

**Education****Doctor of Philosophy**

Ongoing – ABD

Supporting Areas of Emphasis: Field Collection Methods, Communication

**Geography**

University of Kansas, Lawrence, KS

**Masters of Science**

May, 2016

Supporting Areas of Emphasis: Surface Hydrology, Remote Sensing

**Environmental Science**

University of Kansas, Lawrence, KS

**Bachelors of Science**

May, 2014

**Environmental Science and Policy**

Plymouth State University, Plymouth, NH

**Work Experience****National Water Center Innovator's Program**

Summers of 2016 – 2017

Student Course Coordinator – Tuscaloosa, AL

- Lead students towards the successful execution of projects related to the National Water Model
- Research Fellow
- Worked at the National Water Center in advancement of the National Water Model

**Graduate Research Associate**

Aug. 2015 – May 2016

Systems Administrator – Lawrence, Kansas

- Administer, and develop the OpenPolarServer, the geospatial platform used by the Center for Remote Sensing of Ice Sheets to distribute data to the public: See <http://ops.cresis.ku.edu/>

**New Hampshire Department of Safety**

Dec. 2013 – Sept. 2014

Cartographer 1 – Laconia, New Hampshire

- Used ArcGIS and GPS to map locations across New Hampshire for emergency response use
- Developed standard operating procedures to streamline mapping products as the state transitioned to the NextGen 911 system

**Other Experience****Missouri Basin River Forecast Center**

May 2015 – Aug. 2015

Student Volunteer – Pleasant Hill, MO

- Forecasted river stage and discharge alongside senior forecasters
- Developed working knowledge of NOAA river forecasting models, tools and data inputs

**Newfound Lakes Region Association**

Spring 2011 – Fall 2012

Student Volunteer – Newfound, NH

- Collaborated with local stake holders to quantify pollutant loadings into the lake
- Presented recommendations to non-technical and technical audiences

**Software and skills**

- Experienced using ArcMap, HEC-RAS, Photoshop, surveying techniques, and Google Earth Engine.
- Experience coding or working with JavaScript, Python, HPC, html, SQL, MATLAB, WRF-Hydro and SHEF
- Eagle Scout – BSA

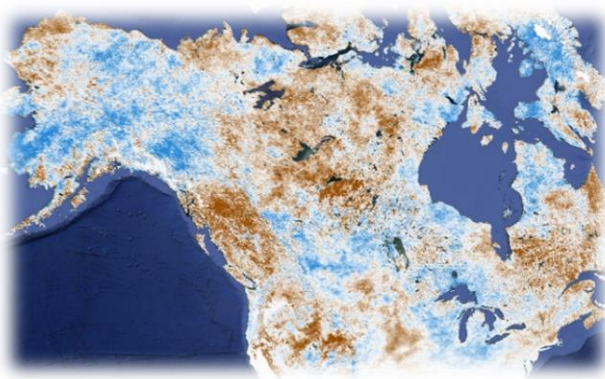
**Teaching Experience**

<u>Course Number</u>	<u>Title</u>	<u>Students</u>
Geog 111	Mapping our Changing World (Lab Sections)	25
Geog 358	Introduction to GIS (Lab Sections)	122
Geog 526	Remote Sensing (Lab Sections)	32
Geog 558	Intermediate GIS (Lab Sections)	43
Geog 558	Intermediate GIS (Lecture Sections)	24

## Selected Publications

1. Maidment, D.R., Rajib, A., Lin, P., Clark, E. P. 2016. National Water Center Innovators Program Summer Institute Report. Consortium of Universities for the Advancement of Hydrologic Science, Inc. Technical Report No. 13, 122 p. DOI: 10.4211/technical.20161019 (**Chapters 1 & 13**)
2. Johnson J. M, **Coll J M**, et al. 2017. National Water Centers Innovators Program Summer Institute Report. Consortium of Universities for the Advancement of Hydrologic Science, Inc. Technical Report No 14.
3. Johnson J. M, **Coll J M**, Ruess J. P, and Hastings T. J. (2018). Challenges and Opportunities for Creating Intelligent Disaster Alerts. *JAWRA Journal of the American Water Resources Association*, (in press)
4. **Coll J M**, Li X. (2018) Comprehensive Accuracy Assessment of MODIS Daily Snow Cover Products and Gap Filling Methods, *Remote Sensing of Environment*, ISPRS, (in press)

## Research

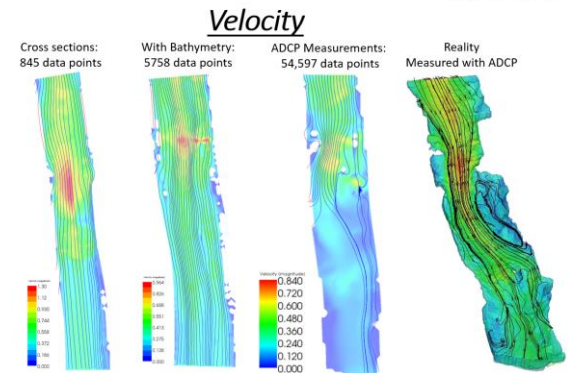
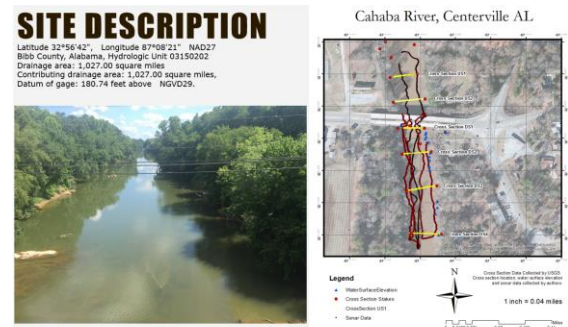
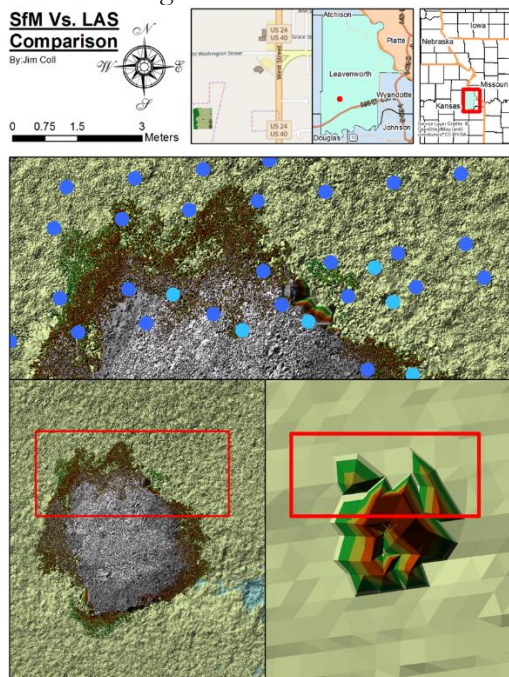


### Masters Thesis: (<https://trendy-snow.appspot.com/>)

Using 16 years of daily snow cover data from MODIS, described and validated MODIS daily snow cover datasets, and mapped global snow cover trends.

### High Density Survey:

Use of Drones to augment LIDAR collected elevations.



### Hydraulic Modeling:

Use of cross sections, fish finder, and ADCP to model the reach to identify both how additional measurements might be incorporated into modeling efforts and how bathymetry affects model output.

### Impact Mapping (<https://livingflood.github.io/>):

Map flood inundation from NWM outputs.

