

Connor J. Chapman, Ph.D.
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Professional Experience

Consulting Meteorologist April 2026 – Present
Sky Synoptics Weather Services
Bainbridge, PA

Deputy Commander, Weather Flight July 2024 – Present
Air National Guard
Fort Indiantown Gap, PA

Secondary Earth Science Teacher August 2021 – Present
Central Dauphin East High School
Harrisburg, PA

Graduate Assistant August 2018 – May 2021
The Pennsylvania State University
University Park, PA

Education

Ph.D. in Geography and Climate Science Aug. 2025
The Pennsylvania State University, University Park, PA
Co-Advisors: Dr. Andrew Carleton, Dr. Guido Cervone

Master of Science in Geography Aug. 2020
The Pennsylvania State University, University Park, PA
Advisor: Dr. Andrew Carleton
Thesis: Soil moisture influence on warm-season convective precipitation for the U.S. Corn Belt
GPA: 3.90

Bachelor of Science in Meteorology Dec. 2017
State University of New York at Oneonta, Oneonta, New York
GPA: 3.85

Publication

Chapman, C. J., and A. M. Carleton, 2021: Soil moisture influence on warm-season convective precipitation for the U.S. Corn Belt. *Journal of Applied Meteorology and Climatology*, **60**, 1615–1632, <https://doi.org/10.1175/jamc-d-20-0285.1>.

Presentations

“Soil moisture gradient interactions with convective precipitation for the Midwestern United States Corn Belt.” *AMS Annual Meeting*, January 2025 (oral).

“Land Cover Influences on Warm-Season Convective Precipitation for the U.S. Corn Belt.” *AGU Fall Meeting*, December 2024 (poster).

“Soil moisture influence on warm-season convective precipitation for the U.S. Corn Belt.” *AMS Annual Meeting*, January 2023 (oral).

“Soil moisture influences on warm-season convective precipitation for the Midwestern US Corn Belt.” *AGU Fall Meeting*, December 2020 (poster).

“Defining winter and identifying synoptic air mass change in the Northeast and Northern Plains US since 1950.” *AGU Fall Meeting*, December 2017 (poster).

Articles in Preparation

Chapman, C. J., and A. M. Carleton, 2026: Land cover influences on convective initiation for the U.S. Corn Belt. *In preparation*.

Chapman, C. J., and A. M. Carleton, 2026: Soil moisture gradient interactions with convective initiation for the U.S. Corn Belt. *In preparation*.

Teaching Experience

Central Dauphin East High School, Secondary

Instructor

Meteorology (Grades 11, 12) Aug. 2021 – Present

- Supervised independent student research on U.S. climate variability
- Designed lectures, activities, and additional course materials on topics such as synoptic weather conditions and physical climatology
- In-person instruction with virtual engagement via Canvas LMS

Geology (Grades 11, 12) Aug. 2021 – Present

- Designed lectures, activities, and additional course materials on topics such as geomorphology and tectonic events
- In-person instruction with virtual engagement via Canvas LMS

Astronomy (Grades 11, 12) Aug. 2021 – Present

- Designed lectures, activities, and additional course materials on topics such as Earth-Sun relationships and solar phenomena
- In-person instruction with virtual engagement via Canvas LMS

The Pennsylvania State University, Undergraduate

Instructor

Geography 3N – The Future of Food Su. 2019, 2023

- Led 18 students through an online course detailing issues in agriculture, sustainability, and climate change
- Updated course content and quiz questions

Teaching Assistant

Geography 332 – Science and policy of global greenhouse gas emissions and management Fa. 2022

- Provided climate science expertise for course development
- Graded assignments and examinations in a timely manner

Geography 210 – Geographic Perspectives on
Environmental Systems

Sp. 2020, 2021

- Instructed lab sections on topics of physical geography, climatology, and geomorphology
- Provided review sessions and reinforced course concepts
- Designed and wrote a new laboratory exercise on the climate and landforms of Pennsylvania for the revised course lab manual (published by ProCopy)
- Facilitated the rapid transition from in-person to remote learning during the Covid-19 pandemic

Geography 30N – Environment and Society in a Changing World

Fa. 2018, 2020

- Designed new course assignments and provided course updates
- Provided grades and feedback on bi-weekly student essays in a timely manner
- Served as course grader for Spring 2022 and Fall 2022

Geography 6N – Maps and the Geospatial Revolution

Fa. 2019

- Facilitated four lab sections totaling approximately 100 students, teaching students how to visualize geospatial data with ArcGIS Online

Geography 160 – Mapping Our Changing World

Sp. 2019

- Helped facilitate an online class of approximately 100 students, exploring topics of coordinate systems and map projections

Geography 1N – Global Parks and Sustainability

Fa. 2018

- Grader and a point of contact for approximately 40 students

Service

National Weather Service Student Volunteer Sp. 2021

- Collected data on ice storm events in Pennsylvania
- Collaborated with forecasters to support outreach to Amish community

Earth and Mineral Sciences Graduate Council Member Sp. 2021

- Represented Geography Department graduate students at council meetings
- Planned and facilitated college-wide graduate events

Undergraduate Research Opportunities Connection Fa. 2020-Sp. 2021

Graduate Coordinator

- Liaison between graduate researchers and undergraduate students interested in assisting with research projects
- Facilitating end-of-semester project presentations

Geography Department Graduate Representative

Treasurer

Fa.2019-Sp. 2020

- Developed and maintained budget
- Assisted with funding applications for conference attendees
- Represented and voted on behalf of Geography Department graduates at faculty meetings

Awards

Geography Department Teaching Assistant of the Year Sp. 2021

Certifications

Pennsylvania Instructional I Teaching Certificate Su. 2022
Earth & Space Science

Foundations for Teaching Online Certificate Oct. 2019
Penn State World Campus

Professional Memberships

Association of Certified Meteorologists	April 2026 – Present
American Geophysical Union	July 2017 – Present
American Meteorological Society	July 2017 – Present
National Science Teachers' Association	April 2021 – Present
American Association of Geographers	March 2022 – Present

Skills

Advanced: Public speaking, leadership, instruction, Python (pandas, netcdf, cartopy), Esri/ArcGIS, Excel

Intermediate: R, Python (arcpy, metpy, scipy), Jupyter, project management, technical writing

Basic: Linux, shell scripting, SQL, C++, Fortran, TensorFlow