***Education***

**Doctor of Philosophy Geography**

Ongoing – ABD University of Kansas, Lawrence, KS

Supporting Areas of Emphasis: Field Collection Methods, Web Mapping

**Masters of Science Environmental Science**

May, 2016 University of Kansas, Lawrence, KS

Supporting Areas of Emphasis: Surface Hydrology, Remote Sensing

**Bachelors of Science Environmental Science and Policy**

May, 2014 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, R, Python, HPC, html, SQL, MATLAB, WRF-Hydro and SHEF
* Eagle Scout – BSA

***Teaching Experience***

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| **Course Number** | **Title** | **Students** |
| Geog 111  Geog 358 | Mapping our Changing World (Lab Sections)  Introduction to GIS (Lab Sections) | 25  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***

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| ***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/***](https://livingflood.github.io/)***):***  Map flood inundation from NWM outputs. |