Jonathan S. Cohen

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Education

Ph.D. Civil & Environmental Engineering, University of California, Davis, 2021 (expected)
Major: Water Resources Engineering
Minor: Systems Engineering

M.S. Civil & Environmental Engineering, University of California, Davis, 2019

B.S. Engineering, Swarthmore College, 2017
Focus in Environmental Engineering
Minor in Environmental Studies

Publications

Peer-Reviewed Journal Articles

Cohen, J.S., Zeff, H.B. and Herman, J.D., 2020. Adaptation of multiobjective reservoir operations to snowpack decline in the western United States. *Journal of Water Resources Planning and Management*, 146(12), p.04020091. (**Editor's Choice Collection*)

Robinson, B., **Cohen, J.S.** and Herman, J.D., 2020. Detecting early warning signals of long-term water supply vulnerability using machine learning. *Environmental Modelling & Software*, 131, p.104781.

Holtzman, N.M., Pavelsky, T.M., **Cohen, J.S.**, Wrzesien, M.L. and Herman, J.D., 2020. Tailoring WRF and Noah-MP to improve process representation of Sierra Nevada runoff: Diagnostic evaluation and applications. *Journal of Advances in Modeling Earth Systems*, 12(3), p.e2019MS001832.

Su, Y., Kern, J.D., Denaro, S., Hill, J., Reed, P., Sun, Y., **Cohen, J.S.** and Characklis, G.W., 2020. An open source model for quantifying risks in bulk electric power systems from spatially and temporally correlated hydrometeorological processes. *Environmental Modelling & Software*, 126, p.104667.

Manuscripts Under Review

Cohen, J.S., Zeff, H.B. and Herman, J.D., 2021. How do the properties of training scenarios influence the robustness of reservoir operating policies to climate uncertainty? *Environmental Modelling & Software*.

Zeff, H.B., Hamilton, A.H., Malek, K., Herman, J.D., **Cohen, J.S.**, Medellín-Azuara, J., Reed, P.M., Characklis, G.W., 2021. California's Food-Energy-Water System: An open source simulation model of adaptive surface and groundwater management in the Central Valley. *Environmental Modelling & Software*.

Peer Reviewed Conference Proceedings Papers

McGarity, A.E., Szalay, S. and **Cohen, J.S.**, 2017. StormWISE model using green infrastructure to achieve Philadelphia's CSO volume reductions at minimum cost. In *World Environmental and Water Resources Congress 2017* (pp. 334-344).

McGarity, E., Szalay, S. and **Cohen, J.S.**, 2016. Green stormwater infrastructure investment model for Philadelphia's Wingohocking sewershed. In *World Environmental and Water Resources Congress 2016* (pp. 87-95).

Papers in Preparation

Cohen, J.S. and Herman, J.D., 2021. A policy tree optimization approach to adaptive planning under climate uncertainty. *Water Resources Research*.

McGarity, A.M., S. Szalay, and **J.S. Cohen**., 2021 "StormWISE Model using green infrastructure to achieve Philadelphia's CSO volume reductions at minimum cost." *Journal of Sustainable Water in the Built Environment*.

Conference and Seminar Presentations

J.S. Cohen, S. Steinschneider J.D. Herman, Multi-objective policy trees for dynamic adaptation to climate change, December 2020.

J.S. Cohen and J.D. Herman, A policy tree optimization approach to adaptive planning under deep uncertainty. Oral Presentation at Decision Making Under Deep Uncertainty, November 2020.

J.S. Cohen, H.B. Zeff, and J.D. Herman, A tree-based policy search framework for dynamic adaptation to climate change in water resources systems. Oral presentation at American Geophysical Union Fall Meeting, December 2019.

J.S. Cohen, H.B. Zeff, and J.D. Herman, Adapting multi-objective reservoir operations to snowpack decline under climate change. Oral presentation presentation at ASCE World Environmental & Water Resources Congress, May 2019.

J.S. Cohen, H.B. Zeff, and J.D. Herman, Adaptations to snowpack decline for California water supply. Oral presentation presentation at California Water & Environmental Modeling Forum Annual Meeting, April 2019.

J.S. Cohen, H.B. Zeff, and J.D. Herman, Impacts of seasonal forecast accuracy and declining snowpack on California water supply. Poster presentation at American Geophysical Union Fall Meeting, December 2018.

J.S. Cohen, H.B. Zeff, and J.D. Herman, Impacts of seasonal forecast accuracy and declining snowpack on California water supply. Poster presentation at ASCE World Environmental & Water Resources Congress, June 2018

J.S. Cohen and A.E. McGarity, Green Infrastructure Simulation and Optimization to Achieve Combined Sewer Overflow Reductions in Philadelphia's Mill Creek Sewershed. Poster presentation at American Geophysical Union Fall Meeting, December 2017.

J.S. Cohen and A. Philyaw., Environmental and Social Benefits of Green Stormwater Infrastructure, Revitalizing Vulnerable Communities: National Training & Resources Summit, October 2016.

Teaching

UC Davis

Computational Methods in Civil & Environmental Engineering (ECI 115): Teaching Assistant for J. Herman, Winter 2020, Fall 2020

Professional Activities

Reviewer for *Journal of Water Resources Planning & Management* (5), *Water Management* (1), *Journal of Open Research Software* (1)

Member, American Geophysical Union, 2017–Present

Member, American Society of Civil Engineers, 2017–Present

Sigma Xi Scientific Research Society, Swarthmore College, 2015-2017

Awards, Fellowships, and Acknowledgements

JWRPM Editor's Choice Selection, December 2020, for *Cohen et al.*, 2020

2020-2021 Summer GSR Award, Department of Civil and Environmental Engineering, UC Davis

EPA STAR Grant Summer Research Fellowship, Department of Engineering, Swarthmore College, Summer 2016

Tarble Summer Research Fellowship, Department of Engineering, Swarthmore College, Summer 2015