

# Sarah Y. Murphy, Ph.D.

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## *Education*

### **Ph.D. Engineering Science**

March 2023

Voiland College of Engineering and Architecture  
Washington State University, Pullman, WA

### **B.S. Atmospheric Sciences**

May 2015

Vermont State University, Lyndonville, VT  
Minors: Mathematics and Calculus-Based Physics

## *Appointments & Positions*

2023 – Present	<b>Physical Scientist</b> U.S. Geological Survey.- New England Water Science Center Augusta, Maine
2022 – Present	<b>Virtual Conference Support Technician</b> M Events Meeting Technologies Inc. - m events USA Cumberland, Rhode Island
2021	<b>Graduate Research Fellow</b> Pacific Northwest National Lab - Atmospheric Sciences & Global Change Division Richland, Washington
2017 – 2021	<b>Teaching Assistant</b> Washington State University - Lab for Atmospheric Research Pullman, Washington
2015 – 2023	<b>Research Assistant</b> Washington State University - Lab for Atmospheric Research Pullman, Washington
2015	<b>Field Technician</b> Center for Severe Weather Research Boulder, Colorado
2014	<b>Research Intern</b> Colorado State University - Radar and Remote Sensing Lab Fort Collins, Colorado
2013	<b>Research Intern</b> Vermont Low Income Trust for Electricity at Lyndon State College Lyndonville, Vermont

## *Memberships & Involvement*

2018 – Present	Data and Software Carpentry Certified Instructor
2016 – Present	Association of Polar Early Career Scientists
2014 – Present	American Geophysical Union
2013 – Present	American Meteorological Society

## Publications

- Irizarry-Ortiz, M., & **Murphy, S. Y.** (2025). Validation of gridded precipitation datasets for flood typing in select conterminous US basins. *Journal of Hydrologic Engineering*, 30(6).  
<https://doi.org/10.1061/JHYEFF.HEENG-6500>
- Murphy, S. Y.** (2023). Measurements and modeling of Arctic atmospheric processes during the Norwegian young sea ice field campaign [Doctoral dissertation, Washington State University]. WSU Libraries. <https://doi.org/10.7273/000005016>
- Hanrahan, J., Maynard, A., **Murphy, S. Y.**, Zercher, C., & Fitzpatrick, A. (2017). Examining the climatology of shortwave radiation in the northeastern United States. *Journal of Applied Meteorology and Climatology*, 56(10), 2869–2881. <https://doi.org/10.1175/JAMC-D-16-0420.1>
- Walden, V. P., Hudson, S. R., Cohen, L., **Murphy, S. Y.**, & Granskog, M. A. (2017). Atmospheric components of the surface energy budget over young sea ice: Results from the N-ICE2015 campaign. *Journal of Geophysical Research: Atmospheres*, 122(15), 8427–8446.  
<https://doi.org/10.1002/2016JD026091>
- Walden, V. P., **Murphy, S.**, Hudson, S. R., & Cohen, L. (2017). N-ICE2015 atmospheric turbulent fluxes [Data set]. Norwegian Polar Institute. <https://doi.org/10.21334/npolar.2017.298013b7>

## Conferences & Communication

- Murphy, S. Y.**, Hammond Wagner, C., Schattman, R., & Peplinski, H. (talk). *Quantifying the Hydrologic Impacts of Changing Climatic Conditions on Agricultural Water Resources in New England Using the Precipitation Runoff Modeling System*. 2025 Maine Sustainability and Water Conference, March 2024.
- Schattman, R., **Murphy, S. Y.**, & Ayotte, J. (session). *Session I – Sustainable Water Resources for Maine Agriculture and Rural Water Use*. 2025 Maine Sustainability and Water Conference, March 2024.
- Murphy, S. Y.**, Cook, C., & Taylor, N. J. (poster). *Sharing data, code, and analyses across organizations: Challenges and breakthroughs with the Interagency Flood Typing and Mixed Population Study*. AGU Fall Meeting, December 2024.
- Murphy, S. Y.**, Walden, V. P., & Wang, H. (talk). *Evaluation of sensible and latent heat fluxes over first-year sea ice estimated in the Weather Research and Forecasting model against N-ICE observations*. AMS 103rd Annual Meeting, January 2023.
- Murphy, S. Y.**, Hines, K., Hudson, S. R., & Walden, V. P. (talk). *Testing boundary layer and cloud parameterizations in the Polar Weather Research and Forecasting model using data from the Norwegian Young Sea ICE (N-ICE2015) cruise*. AGU Fall Meeting, December 2020.
- Murphy, S. Y.**, Walden, V. P., Hudson, S., Cohen, L., & Hines, K. (talk). *An assessment of Polar WRF microphysics and boundary layer schemes using data from the Norwegian Young Sea Ice Experiment*. AGU Fall Meeting, December 2018.
- Murphy, S. Y.**, Walden, V. P., Cohen, L., & Hudson, S. R. (talk). *The impact of cloud properties on young sea ice during three winter storms at N-ICE2015*. AGU Fall Meeting, December 2017.
- Murphy, S. Y.**, Walden, V. P., Cohen, L., & Hudson, S. R. (talk). *Seasonal variation of cloud radiative forcing over young sea ice during the N-ICE2015 experiment*. AMS 97th Annual Meeting, January 2017.

- Murphy, S. Y.,** Walden, V. P., Cohen, L., & Hudson, S. R. **(talk).** *Seasonal variation of cloud radiative forcing over young sea ice during the N-ICE2015 experiment.* AGU 2016 Fall Meeting, December 2016.
- Murphy, S. Y. (talk).** *Examining the Climatology of Solar Energy Potential in Vermont.* Vermont Weather & Energy Analytics Project Weather Team Meeting at IBM TJ Watson Research Center, May 2015.
- Murphy, S. Y.,** Barnum, J. I., Kennedy, P., & Chandrasekar/V. Chandra **(poster).** *Observational Capabilities of the FRONT Network: 21 May 2014.* AMS 95th Annual Meeting, January 2015.