



TOM CORRINGHAM

Scripps Institution of Oceanography
University of California San Diego
9500 Gilman Drive #0230
La Jolla, CA 92093-0230

Phone: (858) 442-4107

Email: tomc@ucsd.edu

Web: <https://tcorringham.scrippsprofiles.ucsd.edu/>

EDUCATION

Ph.D., University of California San Diego (UCSD), Economics, 2018

B.A., University of Oxford, Philosophy, Politics and Economics, 2000

APPOINTMENTS

Staff Research Economist, Scripps Institution of Oceanography (SIO), UCSD, 2021–present

Postdoctoral Researcher, SIO, 2018–2021

PUBLICATIONS

Spokoyny, D., T. Laud, T. W. **Corringham**, T. Berg-Kirkpatrick, 2023: Towards Answering Climate Questionnaires from Unstructured Climate Reports, arXiv [Cs.CL].

<https://arxiv.org/abs/2301.04253>

Laud, T., D. Spokoyny, T. W. **Corringham**, T. Berg-Kirkpatrick, 2022: ClimaBench: A Benchmark Dataset for Climate Change Text Understanding in English, EMNLP 2022 NLP4PI Workshop. <https://arxiv.org/abs/2301.04253v1>

Aguilera, R., S. Leibel, T. W. **Corringham**, M. Bialostozky, M. B. Nguyen, A. Gershunov, T. Benmarhnia, 2022: Mediating Role of Fine Particles Abatement on Pediatric Respiratory Health During COVID-19 Stay-at-Home Order in San Diego County, California. *GeoHealth*, 6, e2022GH000637. <https://doi.org/10.1029/2022GH000637>

Corringham, T. W., J. McCarthy, T. Shulgina, A. Gershunov, D. Cayan, F. M. Ralph, 2022: Climate change contributions to future atmospheric river flood damages in the western United States. *Scientific Reports*, 12, 13747. <https://doi.org/10.1038/s41598-022-15474-2>

Guirguis, K., A. Gershunov, B. Hatchett, T. Shulgina, M. J. DeFlorio, A. C. Subramanian, J. Guzman-Morales, R. Aguilera, R. Clemesha, T. W. **Corringham**, L. Delle Monache, D. Reynolds,



- A. Tardy, I. Small, F. M. Ralph, 2022: Winter Wet-Dry Weather Patterns Driving Atmospheric Rivers and Santa Ana Winds Provide Evidence for Increasing Wildfire Hazard in California. *Climate Dynamics*. <https://doi.org/10.1007/s00382-022-06361-7>
- Helly, J., D. Cayan, T. W. **Corringham**, J. Stricklin, T. Hillaire, 2021: Patterns of Water Use in California. *San Francisco Estuary and Watershed Science* 19(4).
<http://dx.doi.org/10.15447/sfews.2021v19iss4art2>
- Prince, H. D., P. B. Gibson, M. J. DeFlorio, T. W. **Corringham**, A. Cobb, B. Guan, F. M. Ralph, D. E. Waliser, 2021: Genesis locations of the costliest atmospheric rivers impacting the Western United States. *Geophysical Research Letters*, 48, e2021GL093947.
<https://doi.org/10.1029/2021GL093947>
- Corringham**, T. W., D. Spokoyny, E. Xiao, C. Cha, C. Lemarchand, M. Syal, E. Olson, E., A. Gershunov, 2021: BERT Classification of Paris Agreement Climate Action Plans, ICML Workshop, Tackling Climate Change with Machine Learning.
<https://www.climatechange.ai/papers/icml2021/45>
- Corringham**, T., L. Delle Monache, 2021: Economic Impacts of Atmospheric Rivers in the Transportation Sector: Methodology and Case Studies. Technical Report, Aurora Project 2020-01, TPF-5(290), SPR-3(042), InTrans Project 19-156.
https://intrans.iastate.edu/app/uploads/2021/05/atmospheric_rivers_econ_impact_w_cvr.pdf
- Aguilera, R., T. W. **Corringham**, A. Gershunov, S. Leibel, T. Benmarhnia, 2021: Fine Particles in Wildfire Smoke and Pediatric Respiratory Health in California. *Pediatrics*, 147.
<https://doi.org/10.1542/peds.2020-027128>
- Aguilera, R., T. W. **Corringham** (*joint first author*), A. Gershunov, T. Benmarhnia, 2021: Wildfire smoke impacts respiratory health more than fine particles from other sources: observational evidence from Southern California. *Nature Communications*, 12, 1493.
<https://doi.org/10.1038/s41467-021-21708-0>
- Guirguis, K., A. Gershunov, M. J. DeFlorio, T. Shulgina, L. Delle Monache, A. Subramanian, T. W. **Corringham**, F. M. Ralph, 2020: Four North Pacific atmospheric circulation regimes and their relationship to California precipitation on daily to seasonal timescales. *Geophysical Research Letters*, 47, e2020GL087609. <https://doi.org/10.1029/2020GL087609>
- Corringham**, T. W., F. M. Ralph, A. Gershunov, D. R. Cayan, C. A. Talbot, 2019: Atmospheric rivers drive flood damages in the western United States, *Science Advances*, Dec. 4, 2019, EAAX4631. <https://doi.org/10.1126/sciadv.aax4631>



Corringham, T. W., D. R. Cayan, 2019: The effect of El Niño on flood damages in the western United States. *Weather Climate and Society*, 11, 489–504.

<https://doi.org/10.1175/WCAS-D-18-0071.1>

Corringham, T. W., 2018: Wildfires, Floods, and Climate Variability. UC San Diego.

<https://escholarship.org/uc/item/49x991gx>

Corringham, T. W., A. L. Westerling, B. J. Morehouse, 2008: Exploring use of climate information in wildland fire management: a decision calendar study, *Journal of Forestry*, 106(2), 71-77. <https://doi.org/10.1093/jof/106.2.71>

PRESENTATIONS

Corringham, T. W., 2023: Applying the principles of environmental justice to forecast-informed reservoir operations. Presentation at the 2023 Floodplain Management Association meeting, Los Angeles, California.

Corringham, T. W., J. McCarthy, T. Shulgina, A. Gershunov, D. Cayan, F. M. Ralph, 2022: Climate change contributions to future atmospheric river flood damages in the western United States. Presentation at the 2022 International Atmospheric Rivers Conference, Santiago, Chile.

Corringham, T. W., Corringham, T. W. A. O'Donnell, J. Lynch, N. Pingel, D. Jones, B. Dickson, J. Leu, D. Lee, J. Nielsen, A. Schlein, R. Putty, D. Axisa, 2022: Yuba Feather FIRO Economic Benefit Assessment Framework. Poster at the 2022 Forecast Informed Reservoir Operations Workshop.

Corringham, T. W., L. Delle Monache, 2022: Road Safety and Mobility Costs of Atmospheric Rivers in the Western United States. Poster at the CW3E Annual Meeting.

Corringham, T. W., L. Delle Monache, 2021: The Economic Costs of Road Safety and Mobility Impacts of Extreme Precipitation from Atmospheric Rivers in the Western United States. Poster at the American Geophysical Union Fall Meeting.

Guirguis, K., A. Gershunov, B. Hatchett, T. Shulgina, T. W. **Corringham**, et al., Weather Patterns Driving Atmospheric Rivers, Santa Ana Winds, Floods and Wildfires During California Winters and Evidence of Increasing Fire Risk. Presentation A25E-1721 at the American Geophysical Union Fall Meeting.

Corringham, T. W., 2021: Impactos económicos de los ríos atmosféricos en el oeste de Estados Unidos (*invited*). Center for Climate and Resilience Research, Chile.

<http://www.cr2.cl/evaluacion-economica-de-la-megasequia/>



Corringham, T. W., L. Delle Monache, 2021: The Economic Impact of Atmospheric Rivers on Road Networks in the Western United States. Presentation at the American Meteorological Society Annual Meeting.

Corringham, T. W., T. Shulgina, A. Gershunov, D. R. Cayan, F. M. Ralph, 2020: Projections of Future Flood Damages Associated with Atmospheric Rivers in the Western United States. American Geophysical Union Fall Meeting.

Prince, H. D., P. Gibson, M. DeFlorio, T. W. **Corringham**, A. Cobb, B. Guan, 2020: Genesis locations of the costliest atmospheric rivers impacting the western United States. Poster at the American Geophysical Union Fall Meeting.

Corringham, T. W., 2020: Economic Perspectives of Atmospheric River Impacts (*invited, keynote*). International Atmospheric Rivers Conference, La Jolla, CA.

Corringham, T. W., F. M. Ralph, A. Gershunov, D. Cayan, C. Talbot, 2020: Atmospheric River Scale Captures Economic Flood Impacts. Presentation 6A.2 at the American Meteorological Society Annual Meeting, Boston, MA.

McCarthy, J., T. W. **Corringham**, 2020: Climate Change to Intensify Atmospheric River Induced Flooding Damages in the Western United States. Poster S209 at the American Meteorological Society Annual Meeting, Boston MA.

Corringham, T. W., F. M. Ralph, A. Gershunov, D. Cayan, C. Talbot, 2019: A scale of atmospheric river intensity captures the economic impacts of flooding in the western United States. Presentation H14G-06 at the American Geophysical Union Fall Meeting, San Francisco, CA.

Corringham, T. W., A. Gershunov, D. R. Cayan, F. M. Ralph, 2019: Atmospheric Rivers and Insured Flood Losses in the Western United States. Presentation 2A.6 at the American Meteorological Society Annual Meeting, Phoenix, AZ.

Corringham, T. W., A. Gershunov, D. R. Cayan, F. M. Ralph, 2018: Atmospheric Rivers Drive Flood Damages in the Western United States. Poster A51I-2267 at the American Geophysical Union Fall Meeting, Washington, D.C.

Corringham, T. W., A. Gershunov, D.R. Cayan, 2018: Atmospheric Rivers Drive Flood Damages in the Western United States. Presentation at the Second International Atmospheric Rivers Conference, La Jolla, CA.

GRANTS

Lead PI, **Corringham**, T. W., F. M. Ralph, J. M. Shepherd, D. Nelson, S. Ogle, 2023–2027, Incorporating Principles of Environmental Justice into Forecast Informed Reservoir Operations, a Climate and Flood Adaptation Strategy, NOAA, **\$475,000**



Contributor, Wall, T., J. Kalansky, D. R. Cayan, 2022–2027, The California Nevada Adaptation Program (CNAP): Building Capacity for Near- and Long-Term Resiliency in California and Nevada, NOAA Regionally Integrated Science Assessment Program, **\$5,179,908**

Co-PI, **Corringham**, T. W., T. Berg-Kirkpatrick, D. Spokoyny, 2022–2023, Extracting and Discovering New Measurements from Climate Text Sources, Climate Change Artificial Intelligence, **\$145,000**.

Co-PI, **Corringham**, T. W., D. R. Cayan, 2020–2022, Water Use and Agricultural Productivity in California, California Nevada Climate Applications Program, Supporting Drought Early Warning in the California and Nevada Region Phase II, **\$110,000**.

Co-PI, **Corringham**, T. W., L. Delle Monache, 2020, Economic Impacts of Atmospheric Rivers in the Transportation Sector: Methodology and Preliminary Case Studies, Iowa Department of Transportation, Project Number TPF-5(290), March 2020 – March 2021, **\$120,000**.

SELECTED MEDIA

Milman, Oliver, “State Farm stopped insuring California homes due to climate risks. But it shares lobbyists with big oil,” **The Guardian**, Jul. 5, 2023, <https://www.theguardian.com/us-news/2023/jul/05/state-farm-stopped-insuring-california-homes-due-to-climate-risks-but-it-shares-lobbyists-with-big-oil>

Flavelle, Christopher, Jill Cowan, Ivan Penn, “Climate Shocks Are Making Parts of America Uninsurable. It Just Got Worse,” **New York Times**, May 31, 2023, <https://www.nytimes.com/2023/05/31/climate/climate-change-insurance-wildfires-california.html>

Conroy, Gemma, “What the science says about California’s record-setting snow,” **Nature**, Mar. 31, 2023, <https://www.nature.com/articles/d41586-023-00937-x>

Corringham, T. W., M. Brauer, M. Burke, S. Hussain, A. Rappold, “Public Impacts of Wildfire Smoke,” **World Forestry Center**, Nov. 18. 2022, <https://www.worldforestry.org/smoke/>

Corringham, T. W., R. Aguilera-Becker, J. Guzman-Morales, “Playing with fire: How we can prevent wildfire climate change catastrophes,” **The Hill**, Aug. 8, 2021, <https://thehill.com/opinion/energy-environment/566875-playing-with-fire-how-we-can-prevent-wildfire-climate-change>



Singh, Maanvi, “California’s wildfire smoke could be more harmful than vehicle emissions,” **The Guardian**, Mar. 6, 2021, <https://www.theguardian.com/us-news/2021/mar/06/california-wildfire-smoke-harmful-pollution-study>

Cowan, Jill, “How Much Will Wildfires Cost?” **New York Times**, Sep. 16, 2020, <https://www.nytimes.com/2020/09/16/us/california-fires-cost.html>

Hodges, Kip, “Here Comes the Flood,” In Science Journals, S. Hartley ed. **Science**, Dec. 6, 2019, Vol. 366, Issue 6470, pp. 1209-1210
<https://science.sciencemag.org/content/366/6470/1209.9>

Branom, Mike, “Atmospheric rivers caused 85 percent of recent flood damage in Western U.S.,” **Washington Post**, Dec. 4, 2019, <https://www.washingtonpost.com/weather/2019/12/04/atmospheric-rivers-caused-percent-wests-recent-flood-damage/>

SERVICE

Co-Chair, Justice Equity Diversity Inclusion Task Force, Center for Western Weather and Water Extremes (CW3E), 2022–present

Member, Justice Equity Diversity Inclusion Task Force, CW3E, 2021–2022

Conference organizing committee member, International Atmospheric Rivers Conference (IARC) 2022, Santiago, Chile

Conference organizing committee member, IARC 2024, La Jolla, California

Reviewer, Nature, Science Advances, Bulletin of the American Meteorological Society, Science of the Total Environment, Weather and Climate Extremes, Applied Sciences, Natural Hazards and Earth System Sciences, Journal of Environmental Economics and Management, The Lancet Regional Health Americas, Communications Earth & Environment, Geophysical Research Letters