

Dr. Joseph H. Casola, Jr.

Education

Ph.D, Atmospheric Sciences, University of Washington, Seattle, Washington, 2009

*Dissertation: On the Variability of the Snowpack of the Washington Cascades
Certificate in the Interdisciplinary and Policy Dimensions of the Earth Sciences
(IPDES); co--advised by faculty within Atmospheric Sciences and the School of
Marine Affairs*

M.S., Atmospheric Sciences, University of Washington, Seattle, Washington, 2005

B.S., Chemistry, Duke University, Durham, North Carolina, 1999

Employment Experience

Deputy Director

Climate Impacts Group, University of Washington, Seattle. WA (current)

Lead the development of strategic planning at the Climate Impacts Group (CIG), contribute to CIG research projects regarding climate risks and adaptation opportunities in the Pacific Northwest, manage external relationships with key stakeholders, and attract resources to support innovative programs.

Staff Scientist, Director of Science and Impacts

Center for Climate and Energy Solutions, Arlington, VA (2013-2015)

Designed research, communications, and policy initiatives to promote actions to reduce greenhouse gas emissions and better adapt to climate impacts. Work closely with federal agencies, non-profit organizations, academic institutions, and private sector corporations to advance the state-of-the-art for climate risk assessment and management, and to identify shared interests in protecting infrastructure and natural systems.

Senior Associate, Climate Impacts and Adaptation Group

ICF International, Washington, DC (2010-2013, 1999-2001)

Managed projects ranging in value from \$25,000 to \$500,000 for federal, state, local, and international clients. Key projects included: organization and writing of the Environmental Protection Agency's current climate change website; development of a risk screening tool for World Bank investments; and vulnerability assessments for transportation planners in Los Angeles and Philadelphia. Mentored over a dozen junior staff.

Postdoctoral Fellow

National Research Council, Washington, DC (2009-2010)

Organized and selected scientific experts for panel meetings. Wrote and edited materials for both technical and non---technical audiences, including those related to the *America's Climate Choices* suite of reports. Established connections with Academy---level climate science experts across the country and key climate science and policy staff at various federal agencies in Washington, DC.

Research Assistant

Climate Impacts Group, University of Washington, Seattle, WA (2005)

Synthesized research into a technical report, *Climate Impacts on Washington's Water Supply, Forests, Fish, and Agriculture*, for regional resource managers.

Project Experience Related to Climate Risk Management

Assisting transportation, water, and ecosystem managers to consider climate issues in planning

- Helped to prepare a Climate Action and Adaptation Plan for the Los Angeles County Metropolitan Transportation Authority (LA Metro) and to identify adaptation options for the Southeastern Pennsylvania Transportation Authority (SEPTA).
- Developed decision—support tools, scenario planning guidance, and workshop materials for National Parks and National Wildlife Refuges.
- Built partnerships with sector—specific trade organizations, including the Association of Municipal Water Agencies and the American Association of State Highway and Transportation Officials. Developed fact sheets and organized webinars to raise awareness of climate issues among respective members.
- Designed a survey to collect information about ecological observations across the country in support of the National Climate Assessment process.

Analyzing climate—sensitive regulations and regulatory processes

- Identified potential mechanisms within the Clean Water Act that the EPA's Office of Policy could utilize to incorporate information about future climate in water quality standards.
- Wrote portions of a guidebook for transportation planners outlining ways to include considerations of climate impacts and adaptation when preparing environmental impacts statements.

Understanding the climate sensitivity of Washington State's natural resources

- Lead author of the 2005 report, *Climate Impacts on Washington's Water Supply, Forests, Fish, and Agriculture*, which served as the predecessor document for Washington Climate Change Impacts Assessment completed in 2009.
- Analyzed past and future changes in snowpack in the Washington Cascades. Worked with Seattle City Light in developing seasonal forecast tools for snowpack and streamflow in the Skagit watershed.

Translating climate science and communicating the risks of climate impacts

- Led writing and content development for EPA's new climate change website, launched May 2012.
- Contributed substantially to the comment—response process and the development of public outreach materials for the National Research Council's (NRC) *America's Climate Choices* reports, especially *Adapting to the Impacts of Climate Change*.
- Served as lead staff member for the completion of the NRC report *Assessment of Intraseasonal to Interannual Climate Prediction and Predictability*.

Providing technical support to international development organizations

- Assisted the World Bank in developing a systematic process for assessing potential climate impacts as part of its project development process.
- Developed guidance and workshop materials for the US Agency for International Development in its effort to support adaptation planning in Jamaica.

Teaching Experience

Adjunct Faculty, George Mason University, Fairfax, VA (Fall 2013)

Co-instructor for Earth Science and Policy

University of Washington, Seattle, WA (2002--2009)

- Instructor/Lecturer
Introduction to Weather
- Teaching Assistant
Ethics of Climate Change
Climate Dynamics Climate
and Climate Change
Introduction to Weather
- Lead Teaching Assistant
Responsible for training new teaching assistants in addition to developing novel
classroom and online teaching resources for the Department of Atmospheric
Sciences

Selected Media Appearances and Presentations

- [Cooling a Warming World](#)
Voice of America, *On the Line*
- [Climate change will disrupt energy supplies, DOE warns](#)
USA Today
- [Adjusting to Climate Change on Delmarva](#)
Delmarva Public Radio (NPR affiliate)
- [It's time to adapt to unstoppable global warming, scientists say](#)
NBC News
- [Chilling out on the polar vortex,](#)
Climate Compass Blog at C2ES
- [Getting clear on climate facts](#)
Climate Compass Blog at C2ES
- Invited presentations at conferences and events held by the **Transportation
Research Board, Organization for American States, American Planning
Association, American Bar Association, Seattle City Light, Bank of America,
Exelon Corporation, Delta Airlines, and DuPont.**

Selected Publications

- Jaglom, W.S., J.R. McFarland, M.F. Colley, C.B. Mack, B. Venkatesh, R.L. Miller, J. Haydel, P.A. Schultz, B. Perkins, **J. H. Casola**, J.A. Martinich, P. Cross, M.J. Kolian, S. Kayin, 2014. Assessment of projected temperature impacts from climate change on the U.S. electric power sector using the Integrated Planning Model®. *Energy Policy*, **73**, 524---539.
- **Casola, J.H.** and F. Tron, 2013. Interannual Precipitation and Temperature Variability near Mont Panié Wilderness Reserve and its Connection to Observed Kauri Die---Back. Chapter 7 in Rapid Assessment Program #65, Conservation International.
- **Casola, J.H.**, L. Cuo, B. Livneh, D.P. Lettenmaier, M.T. Stoelinga, P.W. Mote, and J.M. Wallace, 2009. Assessing the Impacts of Global Warming on Snowpack in the Washington Cascades. *Journal of Climate*, **22**, 10, 2758---2772.
- McMurdie, L. and **J.H. Casola**, 2009. Weather Regimes and Forecast Errors in the Pacific Northwest. *Weather and Forecasting*, **24**, 3, 829---842.
- **Casola, J.H.**, and J.M. Wallace, 2007. Identifying Weather Regimes in the 500---hPa Geopotential Height Field for the Pacific---North American Sector Using a Limited--- Contour Clustering Technique. *Journal of Applied Meteorology and Climatology*, **46**, 10, 1619---1630.
- **Casola, J.H.**, J.E. Kay, A.K. Snover, R.A. Norheim, L.C. Whitely Binder, and the Climate Impacts Group, 2005. *Climate Impacts on Washington's Water Supply, Forests, Fish, and Agriculture*.
- Dolin, E. J., and **J.H. Casola**, International Efforts to Reduce PFC Emissions from Primary Aluminum Production. 2001 Annual TMS (The Minerals, Metals and Materials Society) Meeting and Conference Proceedings, New Orleans, LA, February 11---15, 2001.
- U.S. Environmental Protection Agency, 2001. *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990--1999*. US EPA #236---R---01---001. (Industrial Processes chapter and Appendix B)

Affiliations and Awards

Member of American Meteorological Society and American Geophysical Union

Member of the American Meteorological Society's Board on Global Strategies (through 2017)

Best Student Paper, Western Snow Conference (2008)

Selected as participant for the American Meteorological Society, Summer Policy Colloquium, Washington, DC (Summer 2006)