Michael L. Wasserstein

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# EDUCATION

**Ph.D. in Atmospheric Sciences** Expected Fall 2026

# University of Utah, Salt Lake City, UT

**M.S. in Atmospheric Sciences** August 2023

University of Utah, Salt Lake City, UT

Thesis Title: Cool-season Orographic Snowfall Extremes in the Central Wasatch Mountains, Utah, USA

# B.A. in Physics with honors (Minors in Mathematics and Spanish) May 2021

Middlebury College, Middlebury, VT

# RESEARCH INTERESTS

# Orographic precipitation

# Mountain weather and climate

# Mesoscale and synoptic-scale meteorology

# Numerical weather prediction

# Machine Learning

# APPOINTMENTS

2021 – Present **Graduate Research Assistant,** University of Utah

2020 - 2021 **Undergraduate Student Researcher**, Middlebury College

2019 **Meteorologist Intern**, NBC Universal Channel 4, West Hartford, CT

**TEACHING EXPERIENCE**

**Graduate Teaching Assistant**, University of Utah

* Secrets of the Greatest Snow on Earth, ATMOS 1000; Spring 2023

**Teaching Assistant**, Middlebury College

* Newtonian Physics, PHYS 109; Fall 2020
* Electricity and Magnetism (lab), PHYS 110; Spring 2019

**Workshop Instructor**, Middlebury College

* Introduction to Meteorology; Winter 2020, Winter 2021

# HONORS AND AWARDS

* Outstanding Student Presentation Award, AMS 21st Conference on Mountain Meteorology, Summer 2024
* NCAR Advanced Study Program (ASP) Graduate Visitor Program (GVP) Fellowship, Summer 2024
* NCAR Student Visit, August 2023
* College Scholar, Spring 2018, Fall 2018, Fall 2019, Spring 2019, Fall 2020, Spring 2020, Spring 2021
* NESCAC All-Academic Team, Fall 2019, Spring 2020, Fall 2020, Spring 2021
* Dean’s List, Fall 2017

# INVITED PRESENTATIONS

Fine-scale prediction of orographic precipitation in multi-ridge orography. Seminar, University of Utah, September 2024.

# Fine-scale prediction of orographic precipitation in multi-ridge orography. Research Applications Lab HAPpy Hour Seminar, NCAR, June 2024.

# Cool-season orographic snowfall extremes in the central Wasatch Mountains, Utah, USA. National Weather Service Salt Lake City Fall Seminar, NWS SLC, November 2023.

# Cool-season orographic snowfall extremes in the central Wasatch Mountains, Utah, USA. Research Applications Lab Seminar, NCAR, August 2023.

# Avalanches, Cool-Season Orographic Precipitation Extremes, and Deep-Powder Skiing in Little Cottonwood Canyon, Utah. Seminar, University of Innsbruck, June 2023.

# Characteristics of Cool Season Orographic Precipitation Extremes in the Central Wasatch. ECSC 0350; The Mountain Critical Zone, Middlebury College (virtual), February 2023.

Characteristics of Precipitation Extremes in the Central Wasatch. Seminar, University of Utah, November 2022.

Weather. OEL-352: Avalanche Ecology, Westminster College, February 2022.

# PUBLICATIONS

# Wasserstein, M. L., Evans, A. L., Veals, P. G., Kingsmill, D. E., and Steenburgh, W.J.: Orographic Influences on Precipitation in a Continental Mountain Environment as Observed by Mountain and Valley Profiling Radars. In prep for submission to *Monthly Weather Review*.

**Wasserstein, M. L.** and Steenburgh, W. J., 2024: Diverse Characteristics of Extreme Orographic Snowfall Events in Little Cottonwood Canyon, Utah. *Monthly Weather Review*, **152**, 945–966, <https://doi.org/10.1175/MWR-D-23-0206.1>.

# CONFERENCE PRESENTATIONS

Kingsmill, D.E., **Wasserstein, M.L.**, Geerts, B.N., and Steenburgh, W.J., 2024: “Multiscale Mountain Waves associated with Orographic Precipitation over Basin and Range Topography”, 21st Mountain Meteorology, AMS, Boise, ID.

**Wasserstein, M.L.** and Steenburgh, W.J., 2024: “Diverse Characteristics of Extreme Orographic Snowfall Events in Little Cottonwood Canyon, Utah”. 21st Mountain Meteorology, AMS, Boise, ID.

**Wasserstein, M.L.** and Steenburgh, W.J., 2023: “Characteristics of Cool-Season Orographic Precipitation Extremes in the central Wasatch Range, Utah, USA”. 36th International Conference on Alpine Meteorology, St. Gallen, CH.

# POSTER PRESENTATIONS

Evans, A.N., Veals, P.G., **Wasserstein, M.L.**, and Steenburgh, W.J., 2024: “Census of Valley and Mountain Profiling Radar Characteristics during Winter Storms along Utah's Wasatch Front”, 21st Mountain Meteorology, AMS, Boise, ID.

**Wasserstein, M.L.**, and Steenburgh, W.J., 2024: “Fine-scale Prediction of Orographic Precipitation in Little Cottonwood Canyon, Utah”, 21st Mountain Meteorology, AMS, Boise, ID.

Evans, A.N., Veals, P., **Wasserstein, M.L.**, and Steenburgh, W.J., 2023: “Census of Valley and Mountain Profiling Radar Characteristics during Winter Storms along Utah's Wasatch Front”, 32nd Conference on Weather Analysis and Forecasting, AMS, Madison, WI.

**Wasserstein, M.L.**, Steenburgh, W.J., Veals, P., Kingsmill, D., Evans, A. 2023: “Observations of the Characteristics of Cool-Season Precipitation in the Salt Lake Valley and Adjacent Central Wasatch Range of Utah, USA”. 36th International Conference on Alpine Meteorology, St. Gallen, CH.

Lombardo, S.J., **Wasserstein, M.L.**, Veals, P., and Steenburgh, W.J., 2022: “Verification and Bias Correction of Global Forecast System (GFS) Precipitation Forecasts in Little Cottonwood Canyon. REALM Student Poster Session, University of Utah, Salt Lake City, UT.

**Wasserstein, M.L.** and Steenburgh, W.J., 2022: “Impacts of Dry Sub-Cloud Layers on Orographic Precipitation”, 20th Conference on Mountain Meteorology, AMS, Park City, UT.

**DATASETS**

Steenburgh, J., **Wasserstein, M. L.**, Veals, P. G. 2025. " Alta-Atwater Micro Rain Radar Data 2022–2024." The Hive: University of Utah Research Data Repository. [https://doi.org/10.7278/S5d-wern-v6kz](https://hive.utah.edu/catalog?locale=en&q=%22https%3A%2F%2Fdoi.org%2F10.7278%2FS5d-wern-v6kz%22&search_field=identifier).

Steenburgh, J., **Wasserstein, M. L.**, Veals, P. G. 2025. " Highland High Micro Rain Radar Data 2022–2024." The Hive: University of Utah Research Data Repository. [https://doi.org/10.7278/S5d-n1jc-2d68](https://hive.utah.edu/catalog?locale=en&q=%22https%3A%2F%2Fdoi.org%2F10.7278%2FS5d-n1jc-2d68%22&search_field=identifier).

Steenburgh, J., **Wasserstein, M. L.**, Veals, P. G., Evans, A., and Kingsmill, D. 2025. "Alta Atwater PARSIVEL Disdrometer Measurements 2022-2024." The Hive: University of Utah Research Data Repository. [https://doi.org/10.7278/S5d-wtpn-az0j](https://hive.utah.edu/catalog?locale=en&q=%22https%3A%2F%2Fdoi.org%2F10.7278%2FS5d-wtpn-az0j%22&search_field=identifier).

Steenburgh, J., **Wasserstein, M. L.**, Veals, P. G., Evans, A., and Kingsmill, D. 2025. "Highland PARSIVEL Disdrometer Measurements 2022-2024." The Hive: University of Utah Research Data Repository. <https://doi.org/10.7278/S5d-wtpn-az0j>.

Steenburgh, J., **Wasserstein, M.**, 2025. "Alta-Collins Snow and Liquid Precipitation Equivalent Observations 2023-2024". The Hive: University of Utah Research Data Repository, [https://doi.org/10.7278/S5d-dx7x-d8ay](https://hive.utah.edu/catalog?locale=en&q=%22https%3A%2F%2Fdoi.org%2F10.7278%2FS5d-dx7x-d8ay%22&search_field=identifier).

**Wasserstein, M. L.** and Steenburgh, W.J., 2023. "Alta-Collins Snow and Liquid Precipitation Equivalent Observations 2000–2023." The Hive: University of Utah Research Data Repository, [www.doi.org/10.7278/S50d-nsy5-8bje](http://www.doi.org/10.7278/S50d-nsy5-8bje).

# FIELD WORK

# S2noCliME Field Campaign, Steamboat Springs, CO, January 2025.

# TECHNICAL SKILLS

* **Computer**: Python (primary), R, Mathematica, MATLAB,
* **Models**: WRF, CM1
* **Languages**: English (primary), Spanish

# AFFILIATIONS

* Member, American Meteorological Society, 2018 to present

# SERVICE

* First-year Graduate Student Mentor, University of Utah, 2024 to present
* Student Member, American Meteorological Society Committee on Mountain Meteorology, 2024 to present

# PRESS

* KUER (02/21/2024) “It’s been a warm, wet winter in Utah but don’t blame El Niño”: <https://www.kuer.org/health-science-environment/2024-02-21/its-been-a-warm-wet-winter-in-utah-but-dont-blame-el-nino>
* @THEU (02/05/2024) “Where does the central Wasatch’s extreme snowfall come from?”: <https://attheu.utah.edu/research/where-does-the-central-wasatchs-extreme-snowfall-come-from/>