

JEFFREY ADAM VANLOOY
CURRICULUM VITAE

Department of Earth System Science and Policy
University of North Dakota
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EDUCATIONAL BACKGROUND

Ph.D., Geography, August 2007

University of Utah; Salt Lake City, UT 84112

Dissertation Title: "Measuring the Mass Balance and Contribution of North American Glaciers to Sea Level Rise Using Remote Sensing Techniques"

Master of Arts, Geography, May 2002

Kansas State University; Manhattan, KS 66506

Thesis Title: "Changes in Channel Morphology along the Cimarron River in Southwest Kansas: 1953 – 2001"

Bachelor of Science, Geography, May 2000

University of Idaho; Moscow, ID 83844

Bachelor of Science, Cartography, May 2000

University of Idaho; Moscow, ID 83844

PROFESSIONAL EXPERIENCE

Professor (Fall 2024 – Present)

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Associate Professor (Fall 2017 – Fall 2024)

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Assistant Professor (Summer 2010 – Summer 2017)

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Assistant Professor (Fall 2007 – Summer 2010)

Department of Geography; Radford University; Radford, VA

Graduate Research Fellow (Fall 2006 – Spring 2007)

Graduate School; University of Utah; Salt Lake City, UT

Associate Instructor (Fall 2005 – Summer 2006)

Department of Geography; University of Utah; Salt Lake City, UT

Undergraduate Academic Advisor (Fall 2005 – Summer 2006)

Department of Geography; University of Utah; Salt Lake City, UT

COURSES TAUGHT

Sustainability Science: ESSP 200

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Land and Water Sustainability: ESSP 320

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Why Cry for the Cryosphere?: ESSP 410

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Earth System Science and Policy II: Geosphere Block: ESSP 502

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Earth System Processes and Vulnerability Analysis: ESSP 507

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Advanced Topics in Geospatial Technology: ESSP 540

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Colloquium: ESSP 590

Department of Earth System Science and Policy;
University of North Dakota; Grand Forks, ND

Physical Geography: Geography 130

Department of Geography; Radford University; Radford, VA

Introduction to GIS: Geography 250

Department of Geography; Radford University; Radford, VA

Fundamentals of Cartography: Geography 270

Department of Geography; Radford University; Radford, VA

Biogeography: Geography 335

Department of Geography; Radford University; Radford, VA

Geomorphology: Geography 350/Geology 360

Department of Geography; Radford University; Radford, VA

Environmental Analysis Through Remote Sensing: Geography 5110/6110

Department of Geography; University of Utah; Salt Lake City, UT

Geography of North America: Geography 3620

Department of Geography; University of Utah; Salt Lake City, UT

World Regional Geography: Geography 1300

Department of Geography; University of Utah; Salt Lake City, UT

GRADUATE STUDENT ADVISING

Master's Thesis Committees

- Committee Chair (Major Advisor)
 - o Eric Addico (M.S. ESSP)
 - o Chloe Neal (M.S. ESSP)
 - o Logan Dietrich (M.S. ESSP; Graduated May 2026)
 - o Christine Shapiro (M.E.M. ESSP; Graduated May 2025)
 - o Rebecca Mayer (M.E.M. ESSP; Graduated May 2024)
 - o Elliot Peltier (M.S. Graduated December 2024)
 - o Lance DiAngelis (M.S. ESSP; Graduated December 2018)
 - o Stefano Potter (M.S. ESSP; Graduated May 2017)
 - o Isaac Simon (M.S. ESSP; Graduated May 2016)
 - o Michael Knudson (M.S. ESSP; Graduated May 2014)
- Committee Member
 - o Zachary Ahrenstorff (M.S. Geography and GIScience)
 - o Morticia Moonchilde (M.S. ESSP)
 - o Brandon Narum (M.S. ESSP)
 - o Mckenzie Schewe (M.S. Environmental Engineering; Graduated December 2025)
 - o Grace Agbozo (M.S. Geography and GIScience; Graduated May 2025)
 - o Victor Araya (M.S. Geography and GIScience; Graduated May 2025)
 - o Yeqian Xu (M.S. ESSP; Graduated May 2024)
 - o JamesGuy Gierisch (M.S. Geography and GIScience; Graduated May 2024)
 - o Ning Li (M.S. ESSP; Graduated December 2024)
 - o Ethan Pieczykolan (M.E.M. ESSP; Graduated December 2023)
 - o Jacob Moll (M.S. Geography and GIScience; Graduated May 2023)
 - o Christine Lindenberg (M.S. Geography and GIScience; Graduated May 2022)
 - o Kane Hammond (M.S. ESSP; Graduated August 2021)
 - o Seyedmojtaba Shahabi (M.S. ESSP; Graduated August 2020)
 - o Anai Caparo (M.S. Geography and GIScience; Graduated August 2020)
 - o Shelby Osborne (M.S. ESSP; Graduated May 2020)
 - o Mansurat Abdulmalik Ali (M.S. ESSP; Graduated December 2019)
 - o Daniel Dixon (M.S. ESSP; Graduated December 2018)
 - o Eliot Peltier (M.S. Geography; Graduated December 2017)
 - o Katie Engelmann (M.S. Geography; Graduated May 2017)
 - o Eric Torgerson (M.S. Geography; Graduated May 2017)
 - o Wenyu Song (M.E.M. ESSP; Graduated December 2016)
 - o Brent Silvis (M.S. ESSP; Graduated May 2016)
 - o Melissa Wygant (M.S. Geography; Graduated August 2014)
 - o Brett Sergenian (M.S. Geography; Graduated May 2014)
 - o Ashley Toole (M.E.M. ESSP; Graduated December 2012)
 - o Nicholas Roehrdanz (M.S. Geography; Graduated December 2012)

Doctoral Dissertation Committees

- Committee Chair (Major Advisor)
 - o Andrew Efta (Ph.D. ESSP)
 - o Elliot Peltier (Ph.D. ESSP)
 - o Nykki Dunaway (Ph.D. ESSP)
 - o Sanmi Odeyemi (Ph.D. ESSP)
 - o Steven Wallis (Ph.D. ESSP)
 - o Marc Zamkotowicz (Ph.D. ESSP)

- o Anai Caparo Bellido (Ph.D. ESSP)
- o Lance DiAngelis (Ph.D. ESSP)
- o Nana Owusu-Amponsah (Ph.D. ESSP; Graduated August 2023)
- Committee Member
 - o Kim Berthet (Ph.D. ESSP)
 - o Carlos Coontz (Ph.D. ESSP)
 - o Joseph Saenz (Ph.D. ESSP)
 - o Ossai Alu (Ph.D. ESSP)
 - o Manna Khan (Ph.D. ESSP)
 - o Jayme Colosimo (Ph.D. ESSP; Graduated May 2026)
 - o Jiyang Zhang (Ph.D. ESSP; Graduated December 2023)
 - o Yuanheng Xiong (Ph.D. ESSP; Graduated May 2023)
 - o Morgen Burke (Ph.D. ESSP; Graduated December 2021)
 - o Afshin Shabani (Ph.D. ESSP; Graduated December 2018)
 - o Eric Castle (Ph.D. ESSP; Graduated August 2018)
 - o Rebecca Lemons (Ph.D. ESSP; Graduated May 2018)
 - o Qiang Zhou (Ph.D. ESSP; Graduated August 2015)
- Member-at-Large
 - o Jacob Taylor (Ph.D. Indigenous Health; Graduated December 2024)
 - o Natalie Midzak (Ph.D. Atmospheric Science; Graduated May 2024)
 - o Vida Atashi (Ph.D. Civil Engineering; Graduated May 2023)
 - o Erica Dolinar (Ph.D. Atmospheric Science; Graduated August 2018)

PUBLICATIONS: (contribution in parentheses)

**Graduate Student Advisee; *Graduate Student

Refereed

Li, Yanan, Raihan Jamil, and **Jeffrey VanLooy**. 2025. Accelerated glacier thinning and area loss in the Wind River Range, Wyoming (1968-2019): climate and topographic drivers. *Remote Sensing*. 17:916.

VanLooy, Jeffrey A., and Gregory S. Vandeberg. 2024. Glacier meltwater impacts to late summer flow and geochemistry to tributaries in the Wind River Range, Wyoming, USA. *The Professional Geographer*. 76:683-689.

Zhang, Jiyang*, Haochi Zheng, Xiaodong Zhang, Zhulu Lin, **Jeffrey VanLooy**, and Aaron Kennedy. 2023. Strategic land acquisition for efficient and equitable flood risk reduction in the United States. *Climate Risk Management*. 42:100554.

Owusu-Amponsah, Nana**, **Jeffrey VanLooy**, and Gregory Vandeberg. 2023. Changes in snow and ice surface albedo and its impact on snow and ice area in the Wind River Range, Wyoming, U.S.A. *Physical Geography*. 44:581-599.

Zhang, Jiyang*, Haochi Zheng, Xiaodong Zheng, and **Jeffrey VanLooy**. 2020. Changes in regional snowfall in Central North America (1961-2017): mountain versus plains. *Geosciences*. 10:157.

VanLooy, Jeffrey A. and Gregory S. Vandeberg. 2019. Late summer glacial meltwater contributions to Bull Lake Creek stream flow and water quality, Wind River Range, Wyoming, USA. *Physical Geography*. 40:461-480.

- Burke, Morgen W. V.*, Mojtaba Shahabi*, Yeqian Xu*, Haochi Zheng, Xiaodong Zhang, and **Jeffrey VanLooy**. 2018. Identifying the driving factors of water quality in a sub-watershed of the Republican River basin, Kansas USA. *International Journal of Environmental Research and Public Health*. 15:1041.
- Molodtsova, Tatiana*, Sergey Molodtsov*, Andrei Kirilenko, Xiaodong Zhang, and **Jeffrey VanLooy**. 2016. Evaluating flood potential with GRACE in the United States. *Natural Hazards and Earth System Sciences*. 16:1011-1018.
- Vandeberg, Gregory S., and **Jeffrey A. VanLooy**. 2016. Continental Glacier meltwater contributions to late summer stream flow and water quality in the northern Wind River Range, Wyoming, USA. *Environmental Earth Sciences*. 75:1-14.
- Knudson, Michael D.***, **Jeffrey A. VanLooy**, and Michael J. Hill. 2015. A habitat suitability index (HSI) for the western prairie fringed orchid (*Platanthera praeclara*) on the Sheyenne National Grassland, North Dakota, U.S.A. *Ecological Indicators*. 57:536-545.
- Paul, Frank, Tobias Bolch, Andreas Kääb, Thomas Nagler, Christopher Nuth, Killian Scharrer, Andrew Shepherd, Tazio Strozzi, Francesca Ticconi, Rakesh Bhambri, Etienne Berthier, Torborg Heid, Seongsu Jeong, Matthias Kunz, Adrian Luckman, Alan Muir, Geir Moholdt, **Jeffrey VanLooy**, and Thomas Van Niel. 2015. The Glaciers Climate Change Initiative: Methods for creating glacier area, elevation change and velocity products. *Remote Sensing of Environment*. 162:408-426.
- VanLooy, Jeffrey A.**, Clement Miede*, Gregory S. Vandeberg, and Richard R. Forster. 2014. Ice-volume estimation inferred from ice-thickness and surface measurements for Continental Glacier, Wind River Range, Wyoming, U.S.A. *Journal of Glaciology*. 60:478-488.
- Proulx, Rob A.*, Michael Knudson**, Andrei Kirilenko, **Jeffrey A. VanLooy**, and Xiaodong Zhang. 2013. Characterizing the Terrestrial Water Budget in the Prairie Coteau Using GRACE, NOAA, Landsat, and Groundwater Well Data. *Water Resources Research*. 49:5756-5764.
- VanLooy, Jeffrey A.**, Richard Forster, David Barta*, and James Turrin*. 2013. Spatially variable surface elevation changes and estimated melt water contribution of Continental Glacier in the Wind River Range, Wyoming, USA: 1966 - 2011. *Geocarto International*. 28:98-113.
- VanLooy, Jeffrey A.** and Richard R. Forster. 2011. Use of historical elevation data to calculate surface-elevation and volume changes of Ha-Iltzuk Icefield, southwest British Columbia, Canada, 1970 to mid-1980s. *Annals of Glaciology*. 52:109-115.
- VanLooy, Jeffrey A.** 2011. Analysis of elevation changes in relation to surface characteristics for six glaciers in Northern Labrador, Canada using ASTER imagery. *Geocarto International*. 26:167-181.
- VanLooy, Jeffrey A.** and Richard R. Forster. 2008. Glacial changes of five southwest British Columbia icefields, Canada, mid-1980s to 1999. *Journal of Glaciology*. 54:469-478.

VanLooy, Jeffrey A. and Thomas J. Cova. 2007. GIS-based indices for comparing airline flight-path vulnerability to volcanoes. *The Professional Geographer*. 59:74-86.

VanLooy, Jeffrey A., Richard R. Forster, and Andrew L. Ford. 2006. Accelerating thinning of Kenai Peninsula glaciers, Alaska. *Geophysical Research Letters*. 33:L21307.

VanLooy, Jeffrey A. and Charles W. Martin. 2005. Channel and vegetation change on the Cimarron River, Southwestern Kansas, 1953-2001. *Annals of the Association of American Geographers*. 95:727-739.

Peer Reviewed Book Chapters

VanLooy, Jeffrey, Richard Forster, and Andrew Ford, "Accelerating thinning of Kenai Peninsula glaciers, Alaska", in *State of the Cryosphere: Glaciers and Ice Sheets*, ed. Hamish Pritchard, Special Publications Volume 60, SP0607314, ISBN: 978-0-87590-731-4.

Non-refereed

Araya, Victor, Mbongowo Mbuh, Gregory Vandeberg, and **Jeffrey VanLooy**. 2025. Spatial and temporal assessment of meteorological drought using the standardized precipitation index (SPI) and its effect on crop yield over the corn belt region of the United States from 2000 to 2023. *Journal of Earth Observation and Geospatial Applications*. 1:108–128.

VanLooy, Jeffrey A., and Roberta MacDonald*. 2014. Analyzing changes and differences in glacial melt rates across the southern Greater Yellowstone Ecosystem. In *Program and Abstracts, Crossing Boundaries: Science, management, and conservation in the Greater Yellowstone*, pp. 46-47. Yellowstone National Park, WY: The 12th biennial scientific conference on the Greater Yellowstone Ecosystem.

Forster, Richard R., **Jeff VanLooy**, Dorothy Hall, and Ryo Michishita. 2008. Alaskan glaciology from space. Proceedings in *IEEE International Geoscience and Remote Sensing Symposium*.

PROFESSIONAL PRESENTATIONS (*presenter; **invited)

National/International

2025 **"Geochemical analysis of glacier melt water in the Andes Mountains of southern Peru,"** paper presented at the Great Plains/Rocky Mountains Regional meeting of the American Association of Geographers; Omaha, NE*

2025 **"Glacier National Park vs. the Greater Yellowstone Ecosystem: Factors influencing glacial melt rates in two iconic landscapes,"** poster presented at the American Association of Geographers national annual meeting; Detroit, MI*

- 2024 **"The race to the end: A comparison of factors influencing glacial melt rates in Glacier National Park and the Greater Yellowstone Ecosystem,"** poster presented at the 16th Biennial Scientific Conference on the Greater Yellowstone Ecosystem; Big Sky, MT*
- 2023 **"Monitoring glacial meltwater in the western U.S.: a call for more data,"** poster presented at the *American Association of Geographers* national annual meeting; Denver, CO*
- 2023 **"Perennial snow and ice changes in the Crazy Mountains, Montana from 1972 to 2020: a model for ice patch archaeology exploration,"** Christine Lidenberg, Gregory Vandeberg, **Jeffrey VanLooy**, and Elizabeth Scharf; paper presented at the American Association of Geographers national annual meeting; Denver, CO
- 2023 **"Albedo changes on snow and ice surfaces as a melting factor in the Wind River Range, Wyoming,"** Nana Owusu-Amponsah, **Jeffrey VanLooy**, and Gregory Vandeberg; poster presented at the *American Association of Geographers* national annual meeting; Denver, CO
- 2022 **"Variable melt rates of Continental and Knife Point Glaciers compared with trends of snowpack and temperature in the Wind River Range, Wyoming,"** poster presented at the *American Association of Geographers* national annual meeting; Virtual*
- 2018 **"Tracer-based Meltwater Contributions to Glaciated Basins in the Wind River Range, Wyoming,"** Gregory Vandeberg and **Jeffrey VanLooy**; poster presented at the *American Association of Geographers* national annual meeting; New Orleans, LA*
- 2017 **"Long-term Monitoring of Ice in one of the World's Most Iconic Wildernesses: Potential Benchmark Glaciers in the Greater Yellowstone Ecosystem,"** paper presented at the *American Association of Geographers* national annual meeting; Boston, MA*
- 2016 **"Estimations of recent glacier surface elevations changes in the Wind River Range, Wyoming,"** paper presented at the *Association of American Geographers* national annual meeting; San Francisco, CA*
- 2015 **"Continental Glacier meltwater dynamics in the Northern Wind River Range, Wyoming,"** paper presented at the *Association of American Geographers* national annual meeting; Chicago, IL*
- 2015 **"Geochemistry of Continental Glacier meltwater in the northern Wind River Range, Wyoming,"** Gregory Vandeberg and **Jeffrey VanLooy**; paper presented at the *Association of American Geographers* national annual meeting; Chicago, IL
- 2014 **"ISS Agricultural Camera: Land cover research using a three band camera,"** paper presented at the 3rd Annual ISS Research and Development Conference; Chicago, IL*
- 2014 **"The International Space Station Agricultural Camera: A description of inventory from a unique space borne sensor,"** paper presented at the *Association of American Geographers* national annual meeting; Tampa, FL*

- 2013 **"Calculating ice volume and estimating remaining "life span" of Continental Glacier, Wyoming using ice penetrating radar and surface elevation data,"** paper presented at the *Association of American Geographers* national annual meeting; Los Angeles, CA*
- 2013 **"Glacial melt water dynamics in the northern Wind River Range, Wyoming,"** Gregory Vandeberg, **Jeffrey VanLooy**, Clement Miede, and David Butz, paper presented at the *Association of American Geographers* annual meeting; Los Angeles, CA
- 2012 **"Mapping surface and volume changes of Continental Glacier in the Wind River Range, WY: 1966 – 2011,"** paper presented at the *Association of American Geographers* national annual meeting; New York, NY*
- 2011 **"Continued thinning of Ha-Iltzuk Icefield, Southwest British Columbia, 2004 – 2010,"** paper presented at the *Association of American Geographers* national annual meeting; Seattle, WA*
- 2010 **"Use of historical elevation data to calculate surface elevation and volume changes of Ha-Iltzuk Icefield in southwest British Columbia, 1970 – mid1980,"** paper presented at the *International Glaciological Society: International Symposium on Earth's Disappearing Ice: Drivers, Responses, and Impacts*; Ohio State University, Columbus, OH*

Regional

- 2017 **"Out of Sight, Out of Mind: The Critical Need for Researching Glaciers in the Greater Yellowstone Ecosystem,"** 48th Annual South Dakota State Geography Convention; Brookings, SD**
- 2017 **"Comparison of remote sensing only versus combined remote sensing and field based techniques for estimating late summer glacial melt water contributions to Wind River stream flow,"** 68th Field Conference of the Wyoming Geological Association; Casper, WY; presented via Zoom**
- 2017 **"Field Reconnaissance to Determine the Feasibility of Long-term Monitoring of Helen Glacier in the Wind River Range, WY: Lessons Learned,"** paper presented at the Great Plains/Rocky Mountains Regional meeting of the *American Association of Geographers*; Grand Forks, ND*
- 2016 **"Monitoring Changing Glacial Conditions and Contributions to Streamflow Across the Southern Greater Yellowstone Ecosystem,"** paper presented at the 13th Biennial Scientific Conference on the Greater Yellowstone Ecosystem; Jackson Lake Lodge, Grand Teton National Park, WY**
- 2016 **"Late Summer Streamflow Contributions from Glacial Meltwater in the Wind River Range, Wyoming,"** The Nature Conservancy; Lander, WY; Virtual Meeting – Via Skype**
- 2016 **"Wind River Glacier Study: Surface Elevation Change Analysis of Bull Lake Creek and Torrey Creek Glaciers, Wind River Range, Wyoming,"** Greater Yellowstone Climate Change Adaptation Subcommittee Meeting; United States Forest Service; Bozeman, MT; Virtual Meeting – Via Live Meeting**
- 2015 **"Ice Volume and Melt Water Estimation of Wind River Range Glaciers, Wyoming,"** Wyoming Geological Association; Casper, WY**

- 2015 **"Wind River Glacier Study: Stream Flow Contribution and Water Quality Analysis from Bull Lake Creek Glaciers, Wind River Range, Wyoming,"** Greater Yellowstone Hydrologists Meeting; United States Forest Service; Bozeman, MT; Virtual Meeting – Via Live Meeting**
- 2015 **"Continental Glacier meltwater contributions to late summer stream flow and stream nutrient levels in the northern Wind River Range, Wyoming,"** Gregory Vandeberg and **Jeffrey VanLooy**; paper presented at the *Prairie Division of the Canadian Association of Geographers* annual meeting; Kenora, ON
- 2014 **"Analyzing changes and differences in glacial melt rates across the Southern Greater Yellowstone Ecosystem,"** paper presented at the 12th *Biennial Scientific Conference on the Greater Yellowstone Ecosystem*; Mammoth Hot Springs, WY*
- 2014 **"Ice volume estimation inferred from ice thickness and surface measurements for Continental Glacier, Wind River Range, Wyoming,"** Gregory Vandeberg, **Jeffrey VanLooy**, Clement Miede, and Richard Forster, paper presented at the *Geographic Research Seminar*; Department of Geography and Environmental Studies, University of Regina; Regina, SK
- 2013 **"Glacial Conditions in the Wind River Range and Greater Yellowstone Area: Research Results from Continental Glacier and Proposed Future Studies,"** Greater Yellowstone Coordinating Committee Meeting; United States Forest Service; Webinar based in Bozeman, MT**

State/Local

- 2022 **"Monitoring Glacial Meltwater in the Western U.S.: A Critical Need for More Data,"** Forum on Contemporary Geographic Issues; Department of Geography and GIScience; University of North Dakota; Grand Forks, ND (October)**
- 2021 **"Changes in glacier albedo and its significance as a glacial melting factor in the Wind River Range, Wyoming, USA,"** Nana Owusu-Amponsah, **Jeffrey VanLooy**, and Gregory Vandeberg; poster presented at the annual *UND GRAD* conference; Grand Forks, ND
- 2020 **"Changes in glacier albedo and possible impacts on glacial melting in the Wind River Range, Wyoming,"** Nana Owusu-Amponsah and **Jeffrey VanLooy**; poster presented at the annual *UND GRAD* conference; Grand Forks, ND
- 2019 **"Changes in snowfall and snow density in relation to temperature change in the Wind River Range, Wyoming,"** Elliot Peltier, **Jeffrey VanLooy**, and Nana Owusu-Amponsah; poster presented at the annual *ND EPSCoR* conference; Fargo, ND
- 2015 **"Glaciers as a Water Resource: Analysis of Stream Flow Contribution from Wind River Range Glaciers, Wyoming,"** Leading Edge of Earth and Planetary Sciences (LEEPS) lecture; Harold Hamm School of Geology and Geological Engineering; University of North Dakota; Grand Forks, ND**
- 2015 **"Conducting Research in the Wilderness: The Wind River Range Experience,"** Leading Edge of Earth and Planetary Sciences (LEEPS) lecture; Harold Hamm School of Geology and Geological Engineering; University of North Dakota; Grand Forks, ND**

- 2015 **“Creating Digital Elevation Models (DEMs) from International Space Station Agricultural Camera (ISSAC) images: Lessons learned,”** poster presented at the annual *Scholarly Forum* sponsored by the University of North Dakota, School of Graduate Studies; Grand Forks, ND*
- 2013 **“Ice Volume Changes and Melt Water Dynamics of Continental Glacier, Northern Wind River Range, Wyoming,”** Forum on Contemporary Geographic Issues; Department of Geography; University of North Dakota; Grand Forks, ND**
- 2010 **“White Summer: Experience and Influence from the Juneau Icefield Research Program,”** Forum on Contemporary Geographic Issues; Department of Geography; University of North Dakota; Grand Forks, ND**

GRANTS AND CONTRACTS SUBMITTED/FUNDED

Funded

- 2025 \$1,999,846: NSF NRT: Training next generation resource managers with converging technologies for equitable and sustainable uses of water and land. PI: Haochi Zheng, Department of Earth System Science and Policy, University of North Dakota; Co-PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Co-PI: Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota; Co-PI: Paul Snyder, Department of Aviation, University of North Dakota; Co-PI: Montana Etten-Bohm, Department of Atmospheric Sciences, University of North Dakota.
- 2025 \$10,000: School of Aerospace Sciences Faculty Research Seed Funding; Analysis of glacial meltwater chemistry for modeling future streamflow and remote sensing-based identification of lake and stream water quality in the Andes of southern Peru. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota.
- 2021 \$3,100: School of Aerospace Sciences Faculty Research Seed Funding; Analyzing the significance of albedo and other environmental variables on the spatial distribution of surface elevation change rates of mountain glaciers. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota.
- 2019 \$105,520: NSF Major Research Instrumentation; Title: MRI: Acquisition of an Acoustic Doppler Current Profiler (ADCP) System for Profiling Open Channels. Dates: 10-1-2018 – 9-30-2021. PI: Yeo Howe Lime, Co-PI's: Philip Gerla, Gregory Vandeberg, **Jeff VanLooy**, Taufique Mahmood.
- 2018 \$21,872: ND EPSCoR; Title: Infrastructure Improvement Program – Tribal College / Graduate Student Research Assistantship (Advisor). Dates: 1-8-2018 – 1-31-2020. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2017 \$11,000: Greater Yellowstone Coordinating Committee and Shoshone National Forest; Title: Analysis of glacial locations for proposed benchmark glaciers in the Greater Yellowstone Ecosystem. Dates: 3/1/2017 – 3/1/2020. Project

Number: UND0021620. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota; Co-PI: Gregory Vandeberg Department of Geography and GISc., University of North Dakota.

- 2015 \$11,616: Greater Yellowstone Coordinating Committee and Shoshone National Forest; Title: Using glacial indicators for assessment of water and air quality, as well as glacial melt water quantity in the Greater Yellowstone Area: A case study in the Wind River Range, WY. Dates: 3/1/2015 – 3/1/2016. Project number: UND0020201. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2014 \$7,000: Summer Graduate Research Professorship, School of Graduate Studies, University of North Dakota; Title: Creation of Digital Elevation Models (DEMs) from International Space Station Agricultural Camera (ISSAC) Imagery for World-wide Glacial Research. Dates: 5/16/2014 – 7/31/2014. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2012 \$6,500: Collaborative contract work with BBI International (Ethanol Producer Magazine) for five biofuel plant location maps. Dates: 3/20/2012 – 12/31/2012 Proposal Number: 40800-2225-UND0017720. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2012 \$19,052: Faculty Research Seed Money, University of North Dakota; Title: Measurement of glacial changes in the Wind River Mountains, Wyoming, and their contributions to regional water resources. Dates: 3/5/2012 – 9/5/2013 Award Number: 21418-4010-01925. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2011 \$5,000: Contract work with BBI International (Ethanol Producer Magazine) for five biofuel plant location maps. Dates: 3/19/2011 – 12/31/2011 Proposal Number: UND0016879. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2011 \$3,619.59: Senate Scholarly Activities Committee, New Faculty Scholar Award, University of North Dakota; Title: Land cover change caused by climate changes in the Sheyenne National Grassland, North Dakota between 1930 and 2010. Dates: 3/15/2011 – 3/15/2013 Award Number: 21422-4010-01865. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2010 \$3,000,000: NASA Grant; Title: Northern Great Plains Center for People and the Environment. Dates: 10/1/2010 – 5/31/2013 Award Number: NNX10AH20G. Co-I: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.
- 2012 \$5,250: NASA ASF (Alaska Satellite Facility) research proposal to gain access to PALSAR satellite data to conduct research on increasing wetlands in the Sheyenne National Grassland, North Dakota. Proposal Number: 641.

Unfunded

- 2023 \$522,831: NASA EPSCoR CAN Pre-proposal: Estimating snow and ice meltwater contributions to streamflow in mountainous regions of the western United States using a remote sensing based empirical model. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Co-PI: Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota.

- 2023 \$729,534: Bureau of Reclamation: Improving projections of snow and ice meltwater contributions to streamflow in mountainous regions of the western United States using remote sensing based empirical models. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Co-PI: Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota; Co-PI: Taufique Mahmood, Harold Hamm School of Geology and Geological Engineering, University of North Dakota.
- 2023 \$9,378: GEO Mountains; Small Grants Programme 2023: Decadal ablation rates of debris covered glaciers in the Cordillera del Vilcanota, Cusco – Peru. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Co-PI: Anai Caparo Bellido, Department of Earth System Science and Policy, University of North Dakota.
- 2023 \$63,320: ND NASA EPSCoR: Analysis of albedo as a proxy in estimating glacier surface elevation changes. PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Co-PI: Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota.
- 2022 \$123,245: NSF; MRI: Acquisition of a cavity ring-down spectrometer to enhance research and training in environmental sustainability using stable isotope ratio analysis; PI: Taufique Mahmood, Harold Hamm School of Geology and Geological Engineering, University of North Dakota; Co-PI: Ronald Matheney, Harold Hamm School of Geology and Geological Engineering, University of North Dakota; Yeo Howe Lim, Department of Civil Engineering, University of North Dakota; Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota; **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Xiaodong Hou, Institute for Energy Studies, University of North Dakota; Jaakko Putkonen, Harold Hamm School of Geology and Geological Engineering, University of North Dakota.
- 2021 \$664,244: NASA; Predicting Intra-Lake Chlorophyll-a and Nutrient Water Quality Hotspots and the Consequences to Recreational Use in Diverse Inland Landscapes; PI: Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota; Yeo Howe Lim, Department of Civil Engineering, University of North Dakota; Taufique Mahmood, Harold Hamm School of Geology and Geological Engineering, University of North Dakota; Mark Kaemingk, Department of Biology, University of North Dakota; **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota.
- 2020 \$124,028: NSF; MRI: Acquisition of a cavity ring-down spectrometer to enhance research and training in environmental sustainability using stable isotope ratio analysis; PI: Taufique Mahmood, Harold Hamm School of Geology and Geological Engineering, University of North Dakota; Co-PI: Ronald Matheney, Harold Hamm School of Geology and Geological Engineering, University of North Dakota; Yeo Howe Lim, Department of Civil Engineering, University of North Dakota; Gregory Vandeberg, Department of Geography and Geographic Information Sciences, University of North Dakota; **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota; Xiaodong Hou, Institute for Energy Studies, University of North Dakota; Jaakko Putkonen, Harold Hamm School of Geology and Geological Engineering, University of North Dakota.

- 2019 \$867,132: NASA; Uncovering hydrodynamics of interconnected wetlands and lakes using SWOT mission data; PI: Yeo Howe Lim, Department of Civil Engineering, University of North Dakota; Co-PI: Taufique Mahmood, Department of Geology & Geological Engineering, University of North Dakota; Co-PI: Gregory Vandenberg, Department of Geography & GIScience, University of North Dakota; Co-PI: **Jeffrey VanLooy**, Department of Earth System Science and Policy, University of North Dakota.

- 2017 \$42,000: University of North Dakota, Office of the Vice President for Research and Economic Development; Post-Doctoral Researcher Award: Developing a hybrid model for accurate estimation of glacial melt water contributions to stream flow; PI: **Jeff VanLooy**, ESSP University of North Dakota; Co-PI: Greg Vandenberg, Department of Geography and GISc., University of North Dakota.

- 2016 \$455,149: NSF; REU Site: The Environmental Impacts of the Changing Cryosphere on Water Resources of the Wind River Basin and Northern Plains: 1/1/2017 – 12/31/2019. PI: Gregory Vandenberg, Department of Geography and GISc., University of North Dakota; Co-PI: **Jeffrey A. VanLooy**, ESSP University of North Dakota.

- 2014 \$119,335: Great Northern Landscape Conservation Cooperative; Title: Measuring glacial melt rates and influences on hydrologic systems in the Rocky Mountain region of the Great Northern Landscape Conservation Cooperative. P.I: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.

- 2014 \$511,473: NASA Land Cover/Land Use Change: Multisource Land Imaging Science; Title: Multisource Imaging Toolbox for Earth Resources (MITER): Integrating multisource imaging data and algorithms into an application toolbox for assessing temporal and spatial changes in global land-use and land-cover. P.I.: **Jeffrey A. VanLooy**, ESSP University of North Dakota, Co-I: Soizik Laguette, ESSP University of North Dakota, Co-I: James Goodman, HySpeed Computing, Miami, FL.

- 2013 \$99,569: United States Department of State; Title: The U.S.-Russia Peer-To-Peer Dialogue Program. PI: Andrei Kirilenko, ESSP, University of North Dakota; Co-I: **Jeffrey VanLooy**, ESSP, University of North Dakota.

- 2013 \$474,558: NSF, CAREER; Title: Influence of spatially variable surface elevation change rates of small mountain glaciers in estimating the remaining time of glacier existence. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.

- 2013 \$679,566: NASA, Terrestrial Ecology; Title: Multiple-use land management and conservation of protected areas: Shyenenne National Grassland as a scalable “model” of functional challenges. PI: Michael Hill, ESSP, University of North Dakota; Co-I: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.

- 2013 \$7,500: ND EPSCoR: Advanced Undergraduate Research Award (AURA); Title: Assessment of surface water resources in the Northern Great Plains and Rocky Mountains. PI: Gregory S. Vandenberg, Geography, University of North Dakota; Co-I: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.

- 2012 \$9,227.54: ND EPSCoR: UND Equipment Grant Initiative; Title: Measurements of glacial changes in the Wind River Mountains, Wyoming, and their contributions to regional water resources. PI: **Jeffrey A. VanLooy**, ESSP, University of North Dakota.

SERVICE

Departmental

(Department of Earth System Science and Policy, University of North Dakota)

- Chair of ESSP (2025 – present)
- Graduate Director for ESSP (Fall 2016 – present)
 - Traveled to the University of Minnesota-Morris for ESSP graduate program student recruitment (2-23-2017)
- Undergraduate Coordinator for the Minor in Sustainability Science in ESSP (Fall 2013 – Fall 2016)
- Chair of the departmental faculty evaluation committee (Fall 2013 – Spring 2014; Fall 2022)
- Coordinator of the Graduate Research Assistants for ESSP (Fall 2013 – Spring 2014)
- Co-organized and assisted with a “GPS scavenger hunt” for students participating in the North Dakota State Science Fair (April 2011)
- Attended a conference entitled “Integrating Sustainability into the Undergraduate Curriculum: Best Practices and Pedagogical Resources,” as a fact finding mission for starting an undergraduate Minor in Sustainability; Luther College, Decorah, IA (April 2011)
- Adjunct Assistant Professor of the Department of Geography, University of North Dakota, Grand Forks, ND (January 2011 – December 2018)
- Earth System Science and Policy Liaison to the Library (Fall 2010 – Fall 2018)
- Evaluation Committee for ESSP (Fall 2010 – present)
- Graduate Faculty (Full Member)

College

(John D. Odegard School of Aerospace Sciences, University of North Dakota)

- School of Aerospace Sciences Program Review Committee (Spring 2025)
- School of Aerospace Sciences Research Council (Spring 2023)
- Tenure and Promotion Committee for the John D. Odegard School of Aerospace Science (Fall 2014 – Spring 2015)

University

(University of North Dakota)

- Member, Faculty Affairs Senate Committee (2025 – 2028)
 - Elected Chair for 2025 – 2026 academic year
- Member, Post-Tenure Review Ad Hoc Committee (Fall 2024)
- Member, Essential Studies Committee; At-Large (2024 – 2027)
- Member, Administrative Procedures Committee (2022 – 2025)
- Member of the UND Strategic Planning Committee (2022)
- Small Group Instructional Diagnostic (SGID) facilitator for faculty teaching improvement (2021-present)
- Member of the UND Higher Learning Commission Accreditation Team (2021 – 2023)
- Panelist for the Alice T. Clark program discussion on University Service and Shared Governance (11-12-2019 and 11-10-2020)
- Co-Chair for a Task Force on the Future of Education at UND (2020-2021)
- Member of the University Senate, Senator at-large (2020-2022)
- Post Chair of the University Senate (2020-2021)
 - Member, Senate Executive Committee
 - Member, Committee on Committees (Chair)
 - Member, Faculty Handbook Committee
- Chair of the University Senate (2019-2020)

- o Member, Senate Executive Committee
 - o Member, Legislative Affairs Committee
- Elected Vice Chair of the University Senate (2018-2019)
 - o Member of the University Senate; Senator at-large
 - o Member, Senate Executive Committee
 - o Member, Senate Budget Committee
 - o Member, Senate Faculty Handbook Committee
 - o Special Review Committee Pool
- Member of the University Senate, Senator at-large (2018-2020)
- Judge for the student poster competition at the UND Graduate Research Achievement Day (GRAD) sponsored by the UND School of Graduate Studies (2017, 2018, and 2019, 2023)
- Member of the University Senate representing the John D. Odegard School of Aerospace Science (August 2015 – May 2016)
- Member of the University Senate Curriculum Committee (August 2015 – May 2018)
 - o University Senate Curriculum Committee Chair for 2017-2018 academic year
- Member of the evaluation committee for the Natural Sciences division for UND Collaborative Seed Grants and Faculty Seed Grants (1-27-2015)
- Selected for and participated in the stakeholder meeting for the UND nickname conducted by the UND Nickname and Logo Process Recommendation Task Force (11-7-2014)
- Co-chair for the Executive Committee within the Council on Environmental Stewardship and Sustainability (Fall 2014 – present)
 - o Contributed to the Education Goals and Objectives section of the UND Climate Action Plan for 2015
- Co-chair on Sustainability Education subcommittee within the Council on Environmental Stewardship and Sustainability (Fall 2012 – present)
- Chair for the Social and Behavioral Sciences subcommittee for the Faculty Research Seed Money Committee (February 2012)

Professional

- American Association of Geographers, Member (Cryosphere Specialty Group Member)
- Elected Chair of the Cryosphere specialty group of the *American Association of Geographers*; 2016 – 2019
 - o Organized R. S. Tarr Student Illustrated Paper Competition at the AAG annual national meetings (2017, 2018, and 2019)
 - o Conducted the business meetings for the Cryosphere Specialty Group at the AAG national annual meetings (2017, 2018, and 2019)
- Elected Treasurer/Secretary of the Cryosphere specialty group of the *Association of American Geographers*; 2013 - 2016
- Organized and chaired a session entitled “Monitoring glacial changes in relation to climate change” at the *American Association of Geographers* national annual meeting, Boston, MA (April 2017)
- Chair of a session entitled “Snow and Ice” at the *Association of American Geographers* national annual meeting, San Francisco, CA (April 2016)
- Co-organized and chaired a session entitled “Water Resources of the Wind River Range, Wyoming” at the *Association of American Geographers* national annual meeting, Chicago, IL (April 2015)
- Chair of a session entitled “Remote Sensing of Forests and Agriculture” at the *Association of American Geographers* national annual meeting, Tampa, FL (April 2014)

- Co-organized and chaired a session for the national annual meeting of the *Association of American Geographers* in Los Angeles, CA entitled "Mountain Glaciers: Changes and Resource Impacts"; 4-10-2013
- Assisted in judging the R. S. Tarr student poster competition for the cryosphere specialty group at the *Association of American Geographers* national annual meeting in New York, NY (2-25-2012)
- Chair of a session entitled "Remote Sensing, Climatology, and Water Resources" at the *Association of American Geographers* national annual meeting, Seattle, WA (April 2011)
- Participated in the Greater Yellowstone Ecosystem (GYE) glacier monitoring protocol meetings to determine the criteria for benchmark glaciers in the GYE; Bozeman, MT (May 2016), and Jackson Lake Lodge, WY (October 2016)
- Invited to participated in the European Space Agency Climate Change Initiative Round Robin experiment for co-registration of DEMs for glacial research (March 2012)
- Reviewed applications for the Dissertation Initiative on Climate Change Research (DISCCRS) VI Symposium to be held in Colorado Springs, CO in October 2011
- Reviewer applications for the ND View scholarship
- Reviewer for the journal *Geocarto International*
- Reviewer for the journal *Physical Geography*
- Reviewer for the *International Journal of Remote Sensing*
- Reviewer for the *Canadian Journal of Remote Sensing*
- Reviewer for the journal *The Cryosphere Discussions*
- Reviewer for the *International Journal of Remote Sensing Letters*
- Reviewer for the journal *Geomorphology*
- Reviewer for the journal *Polar Research*
- Reviewer for the journal *Geography Compass*
- Reviewer for the journal *Remote Sensing of Environment*
- Reviewer for the journal *Annals of Glaciology*

Community Service

- Class presentation on the impact of paleo-glaciology in North Dakota, entitled "North Dakota should hug a glacier" to 8th grade at South Middle School in Grand Forks, ND (1-25-2022)
- Participated in Aerospace 50th Anniversary Open House using Google Earth Engine to show general public how the Earth changes over time (2-3-2018)
- Gave talks entitled "What is Geography?" to the fourth grade class at Kelly Elementary School, Grand Forks, ND (10-9-2017)
- Participated as a panelist for a panel discussion on impacts of climate change on culture for the *Climate and Culture Festival* at the University of North Dakota (12-9-2015)
- Assisted in judging the North Dakota State Science and Engineering Fair for Middle and High School students; Grand Forks, ND (4-5-2013)
- Assisted in judging the Northwest Regional Science and Engineering Fair for Middle and High School students in Minnesota; Crookston, MN (2-11-2012)
- Assisted in judging the Northeast Regional Science and Engineering Fair for Middle and High School students in North Dakota; Grand Forks, ND (3-2-2011)

TECHNICAL SKILLS

- ESRI ArcView and ArcGIS
- ERDAS Imagine and ENVI Remote Sensing Programs
- Laser Range Finder (Impulse XL 200)

- Ice Penetrating Radar System (Blue Systems, Inc.)
- Computer Cartography (CorelDRAW)
- GPS data collection (Trimble and Garmin)
- Microsoft Word, PowerPoint, and Excel

MEMBERSHIPS

- Member, Gamma Theta Upsilon (International Geography Honor Society)
- Member, Association of American Geographers
- Member, American Geophysical Union

CONSULTANT ACTIVITIES

- Assisted the USGS Grand Forks office with rope training for ice safety when conducting winter stream flow measurements in the field (12-18-2017)
- Provided GIS and Remote Sensing assistance in a project regarding the impact of oil extraction on the Fort Berthold Indian Reservation conducted by Kerry Hartman, Ph.D. at Fort Berthold Community College, New Town, ND (July 2011)
- Consultant for BBI International (Ethanol Producers Magazine) for the production of maps of biomass plant locations to be used as inserts in various magazines (March 2011 – December 2012)

OTHER REMARKS

- Interviewed on the topic of conducting research on water quality of Peruvian glacial lakes for the Aerospace Network podcast, Aero Talk (February 2026)
- Conducted field work in the Andes Mountains of Southern Peru within the Cordillera del Vilcanota to collect water samples for water quality and water quantity analysis related to glacial melt water. Field work was conducted with two graduate students from ESSP (August 2025).
- Interviewed for the NASA Blog Post “Earth Observatory” for a post about melting glaciers in British Columbia, Canada entitled “Retreat at Klinaklini” (1-29-2024).
- Interviewed for an article entitled “A Race Against Time” on the topic of melting glaciers in the Wind River Range, Wyoming, by Emma Athena, published in the magazine Elevation Outdoors (3-14-2020)
- Featured in the Wyoming PBS documentary, “Glaciers of the Winds” (9-20-2018)
- Interviewed for an article entitled “The Rocky Mountains’ Largest Glaciers Are Melting with Little Fanfare: The glaciers remain some of the least understood ice sheets in North America,” by Benjamin Storrow, published in Climatewire Magazine and reprinted in Scientific American (9-13-2017)
- Interviewed by Prairie Public Radio for a segment on the show “Main Street” on the topic of conducting research on the glaciers of the Wind River Range, Wyoming (3-1-2016)
- Co-led multi-person expeditions over ten days into the Wind River Range, Wyoming to conduct field research on the glaciers of the Wind River Range, Wyoming; near Pinedale, WY, August 2011, 2012, 2014, 2015, 2017, 2019.