

Jason McVay

XXXX XXXXX XXXX XXXXXX XX | Flagstaff, AZ 86001 | (406) XXX-XXX | jasonmcvay09@gmail.com

PERSONAL STATEMENT

I am interested in the application of GIS and Remote Sensing technologies including UAVs to better understand and solve natural resource and other problems within a spatial context.

EDUCATION

Virginia Tech. Blacksburg, VA May 2013

Master of Science, Geography. GPA: 3.71

Thesis: *A 4700-Year Record of Lake Evolution and Fire History for Laguna Limón, Dominican Republic*

The University of Montana. Missoula, Montana

Dec. 2009

Bachelor of Arts, Environmental Studies, GPA: 3.27

Second Major: Geography. Minor: Mountain Studies

RECENT PROFESSIONAL EXPERIENCE

Geospatial Research Specialist

2014-Present

Remote Sensing and Geoinformatics Lab, Northern Arizona University

- Unmanned Aerial Vehicle (UAV) pilot and technician. Negotiate project deliverables with clients
- Interpret and analyze satellite (Landsat, MODIS, World View), UAV images and LiDAR datasets
- Spatial and statistical analysis in GIS environments. Create cartographically correct maps in ArcMap
- Contribute maps and text to grants and manuscripts for publication in peer-reviewed journals

Student Contractor (GIS)

2014-2016

Grand Canyon Monitoring & Research Center, USGS

- Model multi-scale pre and post-fire sediment yield using the InVEST and GeoWEPP GIS models
- Use ArcGIS to map areas of fine-scale vegetation change along the Colorado River
- Create and manage large tabular, raster and vector GIS datasets in ArcGIS geodatabases
- Produce cartographically correct maps and contribute text to peer-reviewed journal publications

Geospatial Research Staff

2013-2014

Merriam-Powell Center for Environmental Research, Northern Arizona University

- Modeled vegetation species distribution under climate change scenarios using R and ArcGIS
- Created GIS datasets from raw point data, accessed FIA, LANDFIRE and Canadian NFI datasets
- Analyzed and maintained large tabular and spatial datasets using ArcGIS and Excel

Graduate Research Assistant

2011-2013

Paleo-environments Laboratory, Virginia Tech

- Reconstructed environmental and fire history using loss-on-ignition and charcoal processing
- Collected GPS field points and created maps using ArcGIS
- Created and updated charcoal analysis protocols. Lab maintenance and upkeep
- Trained and supervised undergraduate workers in the Paleo-environments lab

TECHNICAL SKILLS

- Adobe Illustrator + MAPublisher
- Analytical Spectral Device
- ArcGIS 9.x, 10.x
- BCAL LiDAR Tools
- CloudCompare
- ENVI + IDL 4.8, 5.3
- ERDAS Imagine
- GPS (Trimble, Garmin)
- html/css
- LAS Tools
- Microsoft Office Suite
- OpenStreetMap
- Pathfinder
- Postflight Terra 3D
- Quantum GIS
- R
- SenseFly eBee Ag (UAV)
- Service-Drone (UAV)
- Terrestrial Laser Scanner
- Total Station

TEACHING EXPERIENCE

- Led two Introduction to ArcGIS workshops, Northern Arizona University. Nov. 7 and 14, 2014
- Graduate Teaching Assistant, Geography Department, Virginia Tech. 2012-2013
 - GEOG 1104: Introduction to Physical Geography, GEOG 4204: Geography of Resources

PUBLICATIONS

Joel Sankey, Jason Kreitler, Todd Hawbaker, **Jason McVay**, Mary Miller, Nicole Vaillant, Scott Lowe, Temuulen Sankey. (2016) Climate, wildfire, and erosion ensemble foretells more sediment in western USA watersheds. *Nature* (In Review).

Temuulen Sankey, **Jason McVay**, Tyson L. Swetnam, Mitchel P. McClaran, Mary Nichols, Philip Heilman. (2016) UAV lidar and hyperspectral sensing: a new tool in biogeoscience research. *Geophysical Research Letters* (In Review).

Zhuoting Wu, Miguel Velasco, **Jason McVay**, Barry Middleton, John Vogel, Dennis Dye (2016) MODIS derived vegetation Index for drought detection on the San Carlos Apache Reservation. *International Journal of Advanced Remote Sensing and GIS* 5(2) 1524-1538.

Temuulen Sankey, Jonathon Donald, **Jason McVay**, Mariah Ashley, Frances O'Donnell, Sharon Mazek Lopez, Abraham Springer. (2015) Multi-scale analysis of snow dynamics at the southern margin of the North American continental snow distribution. *Remote Sensing of Environment* 169, 307-319.

Carolyn A. Copenheaver, John R. Seiler, John A. Peterson, Andrew M. Evans, **Jason L. McVay**, and Justin H. White. (2013) Stadium Woods: A dendroecological analysis of an old-growth forest fragment on a university campus. *Dendrochronologia* 32(1), 62-70.

CONFERENCE PRESENTATIONS

Paper Session

Joel B. Sankey, Jason Kreitler, Todd Hawbaker, **Jason McVay**, Nicole Vaillant, Scott Lowe. Predicting future, post-fire erosion and sedimentation for watersheds of the western USA. American Geophysical Union (AGU) annual meeting. San Francisco, CA. Dec, 2015.

Temuulen Sankey, Jonathon Donald, and **Jason McVay**. *Three-dimensional estimates of tree canopies: Scaling from high-resolution UAV data to satellite observations*. American Geophysical Union (AGU) annual meeting. San Francisco, CA. Dec, 2015.

Joel B. Sankey, **Jason McVay**, Jason Kreitler, Todd Hawbaker, Nicole Vaillant, Scott Lowe. *Predicting Watershed Post-fire Sediment Yield with the InVEST Sediment Retention Model: Accuracy and Uncertainties*. Federal Interagency Sedimentation and Hydrology (SEDHYD) Conference. Reno, NV. April, 2015.

Jason L. McVay, Lisa Kennedy, Kam-bu Liu. *Patterns of Charcoal Deposition as Evidence of Long-Term Fire History; Laguna Limón, Dominican Republic*. American Association of Geographers (AAG) annual meeting. Los Angeles, CA. April, 2013.

Fernando Cardozo-Pelaez, **Jason L. McVay**, and Andrew BC Nevin. *In Vitro Assessment of Guanine Oxidation by Cu and Fe-Ascorbate Systems and Paraquat*. Free Radical of Biology and Medicine 40. San Francisco, CA. 2009.

Poster Session

Lisa M. Kennedy, Rachael Lubitz, Stephen J. Culver, **Jason L. McVay**, Kam-biu Liu, Allison R. LeBlanc. *A 4700-year Environmental History of Laguna Limon on the Northeastern Coast of the Dominican Republic*. Association of American Geographers (AAG) annual meeting. Chicago, IL. April, 2015.

Joel Sankey, **Jason McVay**, Jason Kreitler, Todd Hawbaker, Nicole Vaillant, Scott Lowe. *Predicting watershed sediment yields after wildland fire with the InVEST sediment retention model at large geographic extent in the western USA: accuracy and uncertainties*. American Geophysical Union (AGU) annual meeting. San Francisco, CA. Dec, 2014.

Teki Sankey, Mariah Ashley, **Jason McVay**, Jonathon Donald. *Snow cover Estimates Using Landsat TM5 Satellite Images*. American Geophysical Union (AGU) annual meeting. San Francisco, CA. Dec, 2014.

Jason L. McVay, Lisa M. Kennedy. *Utilizing Macroscopic Charcoal as a Multi-Century Fire Indicator for Laguna Limón, Dominican Republic*. Southeastern Division of the Association of American Geographers (SEDAAG) annual meeting. Asheville, NC. Nov, 2012.

VOLUNTEER & SERVICE

- Disaster mapping, Nepal 2015 Earthquake. Humanitarian OpenStreetMap (hotosm.org) 2015
- Table Demonstration, Unmanned Aircraft System (UAS) for Remote Sensing, Flagstaff Festival of Science. Flagstaff, AZ. 2014
- Citizen Scientist, National Phenology Network. Blacksburg, VA 2011-2013
- Volunteer dog walker, Brother Wolf Animal Shelter. Asheville, NC 2011
- 4-H; Dairy, Sheep, Poultry Judging, Photography. Georgia/Kansas chapters 1997-2005