

# Darcy Bostic, Environmental Policy and Data Science

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## LINKS

[Google Scholar](#), [LinkedIn](#), [Twitter](#), [GitHub](#)

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## PROFILE

I bridge social and physical sciences in high-impact research that results in policy change. My work supports the realization of resilient rural, underserved, and vulnerable communities, with a specific focus on ensuring all communities have sustained access to water, housing, and economic development. I have a B.S. and M.S. in Hydrologic Sciences from UC Davis where I studied everything water — from understanding sediment transport in rivers to graphing social networks involved in sea level rise adaptation to highlighting inequities in groundwater access and policy in CA's Central Valley.

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## EDUCATION

Sep 2018 — Jun 2020	<b>M.S. Hydrologic Sciences, University of California, Davis</b>	Davis, CA
Sep 2014 — Jun 2018	<b>B.S. Hydrology, GIS Minor, University of California, Davis</b>	Davis, CA

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## EMPLOYMENT HISTORY

May 2022 — Present	<b>Data and Impact Manager, Rural Community Assistance Corporation</b>	West Sacramento
	I evaluate RCAC's impact and improve data collection processes. I lead software implementations, strategic plans and theories of change development, and program analysis and evaluation for our environmental, economic development, housing, and CDFI departments.	
	<ul style="list-style-type: none"><li>• Led the implementation of a new CRM software system that improved operational efficiency</li><li>• Collaborated with external, academic research partners to write research proposals, submit grant applications, and conduct research on environmental policies that support rural communities</li><li>• Developed an enterprise data model that integrated data from multiple sources and enabled consistent data access across the organization</li><li>• Supported advocacy efforts with data analysis that resulted in the passage of a Tribal Housing Program (SB18) in California.</li><li>• Provided expertise on California Public Utility Commission hearing on water utility acquisition regulations.</li><li>• Developed evaluation criteria for RCAC Water Leadership Institute program.</li></ul>	
Aug 2021 — May 2022	<b>Research Associate, Rural Community Assistance Partnership</b>	Washington, D.C.
	<ul style="list-style-type: none"><li>• Wrote and received \$200,000 in research grant funding for two research projects supporting evaluation of policies and resources for rural communities and their water systems.</li><li>• Automated reporting processes using R and SQL.</li><li>• Created visualizations for Rural Matters, the RCAP magazine.</li><li>• Spearheaded the creation of a strategic plan and theory of change for the Research Team in order build a roadmap for our internal impact assessment.</li><li>• Hired and managed two interns. Outlined needed tasks and provided feedback on work. Provided training on using GIS for data visualization.</li></ul>	
Jul 2020 — Jun 2021	<b>Research Associate, Pacific Institute</b>	Oakland
	Much of my work at Pacific Institute focused on informing policy that supports small water systems, from talking to operators to understand how COVID impacted their systems, to providing evidence that current groundwater management is going to impact small, groundwater dependent water systems.	
	<ul style="list-style-type: none"><li>• Led research reports from the development of the proposal to the final white paper and subsequent presentations.</li><li>• Maintained and updated code and datasets for use across multiple projects.</li></ul>	
Jun 2018 — Jun 2020	<b>Graduate Student Researcher, Center for Environmental Policy and Behavior, UC Davis</b>	Davis

My proudest achievement is the citation of my report, *Sustainable for Whom?*, in a CA Department of Water Resources decision to require Merced Groundwater Sustainability Agency to include additional protections for residents reliant on domestic wells.

I also:

- Published a white paper funded by the Water Foundation examining the impact of sustainable groundwater management plans on domestic wells.
- Created a website and open-source code to understand the impact of new groundwater sustainability plans on domestic wells in CA.
- Used network analysis, social-ecological systems theory, and the results from a stakeholder survey to understand the landscape of sea level rise adaptation planning in the San Francisco Bay Area.

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## PUBLICATIONS

### Journal Articles

- **Bostic, D.**, Mendez-Barrientos, L., Pauloo, R. *et al.* Thousands of domestic and public supply wells face failure despite groundwater sustainability reform in California's Central Valley. *Sci Rep* **13**, 14797 (2023). <https://doi.org/10.1038/s41598-023-41379-9>
- Dobbin, Kristin Babson, Kuo, Michael, Lubell, Mark, **Bostic, Darcy**, Mendoza, Jessica, and Echeveste, Ernest 2023. "Drivers of (in)equity in collaborative environmental governance". *Policy Studies Journal* 51, 375–395. <https://doi.org/10.1111/psj.12483>
- Michele M. Tobias, **Darcy J. Bostic**, Scott S. Sibbett; Route Logic of the Central Pacific Railroad, 1861–1869. *California History* 1 May 2021; 98 (2): 74–99. doi: <https://doi.org/10.1525/ch.2021.98.2.74>

### White Papers

- **Bostic, D.** 2021. At Risk: Public Supply Well Vulnerability Under California's Sustainable Groundwater Management Act. Oakland, Calif.: Pacific Institute. [https://pacinst.org/publication/at\\_risk\\_wells\\_SGMA](https://pacinst.org/publication/at_risk_wells_SGMA)
- **Bostic, D.**, Walker Grimshaw, Michael Cohen, Laura Landes, Nathan Ohle, Ted Stiger, Glenn Barnes, and Ari Neumann. 2021. Customer Debt and Lost Revenue: The Financial Impacts of COVID-19 on Small Community Water Systems. Oakland, Calif.: Pacific Institute. [https://pacinst.org/publication/COVID19\\_impacts\\_small\\_community\\_water\\_systems](https://pacinst.org/publication/COVID19_impacts_small_community_water_systems)
- Pauloo, R., **Bostic, D.**, Monaco, A. and Hammond, K. 2021. GSA Well Failure: forecasting domestic well failure in critical priority basins. Berkeley, California. Available at <https://www.gspdrywells.com>.
- Porter, Feinstein, **Bostic**, Paulson, Waite, Alex. Solutions for underperforming drinking water systems in California 2020. <https://www.waterrf.org/resource/solutions-underperforming-drinking-water-systems-california>
- **Bostic, D**, Dobbin, K., Pauloo, R., Mendoza, J., Kuo, M., London, J., 2020. Sustainable for Whom? The Impact of Groundwater Sustainability Plans on Domestic Wells, UC Davis Center for Regional Change. <https://regionalchange.ucdavis.edu/report/sustainable-whom-impact-groundwater-sustainability-plans-domestic-wells>
- Esteli Mendez, **Bostic**, Lubell. Implementing SGMA: Results from a stakeholder survey, 2019, <https://environmentalpolicy.ucdavis.edu/news/implementing-sgma-results-stakeholder-survey>
- Lubell, Vantaggiato, **Bostic**. The Governance of Sea Level Rise in the San Francisco Bay Area: results from a survey of stakeholders, 2019, <https://environmentalpolicy.ucdavis.edu/sites/g/files/dgvnsk6866/files/files/person/Lubell-et-al-2019.pdf>

### News Contributions

- CalMatters, 2023: <https://calmatters.org/environment/2023/10/san-joaquin-valley-groundwater/>
- LA Times, 2023: <https://www.latimes.com/environment/story/2023-09-20/thousands-of-central-valley-water-wells-risk-failure>
- CalMatters, 2021: <https://calmatters.org/environment/2021/08/california-groundwater-dry/>
- LA Times, 2021: <https://www.latimes.com/environment/story/2021-12-11/state-cites-flaws-in-san-joaquin-valley-groundwater-plans>

- KVPR, 2021:  
<https://www.kvpr.org/environment/2021-06-28/report-groundwater-overhaul-could-threaten-drinking-water-of-more-t>

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**OTHER AFFILIATIONS**

Jun 2021 — Aug 2021	Water Solutions Network Cohort 4	CA
Sep 2021 — Jan 2022	CA Water Data Consortium Working Group Co-Chair	

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**SKILLS**

Project Management	Strategic Planning
Data Science	Theory of Change Development
Environmental Justice and Policy Research	Grant Writing
Social Network Analysis	