Change*. California State University, Sacramento, Environmental Studies-Geology Colloquium. February 16, 2021.
- Energy Use Effects of Water Conservation and Local Supply in Los Angeles*. UC Berkeley, Department of Landscape Architecture and Environmental Planning Colloquium. April 10, 2019.
- Urban Water Management and Conservation in California*. California State University, Sacramento, USGS Environmental Studies Seminar. April 18, 2018.
- Water and Energy Systems in California*. UCLA Institute of the Environment and Sustainability, Environmental Science Seminar. January 11, 2017.
- An Overview of Urban Water Supply Systems* (2012). Pacific University McGeorge School of Law, Fundamentals of Water Law Practice. September 24, 2012.

### **STUDENT AND FELLOW ADVISING**

*California Institute for Water Resources Student Internship Program*. Program Director.

#### Student Advisees and Employees:

Riley Currey, Fall 2023. *Sacramento State Dept. of Environmental Studies Senior Thesis Course*.

Alma Romo, Spring 2023. *Sacramento State Dept. of Environmental Studies Senior Thesis Course*. Co-instructor and thesis advisor.



Advisees:

*Hailey Reese Burke*, "An observation of climate change and its potential impact on Atlantic hurricanes between the years 1980-2016". Fall 2021.

*Broderick Whitford*, "Sources of E. coli and Mitigation of E. coli in the American River". Fall 2021.

*Lynnea Palecki*, "Biodynamic Agriculture: Towards a Sustainable Future, The Nexus Between Biodynamic Agriculture and Sustainability". Fall 2021.

*Jonathan Schliessman*, "Stressors of Delta Smelt in the San Joaquin-Sacramento Delta and the San Francisco Estuary". Fall 2021.

*Matteson Cunningham*. "The Role of Urban Agriculture in the Food Access Crisis". Fall 2021.

*Madison Wilson*. "Climate Change and Urban Forestry in California." Spring 2022.

*Matthew DiLoreto*. "Hydropower and Renewable Energy Goals in California." Spring 2022.

*Tate Zahn*. "An Environmental and Economic Analysis on the Sustainability of Water Desalination." Fall 2022.

*Kelsey Hicks*. "Sites Reservoir". Fall 2022.

*UCLA Environmental Science Undergraduate Practicum* (March 2021-May 2021). Project Technical Advisor. "Upper Tana Nairobi Water Fund project". Client: IBM, the Nature Conservancy, and the Water Fund in Kenya. (UCLA undergraduate engineering and environmental science students).

*Patrick Maloney*. Sacramento State (November 2019 - present). Project advisor, "Economic and Environmental Effects of Water Conservation." Engineering student researcher. Office of Water Programs at Sacramento State.

*David Babchanik*. Sacramento State (July 2019 - present). Project advisor, "Costs of Stormwater Management in California." Engineering student researcher. Office of Water Programs at Sacramento State. **Award Winner: Second Prize, Sacramento State 2021 Student Research & Creative Activity Spring Symposium (Engineering, Science, and Math).**

*John Heltzel*. Sacramento State (2018). Master's thesis reader, "Modeling Low Impact Development (LID) in an Urban Retrofit Scenario: A Case Study at Davis Manor." Fall 2018. Engineer-in-Training. Office of Water Programs at Sacramento State.

*Joshua Derenski*. UCLA (2015-17). Directed research studying energy efficiency in Los Angeles schools (*Derenski et al, 2017, "Spatial and temporal analysis of energy use data in Los Angeles public schools."* *Applied Energy*. 11.2.) Doctoral Student, University of Southern California.

*Claire Hirashiki*. UCLA (2016-18). Advised in developing an online web platform, the *LA Water Hub*, for visualizing and understanding water management in Los Angeles. Researcher. UCLA Institute of the Environment and Sustainability.

*Paul Cleland*. UCLA (2016-17). Directed research tasks related to water governance analysis in Los Angeles as part of an NSF grant (Award #1204235). Engineer-in-Training. Colorado.

*Erika Kidera*. UCLA (2016-17). Directed research tasks on turf replacement programs in Los Angeles as part of an NSF grant (Award #1204235). Partnerships Manager, Google, San Francisco, CA.

Janet Rodriguez. UCLA (2015-17). Directed research on energy-water nexus in Los Angeles (Award #1204235). Urban Planner, Los Angeles, CA.

### POST-DOCTORAL ADVISING AND VISITING SCHOLARS

Qing Shuang. Visiting Scholar at UCLA (2018-19). Associate Professor, Beijing Jiaotong University. Advised research on resilience in water management and systems analysis of leak occurrence  
Shuang, Qing, Hui Jie Liu, and Erik Porse. "Review of the Quantitative Resilience Methods in Water Distribution Networks." *Water* 11.6 (2019): 1189.)

Ulrich Dittmer. Visiting Scholar at Sacramento State (2021-22). Professor, Water Infrastructure Resources. Technical University of Kaiserslautern, Germany.  
Topics: *Integrated stormwater management and modeling*

### OTHER TEACHING

2004-05      Viking Education, LLC- Washington, D.C.  
Owner and Instructor, Courses: SAT and GMAT preparation

2001-2004    Kaplan Education- West Hartford, CT and Washington, D.C.  
Instructor, Courses: SAT and GMAT preparation

### RECENT RESEARCH PRODUCTS

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- *Network Model of Water Supply and Wastewater System Connectivity in California for Water Demand and Conservation Forecasting.* (2022) Porse, E., D. Keene, J. Kaplan, D. Babchanik. [HydroShare](#).
- *A Method to Group Wastewater Collection Systems by Key Attributes to Evaluate Potential Impacts from Urban Water Conservation.* (2022). Available on [Hydroshare](#).
- *Urban Water Demand Regression Modeling for California Water Suppliers.* (<https://www.hydroshare.org/resource/e9137bf4054a45778a7944d3ebccea0f/>). Principal architect of modeling for urban water demand across over 400 agencies in California.
- *Artes* (2023). Available on [Hydroshare](#). Architect of a simulation model for water management in LA with ecology, rights and laws, engineering, and economics.
- *The LA Water Hub* (<http://waterhub.ucla.edu>). Led the development of a dynamic mapping and visualization site for multi-year research on water resources management in Los Angeles.
- *The LA Solar Prioritization Tool* (<http://solar.energyatlas.ucla.edu>). Project manager and lead analyst for a prioritization tool to optimize placement of distributed solar resources in 1.2 million

properties considering consumption, potential on-site generation, and grid constraints.

- *California Groundwater Contamination Risk Index (GRID)*. (<http://www.owp.csus.edu/grid>). Online tool for mapping groundwater contamination risk for disadvantaged communities.

## GRANTS, AWARDS, AND FUNDING

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*State Water Resources Research Institute Program, Fiscal Year 2023*. U.S. Geological Survey.

**Primary Investigator** (Pending). 2023-2024. California Institute for Water Resources, UC ANR. (\$125,000).

*State Water Resources Research Institute Program, Fiscal Year 2021*. U.S. Geological Survey.

**Primary Investigator** (as of Jan 2023). 2021-2023. California Institute for Water Resources, UC ANR. (\$125,000).

*Climate Smart Agriculture 2*. CA Department of Food and Agriculture. **Primary Investigator** (as of Jan 2023). 2020-2024. California Institute for Water Resources, UC ANR. (\$5,800,000).

*Conservation in Action - Diffusion of Education to Foster Adoption of Enhanced Nitrogen and Irrigation Management Practices*. CA Department of Food and Agriculture. **Primary Investigator** (as of Jan 2023). 2022-2025. California Institute for Water Resources, UC ANR. (\$1,520,000).

*Collaborative Outreach, Education and Training to Improve Nitrogen Use and Irrigation Efficiency in Specialty Crops*. CA Department of Food and Agriculture. **Primary Investigator** (as of Jan 2023). 2022-2025. California Institute for Water Resources, UC ANR. (\$685,073).

*Targeted Nitrogen and Irrigation Education in California's Nitrate Impacted Regions*. CA Department of Food and Agriculture. **Primary Investigator** (as of Jan 2023). 2020-2024. California Institute for Water Resources, UC ANR. (\$3,004,859).

*Next Generation N Management Training for Certified Crop Advisors*. CA Department of Food and Agriculture. **Primary Investigator** (as of Jan 2023). 2020-2023. California Institute for Water Resources, UC ANR. (\$232,802).

*Needs Assessment for Wastewater and Sanitation in California*. California State Water Resources Control Board. **Senior Personnel for UC ANR tasks**. Award includes UCLA (Lead), Sacramento State, University of California Agriculture and Natural Resources, and University of Massachusetts. (\$4,000,000 total, \$450,000 to UC ANR).

*U.S. EPA Region 9 Environmental Finance Center*. U.S. Environmental Protection Agency. **Senior Personnel**. Round 1: 2016-2022 (current), Round 2: 2022-2026 (pending). Award to Office of Water Programs at Sacramento State (up to \$4,800,000 across 5 years).

*Economic and Environmental Impacts of Water Conservation in California*. California State Water Resources Control Board. **Primary Investigator**. Award includes Sacramento State University (lead), UCLA, UC Davis, and Humboldt State University. November 2019-January 2022. (\$2,000,000 total, \$1,100,000 to Sacramento State).

*Groundwater Sustainability Plan for the Santa Monica Basin.* City of Santa Monica. **Primary Investigator for Sacramento State Tasks** (Basin Optimization). Award includes Dudek, Inc. (Lead), Intera, Inc, Sacramento State. October 2019-present. (\$148,000).

*City of Salinas Stormwater Asset Management Technical Assistance.* Subaward from 2NDNATURE, LLC. **Primary Investigator for Sacramento State Tasks.** 2020 (\$10,000).

*A Coupled Surface-to-Groundwater Model in the Los Angeles Basin.* **Primary Investigator for Sacramento State Task.** Award includes UCLA, Colorado School of Mines, and Sacramento State. 2020-21 (\$49,995). Completed.

*Accelerating AEC Deployment Around Existing Buildings in Disadvantaged Communities Through Unprecedented Data Analysis and Comprehensive Community Engagement.* Award includes UCLA (lead), The Energy Coalition, and Liberty Hill Foundation. California Energy Commission. **Senior Researcher.** 2016-18. (\$1,100,000).

*Climate Change and Stormwater Management in Copenhagen.* American-Scandinavian Foundation. Research and travel support. Summer 2014. (\$5,000).

*CHI University Grant Program.* Computational Hydraulics International (CHI). Research support. February 2014. (\$1,440).

*Optimizing Innovative Stormwater Management Practices Using Urban Land Cover.* UC Davis REACH IGERT. One year of graduate study support. September 2013-August 2014. (\$45,000).

*Managing Arroyos in Los Cabos: Analysis of sustainable water management and development in Baja California Sur.* UC Davis REACH IGERT. Research support. Summer 2013. (\$5,100).

*U.S. Mexico Collaborative Solutions for Water Resources Management.* UC Institute for Mexico and the United States (UC-MEXUS). Research and travel support. April 2013. (\$1,500).

*UC Davis REACH-IGERT Traineeship.* University of California, Davis, Department of Evolution and Ecology. Two years of graduate support. 2011-2013. (\$98,000)

*Tau Beta Pi Laureate.* June 2002. (\$2,500).

*Citations of Achievement for Analytical Contributions to Counterintelligence Investigations.* 2005-2007. FBI Director Robert Mueller

## SERVICE ACTIVITIES

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### PEER REVIEW

*Civil Engineering and Environmental Systems* (Editorial Board, December 2020-present)

*Frontiers in Water* (Review Editor, "Water and the Built Environment" section, October 2020-present)  
Special Issue Editor: "Urban Water Management, Planning, and Design: Links, Opportunities, and Challenges" in *Frontiers in Water*. (Co-editors: Sara Hughes, Chingwen Cheng, N. Claire Napawan).

More than 60 articles reviewed by invitation since 2014:

<i>Nature Sustainability</i>	<i>Environmental Science and Technology</i>
<i>Environmental Modeling and Software</i>	<i>Energy Efficiency</i>
<i>Energy Policy</i>	<i>Journal of Infrastructure Systems</i>
<i>J. of Water Resources Planning and Management</i>	<i>Water Resources Research</i>
<i>Journal of American Water Resources Association</i>	<i>Urban Water Journal</i>
<i>Environmental Modeling and Software</i>	<i>MDPI Water</i>
<i>Environmental Research Letters</i>	<i>MDPI Hydrology</i>
<i>MDPI: Sustainability</i>	<i>Lake and Reservoir Management</i>
<i>Journal of Environmental Management</i>	<i>Journal of Industrial Ecology</i>
<i>Lake and Reservoir Management</i>	<i>Sustainable and Resilient Infrastructure</i>
<i>Civil Eng. and Environmental Systems</i>	<i>Environmental Science and Policy</i>
<i>Utilities Policy</i>	<i>Frontiers in Water</i>

### **BOARD POSITIONS AND MANAGERIAL ROLES**

- 2010-present The Sustainability NEXUS- Philadelphia, PA  
Co-Founder and Vice-President
- Co-founder and board member for a non-profit organization focused on increasing entrepreneurship and collaboration in the sustainability community.
- 2011-2016 Engineers Without Borders- Davis, CA  
Project Manager
- Led a project to design an on-site wastewater treatment system for a Native American tribal college in Winters, CA.
  - Coordinated and conducted on-site testing of drinking water systems
  - Organized meetings and teaching sessions acclimating UC Davis students to Native American culture and experience

### **ADVISORY COMMITTEES**

California Environmental Farming Act Science Advisory Panel (EFA SAP) member. s

Water Research Foundation, One Water RFP (WRF 5175), Advisory Committee (2022-23)

California Department of Water Resources, FloodMar program Research Advisory Council working groups (Tools and Modeling; Social Considerations and Equity) (2018-19)

Risk and Society Faculty working group. Sacramento State University (2018-19).

California Water-Energy Nexus Advisory Committee (2017-18)

### PROFESSIONAL AFFILIATIONS AND COMMITTEES

American Society of Civil Engineers (ASCE)

ASCE's Environmental and Water Resources Institute (EWRI), Sustainability Sub-Committee

Association of Pacific Rim Universities (APRU), Sustainable Cities and Landscapes Hub, Re-drawing Urban Waters Working Group, Climate Vulnerability and Justice Working Group

California Native Plant Society

American Geophysical Union

### OTHER RECENT PROFESSIONAL EXPERIENCE

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- 2021 California Bay-Delta Science Program- Sacramento, CA  
Proposal Peer Reviewer: 2021 Delta Science Award Program
- Invited peer reviewer for the Bay-Delta science program that funds research focused on improving knowledge of Bay-Delta management.
- 2019 Bay Area Stormwater Management Agencies (BASMAA)- San Francisco Bay Area, CA  
Peer Reviewer: Reasonable Assurance Analysis
- Invited peer reviewer for stormwater management plans (Reasonable Assurance Analysis) for five counties within the San Francisco Bay Area. Reviewed modeling setup, data, evaluation criteria, and results as part of regulatory review process.
- 2013 Sustainable Cities International (SCI)- Vancouver, BC, Canada and Los Cabos, Mexico  
Affiliated Researcher
- Worked with SCI and a Mexico-based urban sustainability planning organization, IMPLAN, to implement modeling and risk analysis of flood risk planning.
  - Collaborated with architects, ecologists, and urban planners to develop analysis frameworks for master plans of urban development in flood-prone arroyos.
- 2011-2014 Davis Energy Group- Davis, CA  
Technical Writer and Analyst
- Conducted analysis and wrote reports, proposals, and research papers for residential energy efficiency incentive programs. Contributing author for report on cost assessment of Zero Net Energy buildings for Pacific Gas and Electric

## MEDIA

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"Evolution of Drought Response and Resilience in California's Cities." *California Water Blog*. September 24, 2023.

"Drought and the Colorado River: Localizing Water in Los Angeles." *California Water Blog*. With Stephanie Pincetl. January 8, 2023.

"Maps and GIS for Management in Small Wastewater Systems". *Environmental Finance Center Blog*. April 2022.

"Maps and GIS for Management in Small Water Systems: Getting Started". *Environmental Finance Center Blog*. March 3, 2022.

"Urban Water Management 101". *Water Talk Podcast*. University of California. May 2021.

"Evaluating Landscape Effects of Turf Replacement". *California Water Blog*. May 19, 2019.

"Rising to the challenges of 21<sup>st</sup> century water management in Los Angeles". *University of California Agricultural and Natural Resources Blog*. February 11, 2019.

*GoGreen Radio* Podcast. "The Water/Energy Nexus: Lessons from Southern California". July 12, 2019.

"Groundwater Exchange Pools in Los Angeles: An Innovative Example of Adaptive Management". *California Water Blog*. July 27, 2018.

*WaterDeeply* Podcast. "Water Conservation and Efficiency Challenges". July 26, 2018.

"Improving Urban Water Conservation in California." *California Water Blog*. May 6, 2018.

"Los Angeles and the Future of Urban Water Management in California". *California Water Blog*. January 22, 2018.

"The Hard Work of Sustainable Groundwater Management". *California Water Blog*. August 15, 2015.

## SKILLS

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- Optimization modeling software, including CPLEX, GAMS, and GUROBI
- Hydrologic modeling applications
- Statistical modeling, including *R Studio*
- *Python*, *Matlab*, and *Visual Basic* programming



- GIS applications, including *GRASS GIS*, *QGIS*, *ArcGIS*, *CartoDB*, and *Mapbox*
- Network analysis software
- HTML, PHP, SQL programming, web design, and website management
- Policy analysis tools including *Lexis-Nexis*, U.S. government sources, and international sources.
- Statistical software packages, including *SPSS*, *SAS*, *GeoDa*, and *R*.

## LANGUAGES

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English- Fluent

Spanish- Elementary

German- Intermediate

Kiswahili- Elementary