Geoffrey A. Muhlestein

Senior GIS Analyst

Education:	M.A. 2012, Applied Geography (University of Colorado at Colorado Springs)
	B.S. 2006, Geology (Southern Utah University)
	GIS Certificate, 2006 (Southern Utah University)
	A.S., 1997, (Dixie State University)
Years of GIS Experience:	10
Years with AWA:	8

Mr. Muhlestein is the Senior Geographic Information Systems (GIS) Analyst for Applied Weather Associates (AWA). Mr Muhlestein has been an AWA team member since 2006 and has over 10 years of experience in the GIS field. He has designed, coordinated, and implemented numerous GIS projects essential to the development and analysis of PMP for AWA. A Master of Arts in Applied Geography with an emphasis on Geographic Information Systems was earned by Mr. Muhlestein from the Department of Geography and Environmental Studies at the University of Colorado at Colorado Springs. His thesis was titled "An Evaluation of a GIS Based Procedure for Estimating Probable Maximum Precipitation over the Piru Creek Basin". Mr. Muhlestein completed a Bachelor's of Science in Geology at Southern Utah University (SUU) where he also earned a Certificate in Geographic Information Systems. While attending SUU, Mr. Muhlestein was employed as a GIS technician and worked on the publication of geologic maps for the Utah Geological Survey. Previous to his experience in the GIS field, Mr. Muhlestein worked as a whitewater expedition guide in Grand Canyon. Mr. Muhlestein has a great enthusiasm toward learning about, and contributing to, the knowledge of Earth Systems Science, with a particular interest in the hydrologic cycle. He enjoys spending time with family and friends in the wild places of the American West.

SUMMARY OF WORK EXPERIENCE

GIS Specialist and Staff Scientist **Monument, CO**

Applied Weather Associates, LLC **2006-Present**

- Conceptualize, implement, customize, and document various spatial analytical applications to aid in hydro-meteorological studies
- Production of maps, tables, and illustrations for use in working analysis, proposals, presentations, and final project reports.
- Assist in data-mining, data management, and report compilation

GIS/GPS Instructor **Cedar City, UT**

Southern Utah University **2006**

- Instructed two sections of the GIS/GPS portion of the Southern Utah University Geology Field Camp
- Educated students on general GPS overview, hands-on use of the Trimble GeoExplorer GPS receiver, use of Pathfinder Office software, and use of ArcGIS Desktop software at the introductory level

Private Science Tutor **Cedar City, UT**

State of Utah **2006**

- Assisted a special needs undergraduate student with conceptualization, critical thinking, and problem solving skills in GIS, Programming, Statistics, and Mineralogy curriculum

GIS Technician **Cedar City, UT**

Utah Geological Survey (via Southern Utah University) **2004-2005**

- Used GIS software to digitize and attribute the digital version of the Geologic Map of the Abajo Mountains 1:50,000 scale and Geologic Map of Jordan Narrows 1:24,000 scale

EXAMPLE REPORTS/PRESENTATIONS

Kappel, W.D., Hultstrand, D.M., Tomlinson, E.M., and **Muhlestein, G.A**., March 2014: Site-Specific Probable Maximum Precipitation (PMP) Study for College Lake, Fort Collins, CO.

Tomlinson, E.M., Kappel, W.D., **Muhlestein, G.,** Hultstrand, D., and T.W. Parzybok, July 2013: Statewide Probable Maximum Precipitation (PMP) Study for the state of Arizona.

Muhlestein, G.A, 2013: Using ArcGIS and Python to Improve Probable Maximum Precipitation Studies. Presented at ESRI Southwest User Conference, Salt Lake City, UT.

Kappel W. D., **Muhlestein, G.A**., 2013: Calculating Arizona Statewide PMP Using the PMP Evaluation Tool. Presented at ASDSO Dam Safety Conference, Providence, RI.

Muhlestein, G.A, 2012: An Evaluation of a GIS Based Procedure for Estimating Probable Maximum Precipitation over the Piru Creek Basin (Master's thesis). University of Colorado at Colorado Springs, CO

Muhlestein, G.A., Colberg, M.R., and Maxwell, D.J., 2006: An Interactive Geologic Map of Cedar City and the Coal Creek Canyon Area, Iron County, Utah. Presented at the Geologic Society of America Conference, May 2006, Gunnison, CO and at the Utah Academy of Science, Ephraim, UT, April 2006

Witkind, I.J., Cantor, H.G., Griffin, P.C., Tuttle, D.R., Marshall, G.L., 1964: Geologic Map of the Abajo Mountains Area, San Juan County, UT. GIS Compilation in 2006, Project Manager: Grant Willis, Utah Geological Survey. GIS: **Geoff Muhlestein**, Bryan Anderson, Luke Ambrose, and David J. Maxwell of Southern Utah University. Cartography and additional GIS by J. Buck Ehler, Utah Geological Survey