

**Ann M.K. Fritz,**  
**GISP**

**Curriculum Vitae**

LinkedIn: [Ann Fritz](#)

**Education**

**University of Wisconsin-Madison**

Master of Science in Geography - Cartography and Geographic Information Systems (2021)

Online Master's in GIS development focused on programming, geospatial database development and web map scripting.

Skillsets: HTML, CSS, Python, Javascript, PostgreSQL/PostGIS, Esri products, Leaflet, Mapbox, Mapbox, Adobe Illustrator and Photoshop

**University of Wisconsin-Madison**

Master of Science in Geology (1996)

- M.S. Thesis: Construction of an Aquifer Contamination Susceptibility Map of Dane County, Wisconsin
- 1996 - American Water Resource Association, WI Chapter-Student Presentation Winner
- 1995 - President, Geology Club

**University of Minnesota-Morris**

Bachelor of Arts; Major in English and Geology (1991)

- 1991 - Scholar of the College Award
- 1990 - University of Minnesota UROP (Undergraduate Research Opportunity Program) grant recipient
- 1989 – Research Experience for Undergraduate Women and Minorities in Science program

**Awards, Certifications and Membership**

- Certified GIS Professional by the GIS Certification Institute – Certification Number 00047997
- [ProSci](#)® Certified Change Practitioner
- North Dakota Change Network recipient for North Dakota, 2018; sponsored by National Arts Strategies and Bush Foundation (YouTube [link](#) URL: <https://www.youtube.com/watch?v=G62qmQGGJv4>)
- 2016 Esri and Leica Geosystems Smart Communities Innovation Grant recipient (presented to NDDoH, primary author)
- URISA member

- North Dakota Department of Health – Leadership Development Program Graduate 2011
- Boy Scouts of America Advanced Leadership Course – Wood Badge for the 21st Century (Graduate of Class C-01-09)
- 2002 Esri Special Achievement in GIS (presented to GIS Technical Committee agencies for collaborative design and implementation of ND GIS Hub)

## **Employment History**

### **Environmental Scientist III / Geospatial Coordinator**

1999 to present North Dakota Department of Environmental Quality (NDDEQ)

- Coordinate all aspects of Geographic Information Systems at the NDDEQ including development of geospatial standard operating procedures, guidance documents and training materials for NDDEQ staff.
- NDDEQ's representative to the State GIS Technical Committee
- North Dakota Data Steward of National Watershed Boundary Dataset
- Assist NDDEQ PIO with social media and digital communication efforts as needed.

### **Adjunct Instructor – Geographic Information Systems**

2009, 2018 Bismarck State College, Bismarck, ND

- GIS 107 – Applications in Geographic Information Systems
- GIS Practicum Advisor in 2018
- Entry level course on practical applications using geographic information system and spatial analysis extension.
- Developed syllabus, exercises and worked with students developing their GIS skills and individual GIS projects.

### **Geologist II**

1996 – 1999 North Dakota Geological Survey, Bismarck, ND

- Glacial and surficial geologic mapping in eastern North Dakota with special interest in digital mapping techniques.
- Editor, NDGS Newsletter. Quarterly publication of the North Dakota Geological Survey.
- Administrator of the Geothermal regulatory program.
- Developed and led first ever Earth Science Fair for 6th graders during Earth Science Week.

### **Research Assistant**

1994-1996 Wisconsin Geological & Natural History Survey, Madison, Wisconsin

- Developed Aquifer Contamination Susceptibility Map of Dane County, Wisconsin using GIS
- Map digitization of paper geologic maps.
- Utilized SURFER for generating groundwater map of a county in Wisconsin

### **Geologist/Field Technician**

1991-1994 Summit EnviroSolutions (contract employee with Unisys Corporation), St. Paul, MN

- Conducted environmental investigations, drilling, installation of remediation systems, monitoring wells
- Completed soil and water sampling for environmental remediation projects
- Compiled and analyzed results for presentation to state and federal regulatory agencies

### **Selected Continuing Education Experiences**

- Participation in numerous Esri International User Conferences and Developer Conferences
- ArcGIS Pro: Essential Workflows (24 hour Esri Instructor led training) June 2017
- ArcGIS III: Performing Analysis,(16 hour Esri Instructor led training) April 2015
- ArcGIS Online Subscriptions for Organizations: User Workflows (4 hour instructor led workshop) February 2014
- ArcGIS Online Subscriptions for Organizations: Publisher Workflows (4 hour instructor led workshop) April 2014
- ArcGIS Online Subscriptions for Organizations: Administrator Workflows (4 hour instructor led workshop) April 2014
- Introduction to Geoprocessing Scripts Using Python (10.0), (24 hour Esri instructor led training) October 2012

## **Selected Publications and Presentations**

*Fritz, Ann M.K.*, The North Dakota Watershed Boundary Dataset: A GIS Framework Layer (presented at the ND Water Quality Monitoring Conference, Bismarck, ND, February 27-29, 2012)

*Fritz, Ann M.K.*, Coping with Ever Evolving Digital Data: The North Dakota Watershed Boundary Dataset and the US-Canadian Harmonization Efforts (presented at the ND GIS Users Conference, Grand Forks, ND, October 11-13, 2011)

*Fritz, Ann M.K.*, Stewardship of the Watershed Boundary Dataset in North Dakota (presented at ND GIS Users Conference, Grand Forks, ND November 2-4, 2009)

*Fritz, Ann M.K.*, 2001 Geologic Explorer's Guide to the Sheyenne National Grassland, North Dakota Geological Survey Education Series ED-27

Mitchell, Karen J.R., *Ann M.K. Fritz* and Ryan Walckirch, 1999, Evolution of Digital Mapping Techniques in North Dakota (presented at the Digital Mapping Techniques Workshop '99 in Madison, WI, May 19-22, 1999)

Murphy, Edward C., *Ann M.K. Fritz*, and R. Farley Fleming, 1997, The Tolna and Jerusalem Outlets in the Devils Lake Basin, North Dakota, North Dakota Geological Survey Report of Investigation 100

## **Other Activities**

- 2017 North Dakota GIS Users Conference Co-Chair
- 2015 North Dakota GIS Users Conference Chair  
(<http://gis2015.ugpti.org/>)
- 2013 North Dakota GIS Users Conference Co-Chair  
(<http://www.und.nodak.edu/org/urg/>)
- Mentor – Comet Robotics First Lego League Team, Cathedral School, Bismarck, ND
- 2005 - 2019, Boy Scout and Girl Scout Adult Leader and volunteer
- 1990 – Semester internship at Argonne National Laboratory, Chicago, Illinois
- Summers 1986-1988 - YMCA Camp Du Nord staff, Ely, MN