

GINA R. COVA

Research Scientist

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Education

University of Washington, 2020 – 2024

PhD, Environmental and Forest Sciences

Dissertation: Evaluating multi-scaled patterns, trends, and drivers of fire severity to inform adaptive management of western North American forests

Committee: Van R. Kane, Susan Prichard, Harold Zald, L. Monika Moskal, Abigail Swann.

University of California – Berkeley, 2011 – 2015

BA, Earth Systems Science Geography | Minor in Geospatial Information Science & Technology

Professional Experience

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| 2024 – present | Research Scientist. University of Washington, School of Environmental and Forest Sciences – Fire, Landscapes, Adaptive Management, and Ecology (FLAME) Lab. Seattle, WA. |
| 2020 – 2024 | Graduate Research Assistant. University of Washington, School of Environmental and Forest Sciences. Seattle, WA. |
| 2022 – 2024 | Interim GIS, Mapping, & Drawing Administrator. University of California – Berkeley, Facilities Services. Remote work. |
| 2019 – 2020 | Geoinformatics Fellow. NASA DEVELOP National Program at NASA Ames Research Center. Moffett Field, CA. . |
| 2015 – 2019 | Geospatial Analyst and Visual Designer. GreenInfo Network. Oakland, CA. |
| 2013 – 2014 | Geospatial and Cartographic Intern. University of California – Berkeley Cartography and GIS Education Lab. Berkeley, CA. |

Recent Research and Select Projects

2024: Refining fire severity maps to support wildlife habitat assessments and other forest management applications. Washington Department of Natural Resources funded project (\$200k).

2023-24: Implications of recent wildfires for forest management of federal lands in the Pacific Northwest, USA.

2021-24: Effects of land ownership on drivers of burn severity in large western North American wildfires

2024: Now or Never: Saving Old Growth Trees in Eastern Washington Forests.
<https://vimeo.com/918996624/e03a0e2d0a>.

2023-24: Braiding Indigenous and Western Knowledge for Climate-Adapted Forests: An Ecocultural State of Science Report. <https://adaptiveforeststewardship.org/>

2022: Ecological effects of recent wildfires in north central Washington state.
<https://bit.ly/NCWAFires>

Publications and Datasets

Cova, G., Kane, V. R., Prichard, S., North, M., & Cansler, C. A. 2023. The outsized role of California's largest wildfires in changing forest burn patterns and coarsening ecosystem scale. *Forest Ecology and Management*, 528, 120620.
<https://doi.org/10.1016/j.foreco.2022.120620>

Cova, G. R., Prichard, S. J., Rowell, E., Drye, B., Eagle, P., Kennedy, M. C., & Nemens, D. G. 2023. Evaluating Close-Range Photogrammetry for 3D Understory Fuel Characterization and Biomass Prediction in Pine Forests. *Remote Sensing*, 15(19), Article 19.
<https://doi.org/10.3390/rs15194837>

Kane, V. R., Bartl-Geller, B. N., **Cova, G. R.**, Chamberlain, C. P., van Wagtendonk, L., & North, M. P. 2023. Where are the large trees? A census of Sierra Nevada large trees to determine their frequency and spatial distribution across three large landscapes. *Forest Ecology and Management*, 546, 121351. <https://doi.org/10.1016/j.foreco.2023.121351>

Chamberlain, C. P., **Cova, G. R.**, Cansler, C. A., North, M. P., Meyer, M. D., Jeronimo, S. M. A., & Kane, V. R. (2023). Consistently heterogeneous structures observed at multiple spatial scales across fire-intact reference sites. *Forest Ecology and Management*, 550, 121478.
<https://doi.org/10.1016/j.foreco.2023.121478>

Chamberlain, C., **Cova, G.**, Kane, V. R., Cansler, C. A., Bartl-Geller, B., Kane, J., Jeronimo, S., Stine, P., North, M. 2023. Sierra Nevada contemporary reference site boundaries and corresponding remote sensing-derived canopy structure rasters. Fort Collins, CO: *Forest Service Research Data Archive*. <https://doi.org/10.2737/RDS-2023-0027>

Povak, N.; Prichard, S.; Hessburg, P.; Griffey, V.; Salter, R.; Furniss, T.; **Cova, G.**; Gray, R. Machine learning models reveal strong bottom-up controls on fire severity patterns during extreme events. *In Prep*.

Presentations

Cova, G., & Prichard, S. Invited briefing to Great Northwest Forests coalition on adaptive management and ecological outcomes of recent wildfires within the Northwest Forest Plan. Virtual. March 2024.

Cova, G., Kane, V.R., Prichard, S., North, M., Cansler, C.A. Deconstructing the 'megafire': Trends and ecological outcomes of exceptionally large wildfires in California forests. *Association*

for *Fire Ecology 10th International Fire Ecology and Management Congress*, December 2023. Monterey, CA. Oral presentation.

Cova, G., Rowell, E., Prichard, S. Can GoPros democratize field data collection of 3D fuel structure? *Association for Fire Ecology 9th International Fire Ecology and Management Congress*, December 2021. Virtual. Oral presentation.

Cova, G., Herbert, C., Pippin, H., Bake, A. Monitoring Vegetation Change from Land Disturbances in the Powder River Basin Using Remote Sensing. *NASA Annual Earth Sciences Applications Showcase*, August 2019. Washington DC. Oral and poster presentation.

Cova, G. and Chaiu Zhang, Y. Using Maps and Data as Storytelling Tools. People of the Global Majority in the Outdoors, Nature, and Environment Annual Conference, May 2019. Philadelphia, PA. Oral presentation.

Professional Organizations, Service, and Outreach

Association for Fire Ecology | Diversity, Equity, and Inclusivity Committee co-lead, 2023-present

Fire Ecology Reading Group | Founder and facilitator of weekly reading group for 30+ members across multiple universities and agencies conducting fire ecology research, 2021-2022.

School of Environmental and Forest Sciences Graduate Student Council | Officer advocating on behalf of graduate students, 2020-2022

College of the Environment Community Equity Initiative | Organizer to foster community and support to equity and inclusion of first-generation students, students of color, LGBTQ+ students, and other marginalized identities within the College of the Environment, 2020-2021.

GirlVentures | Mentor and climbing instructor to preteen girls and nonbinary youth. Facilitated discussions on body awareness, leadership, trust, and communication, 2017-2019.