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## Edmund (Ned) B. Molder

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Phone: (818) 601-3916

### EDUCATION

#### University of Wisconsin, Madison

M.S., Environment and Resources – 2025

Nelson Institute for Environmental Studies

- Master’s Thesis: “Bigger data, Greater Lakes? Monitoring technology, data infrastructures, and the changing science-policy interface for water quality in lower Green Bay, Wisconsin” (advised by Dr. Ken Genskow and Dr. David Hart)

Doctoral Studies, Environment and Resources – 2020-2024

- Completed all doctoral coursework
- Passed PhD Qualifying Exams (Jan. 2024)
- Conducted research on the politics of scientific and expertise in deep ocean mining and other extractive industries

#### Colorado State University

M.A. Anthropology and Geography – 2019

Humans and the Environment degree track

- Master’s Thesis: “Innovation, Institutions, and the Importance of Large Land Parcels: Drivers of Urban Expansion in San Diego, CA, 1986-2017” (advised by Dr. Stephen J. Leisz)

#### University of Oregon

B.S. Geological Sciences – 2013

Environmental Geosciences degree track

### PUBLICATIONS

#### Peer-reviewed

**Molder, E. B.**, Schenkein, S. F., McConnell, A. E., Benedict, K. K., & Straub, C. L. (2022).

Landsat Data Ecosystem Case Study: Actor Perceptions of the Use and Value of Landsat. *Frontiers in Environmental Science*, 724.

<https://doi.org/10.3389/fenvs.2021.805174>

**Molder, Edmund B.** (2021). “Alces alces absonus”. *becoming-Feral*. J. Armstrong, A. Lakind, C. Adsit-Morris, and R. Saeter (eds.). Objet-a Creative Studio.

**Molder, Ned** and Laituri, Melinda (2020). The Hydro-Social Cycle of an Extreme City: Tijuana, Mexico. *Colorado Water*, 37(1): 11-14.

<https://api.mountainscholar.org/server/api/core/bitstreams/ca2af721-33c9-4292-b85c-2ae3a2e358ca/content>

#### Reports

Browne, Katherine E. with Sarvis Anarella, Maizie Anders, Michelle Anderson, Shadi Azadegan, Charlotte Dorsey, Frances Fedele, Amanda Kircher, Althaea Kress, **Ned Molder**, Zoe Schutte, Elizabeth Shrewsbury, Julie Spawn, Madeline Stott, Sydney

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Vander Waerdt, and John Weinzal (2020). “Rockport Residents and Life After Harvey: Results from the 2019 Colorado State University Ethnographic Field School”.

Steblein, P.F., Loehman, R.A., Miller, M.P., Holomuzki, J.R., Soileau, S.C., Brooks, M.L., Drane-Maury, M., Hamilton, H.M., Kean, J.W., Keeley, J.E., Mason, R.R., Jr., McKerrow, A., Meldrum, J.R., **Molder, E.B.**, Murphy, S.F., Peterson, B., Plumlee, G.S., Shinneman, D.J., van Mantgem, P.J., and York, A., (2021). U.S. Geological Survey wildland fire science strategic plan, 2021–26: U.S. Geological Survey Circular 1471, 30 p., <https://doi.org/10.3133/cir1471>.

### **Other media**

Molder, Ned B. and Straub, Crista L. (2020). “Using Landsat and Machine Learning to Map Urban Change”. *USGS Landsat Case Studies*, HDGov. <https://doi.sciencebase.gov/hd/case-study/using-landsat-and-machine-learning-to-map-urban-change>

## **CONFERENCES, MEETINGS, AND PRESENTATIONS**

### **Moderator Roles**

**Moderator**, *The Making of Rare Earth Frontiers with Julie Klinger*

IRIS NRC Global Dialogues, University of Wisconsin–Madison – October 30, 2024

- Public presentation on geopolitics and environmental implications of rare earth mineral extraction; introduced the speaker and moderated discussion and audience questions

### **Conference Presentations & Organized Sessions**

#### **Society for Social Studies of Science (4S) 2023**

Honolulu, HI – November 2023

(Final program available here - [https://www.4sonline.org/final\\_program.php](https://www.4sonline.org/final_program.php))

- “What good is a ‘smart lake’? The perils and possibilities of Smart Earth technology for environmental governance.” (Presenter), Session: *Turning the Ocean, the Sky and the Land Digital*.
- Co-organizer, two-part session: *Oceans: Matter, Method, Meanings* (with Jonathan Galka and Meghan Shea).

#### **Society for Social Studies of Science (4S) 2022**

Cholula, México – December 2022

(Final program available here - <https://4sonline.org/docs/FINAL-PROGRAM-6.12.pdf>)

- “Following the Research: Extractivist Histories of Marine Science in Deep Seabed Mining.” (Presenter), Session: *STS Engagements with Critical Mineral Studies I*.

#### **Graduate Student Brown Bag Talk Series, Nelson Institute for Environmental Studies**

Madison, WI – May 5, 2022

- “Mapping the Deep Seabed Mining (DSM) Debate in the Cook Islands: A Situational Analysis.” (Presenter).

#### **Geospatial Centroid Brown Bag Presentation – Colorado State University**

Fort Collins, CO – April 10, 2019

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- 45-minute Presentation: *“Urban Expansion in San Diego, CA: Emerging Industry and Cookie-Cutter Housing.”*

### **Event Organization & Leadership Roles**

#### **Water@UW–Madison Spring Symposium – “Reconnecting Around Water”**

Madison, WI – April 22, 2022

Organizer and event coordinator

<https://water.wisc.edu/previous-events/2022-symposium-reconnecting-around-water/>

- Planned and coordinated event logistics with 15 speakers across three panel sessions; led event promotion efforts; developed event branding and written communications; managed live Zoom webinar hosting and registration; planned and coordinated post-symposium reception.

#### **Water@UW–Madison Posters on Ice – Clean Lakes Alliance Frozen Assets Festival**

Madison, WI – February 5, 2022

Organizer and event coordinator

<https://water.wisc.edu/previous-events/2022-posters-on-ice/>

- Managed call for posters, coordinated with presenters, led event set-up and take-down, live-tweeted event activities, photographed event and created and published web content for Water@UW website

### **Research Posters & Technical Presentations**

#### **Earth Science Information Partners (ESIP) Winter Meeting 2021**

January 26–29, 2021

- Research Poster: *“Expanding the Societal Benefits of Earth Observations through Leading Practices for Public Private Partnerships.”*

#### **American Geophysical Union (AGU) Fall Meeting 2020**

December 7–11, 2020

- *“Case Studies of Landsat Users in Machine Learning and AI: Mapping the Benefits of EO Data in a Data Ecosystem.”* (Presenter)
- *“Expanding the Societal Benefits of Earth Observations through Leading Practices for Public Private Partnerships.”* (Contributor)
- *“Economic and societal benefits of Earth observations: Repository design, development, and testing.”* (Contributor)

#### **Hydrology Days Conference – Colorado State University**

Fort Collins, CO – March 27–29, 2019

- Research Poster: *“The Hydrosocial Cycle and Extreme Cities.”*

### **Workshops, Panels, and Additional Organized Events**

#### **“Science and Lived Experience: Food, Land, and Water” Storytelling Workshop**

November 17, 2020

Co-organizer (with graduate students in Prof. Adena Rissman’s F&W ECOL 875 course)

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## **Earth Science Information Partners (ESIP) Summer Meeting 2020**

July 14-24, 2020

Session Co-organizer – *ESIP Public-Private Partnership Cluster* (with Crista Straub et al.)

<https://2020esipsummermeeting.sched.com/event/cIvX/esip-public-private-partnership-cluster>

## **16th GFOI Regional Workshop – REDD+ Data in Latin America**

Fort Collins, CO – January 21–24, 2020

Co-organizer (with Crista Straub)

## **FELLOWSHIPS AND AWARDS**

**Holtz Center Graduate Student Top-Up Fellowship (\$4000) – 2023-2024**

**Earth Science Information Partners (ESIP) Community Fellowship (\$2000) - 2020-2021**

## **RELEVANT EXPERIENCE**

### **Graduate Researcher, Coastal Adaptation and Resilience**

Aug. 2024 – Dec. 2025

Wisconsin Sea Grant, UW-Madison

### **Graduate Teaching Assistant**

Aug. 2020 – Dec. 2024

University of Wisconsin, Madison

- Duties varied by course but primarily included leading four weekly discussion sections with 10-20 undergraduate students; grading weekly assignments and 2-3 essay assignments per semester; responding to student emails; holding weekly office hours to meet with students; meeting with lead instructor each week to plan following week curriculum and address concerns
- Courses taught:
  - FA24 – Envir. St 100, Forests of the World
  - SP24 – Geography 339, Environmental Conservation
  - FA23 – Envir. St 100, Forests of the World
  - SP23 – Geography 339, Environmental Conservation
  - FA22 – Geography / Envir. St 139, Global Environmental Issues
  - FA20 – Anthropology 104, Cultural Anthropology and Human Diversity

### **Associate Editor**

Aug. 2022 – July 2024

Nelson Issue Brief

Nelson Institute for Environmental Studies, UW-Madison

- Led development and production of the twice-yearly Nelson Issue Brief summarizing research on different environmental topics aimed at policy and general public audience
- Wrote calls for submissions; contacted campus scholars to solicit contributions; coordinated submission and editing process with editor-in-chief; compiled and organized final documents for each issue and sent to design team for final layout and printing; coordinated delivery of printed issues to Wisconsin State capitol; met with lawmakers to summarize findings and answer questions

### **Graduate Student Grader**

Aug. 2022 – Dec. 2022

STS 201, “Where Science Meets Society”

Department of Sociology, UW-Madison

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- Graded weekly student papers and other work; attended lectures; answered student questions

**Graduate Project Assistant**

Aug. 2021 – May 2022

Water@UW-Madison

University of Wisconsin, Madison

- Planned five events throughout academic year; managed organization communications (email, Twitter, Google Groups); maintained organization website

**Social Scientist (student contractor) (FTE)**

Sep. 2019 – July 2021

U.S. Geological Survey (USGS)

FORT Collins Science Center, Fort Collins, CO

- Conducted qualitative and quantitative social science research on the “Users, Uses, and Value of Landsat Data” project, in partnership with USGS National Land Imaging (NLI) Program
- Conducted interviews with researchers and organizations that use Landsat data about applications, preferences, challenges, and potential improvements to the data
- Led data collection, analysis, literature review, and writing effort on peer-reviewed journal article about the “Landsat Data Ecosystem”; article was published in *Frontiers in Environmental Science* (Molder et al., 2022)
- Developed online case studies of Landsat users summarizing their applications and value produced by Landsat imagery
- Analyzed survey data from ~3000 respondents in SPSS
- Organized and facilitated monthly interagency working group meetings
- Led creation of Public-Private Partnership group at Earth Science Information Partners (ESIP), planned and facilitated monthly group (virtual) meetings
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**Remote Sensing Research Assistant**

Nov. 2019 – May 2020

Department of Anthropology and Geography

Colorado State University

- Conducted research and spatial analysis on land cover change in Weld County, CO due to oil and gas well development and/or abandonment (supervised by Dr. Heidi Hausermann)

**Graduate Teaching Assistant (FTE)**

Jun. 2019 – Aug. 2019

Ethnographic Field School for Risk and Disaster

Colorado State University

- Taught GIS and participatory mapping methods at month-long summer field school in Rockport, TX; conducted interviews with local residents about their experience surviving and recovering from Hurricane Harvey (2017); developed participatory mapping methodology for use during interviews to identify interviewees’ perceived risk for different hazards; compiled and analyzed spatial data from all interviews and produced maps of risk for use in summary report (Browne et al., 2020); presented study’s findings to community at conclusion of field school conclusion

**Graduate Teaching Assistant**

Aug. 2017 – May 2019

Department of Anthropology and Geography

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Colorado State University

FA17 – Geography 100, Introduction to Geography

SP18 – Geography 100, Introduction to Geography

FA18 – Geography 100, Introduction to Geography

SP19 – Anthropology 200, Cultures and the Global System

**Graduate Student GIS Intern**

Sep. 2018 – Aug. 2019

Geospatial Centroid

Colorado State University

- Conducted research and data processing and analysis for various GIS projects
- Provided technical support to campus community with questions or problems in their GIS project via walk-in help bar
- Managed and facilitated Geospatial Centroid events like GIS day, OSM humanitarian “mapathons”, bi-weekly presentations from campus scholars

**Vice President, Editor in Chief**

Sep. 2018 – May 2019

Anthropology Graduate Student Society (AGSS)

Colorado State University

- Managed editorial and publication process for annual journal of graduate student research: developed project timeline and workflow to ensure timely publication; solicited submissions from students; solicited faculty reviewers; managed correspondence between all authors and reviewers; conducted final manuscript production and assembly, including copyediting, formatting, selecting order of submissions in journal, and corresponding with online publishing platform.

**Co-President, Financial Officer**

Sep. 2018 – May 2019

Geospatial Grad Students Club

Colorado State University

- Scheduled and moderated monthly meetings of GIS-interested grad students; Managed club finances, fundraising, and spending; Facilitated partnerships and coordinated events with other campus groups, departments; Designed club logo

**Graduate Research Assistant**

May – Aug. 2018

Department of Anthropology and Geography

Colorado State University

- Reviewed and annotated literature on nutrition transitions and political economy of food in rural Kenya (supervised by Dr. Kathleen Galvin)

**Soils Technician (FTE)**

Jul. 2016 – Apr. 2017

Geocon, Inc.

San Diego, CA

- Observation and field density testing of trench backfill, soil compaction, and mass grading operations using nuclear gauge / sand cone; laboratory processing and testing of soil samples

**Geotech (FTE)**

Aug. 2013 – Dec. 2015

Groundmetrics, Inc.

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San Diego, CA

- Planning and conducting electromagnetic geophysical surveys for oil, gas, subsurface water, and geothermal monitoring in Texas, Montana, Colorado, and California; developed the company's first site safety protocols and field operations manual; served as Site Safety Officer and Field Operations Manager during field surveys

**President, Community Outreach Coordinator**

Sep. 2011 – Jun. 2013

University of Oregon Geology Club

University of Oregon

- Led club outreach and education activities to lead rock and mineral labs at local schools; managed club finances, updated club budget, and presented budget proposal to Student Senate; planned and led club field trips, including week-long Spring Break trips to the Colorado Plateau (Canyonlands NP and Escalante Nat. Monument); created itinerary for and facilitated weekly club meetings; coordinated with Geology department faculty and graduate students about club events, tutoring program, and field trips; planned and coordinated club fundraising events

**PROFESSIONAL ASSOCIATIONS AND WORKING GROUPS**

- Society for Social Studies of Science (4S)
- International Commission of the History of Oceanography (ICHO)
- American Association of Geographers (AAG)
- American Geophysical Union (AGU)
- Earth Science Information Partners (ESIP)
- World-Wide Human Geography Data Working Group (WWHGD)
- International Marine Minerals Society (IMMS)

**MISCELLANEOUS**

**Software / Programming Proficiencies**

- QGIS
- ArcGIS
- ENVI
- Python
- R
- Markdown
- SPSS
- Qualtrics
- NVivo
- Audacity
- Ableton Live, Logic Pro
- Adobe Creative Suite
- GIMP
- Microsoft Office Suite
- Zotero, EndNote, Mendeley
- Wordpress
- Google Earth, Earth Engine