

Steve Graham

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Appointments

University of Minnesota

Research Associate, U-Spatial@UMD 2019 - present

University of Minnesota Duluth

Research Associate, Geospatial Analysis Center 2008 – 2019

Penn State University

Assistant Director GIA Core, Senior GIS Analyst - Population Research Institute 2004 - 2008

Research Associate - Penn State Institutes of the Environment 2002 - 2004

GIS Analyst - Population Research Institute 2000 - 2004

Education and Certifications

GISP, Certified GIS Professional, GIS Certification Institute

Ph.D. Geological Sciences University of Texas Austin

B.S. Geological Sciences and Environmental Studies, Tufts University

Grants/External Sales

14 County Hazard Mitigation Plans (2023-2025)

PI Stacey Stark, Steve Graham, Jane Lindelof, Ryan Noe, Zach Vavra (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$492,000

MN State Hazard Mitigation Plan Update 2024 (2023-2025)

PI Stacey Stark, Steve Graham, Jane Lindelof, Ryan Noe, Zach Vavra (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$200,000

Five County Hazard Mitigation Plan updates 2022 (2022-2024)

PI Stacey Stark, Steve Graham, Jane Lindelof (U-Spatial)

Funded by the MN Department of Public Safety \$155,000

Lake Superior Coastal Erosion Mapping (2021-2023)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the Arrowhead Regional Dev. Commission \$27,000

Nine County Hazard Mitigation Plan Update 2021 (2020-2023)

PI Stacey Stark, Steve Graham, Zach Vavra (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$288,000

Five Year Review and Update of 17 County and 1 Tribal Hazard Mitigation Plans (2020-2021)

PI Stacey Stark, Steve Graham, Micaella Penning, Zach Vavra (U-Spatial)

Funded by the MN Department of Public Safety \$448,500

HUC 8 Hazus Analysis for Three Watersheds (2019-2020)

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PI Stacey Stark, Steve Graham

Funded by the MN Department of Natural Resources \$53,295

Five Year Review and Update of 10 County Hazard Mitigation Plans (2018-2019)

PI Stacey Stark, Steve Graham, Micaella Penning, Zach Vavra (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$283,500

State of Minnesota Multi-Hazard Mitigation Plan Update (2018)

PI Stacey Stark, Steve Graham, Micaella Penning, Zach Vavra (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office, \$188,000

Swift and Lac Qui Parle Counties Hazus Analysis (2018)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the Upper Minnesota Valley Regional Development Commission \$4,200

Hazus Analysis for four Counties (2018)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the Southwest Regional Development Commission \$26,400

GIS to Identify Opportunities to Reduce Opioid Overdose (2018)

PI Laura Palombi, Heather Blue (Pharmacy), Stacey Stark, and Steve Graham (U-Spatial)

Funded by UMN UpDraft \$5,880

Cook County Hazard Mitigation Plan (2018)

PI Stacey Stark, Steve Graham, Micaella Penning (U-Spatial)

Funded by Cook County, MN \$20,000

Bois Forte Hazard Mitigation Plan (2018)

PI Stacey Stark, Steve Graham, Micaella Penning (U-Spatial)

Funded by Bois Forte Band of Ojibwe \$16,000

Community Asset Mapping and Environmental Scan of Workforce Services (2017)

Co-PI Monica Haynes (Bureau of Business and Economic Research), Co-PI Stacey Stark, Steve Graham (U-Spatial)

Funded by NE MN Workforce Development Board \$19,975

Five Year Review and Update of 7 County Hazard Mitigation Plans (2017-2018)

PI Stacey Stark, Steve Graham, Micaella Penning (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$217,500

2017 DuluthShines! map enhancements (2017)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the Institute for Sustainable Communities

Solar Energy Potential Map for the City of Duluth (2016-2017)

PI Stacey Stark Steve Graham (U-Spatial)

Funded by the Department of Energy Solar Pathways Project, City of Duluth, Northeast Minnesota Regional Sustainable Development partnership \$30,500

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Five Year Review and Update of 10 County Hazard Mitigation Plans (2016-2018)

PI Stacey Stark Steve Graham (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office

Cumulative Effects Analysis and GIS database for the 1854 Ceded Territory (2015)

PI Terry N. Brown (NRRI), Steve T. Graham, Stacey Stark (U-Spatial), George E. Host (NRRI)

Funded by the Grand Portage Band of Chippewa \$90,002

Hazard Mitigation Analysis for Itasca, Aitkin, and Koochiching County Hazard Mitigation Plans (2014)

PI Stacey Stark, Steve Graham, Micaella Kinzli (U-Spatial)

Funded by Arrowhead Regional Development Commission \$21,765

*Five year review and update of County and Tribal Hazard Mitigation Plans (2011-2015) ***

PI Stacey Stark, Steve Graham, Micaella Kinzli (U-Spatial), Adam Pine (Geography).

Funded independently by Lake, Brown, LeSueur, Sibley, Traverse, Carlton, Renville, Scott, and Wright Counties, and the Leech Lake Tribal Council, totaling \$ 247,729

GIS of Culturally Significant Features, Spirit Mountain Area, Minnesota (2013)

PI Stacey Stark , Steve Graham

Funded by the Minnesota Lake Superior Coastal Program \$3,616

State of Minnesota Multi-Hazard Mitigation Plan Update (2013-2014)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$125,000

Archaeological Survey and GIS Development in the Cloquet River Valley (2012)

PI Stacey Stark, Steve Graham (U-Spatial) Sue Mulholland (Anthropology)

Funded by the Minnesota Historical and Cultural Grants program \$62,338

HAZUS-MH Flood Analysis for Hazard Mitigation Level Two, Dakota County (2011-2012)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$34,655

East Swan River Watershed Assessment, GIS Analysis (2010-2011)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the South St. Louis Watershed Conservation District \$23,000

Minnesota Statewide Flood Risk Assessment (2010)

PI Stacey Stark, Steve Graham (U-Spatial)

Funded by the MN Homeland Security and Emergency Management Office \$98,500

St Louis County Independent School District 2142 – Transportation Analysis

Stacey Stark, Steve Graham , Mike Mageau \$11,000 (2009-2010)

Funded by Johnson Controls.

GISL support for UMD Farm Committee: UMD Farm interactive web mapping

Stacey Stark , Steve Graham

Funded by the Barbara J. Wilson Environmental Fund \$1,870 (2010)

Wind Resource Development in the Minnesota Coastal Zone (2008)

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Michael Mageau, Brody Sunderland, Stacey Stark, and Steve Graham
Funded by the MN DNR Coastal Program \$27,615

Publications

Famiglietti, J. S., J. A. Devereaux, C. A. Laymon, T. Tsegaye, P. R. Houser, T. J. Jackson, S. T. Graham, M. Rodell, and P. J. van Oevelen, Ground-based investigation of soil moisture variability within remote sensing footprints during the Southern Great Plains 1997 (SGP97) Hydrology Experiment, *Water Resources Research*, 35(6), 1839-1851, 1999

Fidanza, M. (ed.), *Achieving sustainable turfgrass management*, Burleigh Dodds Science Publishing, Cambridge, UK, 2023. Chapter 17. Considerations with selecting turfgrass varieties and cultivars: Kevin Morris, National Turfgrass Evaluation Program, USA; Yuanshuo Qu, Rutgers, The State University of New Jersey, USA; Len Kne, University of Minnesota, USA; and Steve Graham, University of Minnesota, USA

Graham, Stephen Thomas, *Continental river routing for fully coupled climate system models*, Dissertation, 2000.

Graham, S. T., J. S. Famiglietti, and D. R. Maidment, 5-Minute, 1/2°, and 1° Data Sets of Continental Watersheds and River Networks for Use in Regional and Global Hydrologic and Climate System Modeling Studies, *Water Resources Research*, 35(2), 583-587, 1999.

Mageau, M. T., Sunderland, B., Stark, S. & Graham, S., Wind resource development along Minnesota's North Shore of Lake Superior. Oct 1 2016, In : *Renewable Energy*. 96, p. 812-823 12 p.

Najjar, R. G., L. Patterson and S. Graham. Climate simulations of major estuarine watersheds in the Mid-Atlantic region of the United States. *Climatic Change*, 95(1-2),139-168, 2008

Shorr, N., R. Najjar, A. Amato, and S. Graham, Household heating and cooling energy use in the northeast USA: comparing the effects of climate change with those of purposive behaviors. *Climate Research*, 39(1), 19-30, 2009.

Presentations / Lectures

CE 4255 Civil Engineering Senior Design (UMD 2019-2020)

MNAFPM Annual Conference 2019

MATH 4180: Solving Industrial Mathematics Research Problems (UMD 2017)

CS 4531: Software Engineering (UMD 2016)

BIOL 2802 Ecology Laboratory (UMD 2015 - present)

MATH 4095: Special Topics (UMD 2015)

MKTG 3761 Marketing Analytics I (UMD 2014)

GEOG 3563: Geographic Information Science I: Theory and Analysis (UMD 2010, 2011)

GEOG 5612 Field Techniques: St Louis County School District Transportation Efficiency Study (UMD 2010)

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BIOL 5808 Landscape Ecology: Theory and Application: Human Demographics (UMD 2008)

GIS and Population Science Advanced Spatial Analysis Workshop: Geographically Weighted Regression (University Park, PA; June 1 - June 6, 2008)

GIS and Population Science Workshop 2003, 2005, 2006 (University Park, PA)

PAA 2002 GIS and Spatial Analysis: Demographic Applications (Atlanta, GA; May 8, 2002)

FEMA Dam Safety training: HEC-HMS (multiple locations; 2001-2006)

Professional Membership

Association of American Geographers (AAG)

Minnesota GIS/LIS Consortium

Northern Minnesota GIS User Group

Last update – May 22, 2023