



cultural resource analysts, inc

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Nate Alley, MS	GIS Specialist	
<p>Availability: Immediate</p> <p>Email: nwalley@crai-ky.com</p>	<p>Specific Duties:</p> <ul style="list-style-type: none"> • Manage GIS/Cartography Department, Wyoming office • Field mapping and final report figures • Software maintenance and troubleshooting 	<p>Education and Training:</p> <ul style="list-style-type: none"> • M.S. Forest Sciences: Remote Sensing\Geographic Information Systems, Colorado State University, Fort Collins, Colorado • B.S. Natural Resource Management, Colorado State University, Fort Collins, Colorado • B.A. Visual Communications, Southern Illinois University, Carbondale, Illinois
Experience Summary Information		
<p>GIS Specialist</p> <p>Cultural Resource Analysts, Inc. 2009–present</p>	<p>GIS Specialist</p> <p>The Murulle Foundation 2006–present</p>	<p>GIS Coordinator</p> <p>Western Land Services, Inc. 2007–2009</p>
<p>Mr. Alley began work at CRA in September of 2009. He manages the GIS/Cartography Department for the Wyoming office. Mr. Alley is responsible for all aspects of cartography, from proposal and preparatory field mapping to the final report figures. He performs spatial analyses and conducts predictive modeling of inter and intra archaeological site/artifact distribution. Additional duties include design, maintenance, and integration of geospatial data and pre/post processing of relevant data for project mapping. Mr. Alley also provides IT to employees, including GPS setup/maintenance/backup, software troubleshooting, file conversion, GIS system hardware, software, plotter, and color printer maintenance.</p> <p>Experience and Expertise:</p> <ul style="list-style-type: none"> • Geographic Information Systems • Field Sampling and data collection • GPS data collection and processing • Layout Design <p>Additional Education and Training:</p> <ul style="list-style-type: none"> • 2007 - Trimble System Training, Casper Wyoming, Advanced TerraSync Course • 2004 - State Historic Preservation Office, Laramie Wyoming. Standards for transmittal of GIS Data to SHPO Data Systems • 2003 - MS Access Basic, Database and Table Design, And Database Relationships - Short Course <p>Previous Experience:</p> <p>GIS Coordinator Western Land Services, Inc.</p>		

April 16, 2007 – September 2009

- Responsible for the management of the GIS Department, and continued development of the geospatial library.
- Staff assistance & training with ESRI ArcGIS 9.3 software, GPS data collection, various map creation, and quality control.
- Work with operations staff, Archaeologists, Ecologists, Wildlife Biologists, and other resource professionals to produce high quality products, recommendations, and analysis.
- Research and recommend software upgrades, standard operating procedures, and map standardizations as company protocol.
- Develop maps and prepare data for use by various CBM and Natural Gas Developers, and federal organizations.

**GIS Specialist
The Murulle Foundation
February 2006 – Present**

- Major projects include mapping potential areas within Ethiopia that provide ideal habitat for the Mountain Nyala, risk assessment for animal population and habitat, and develop recommendations for conservation and reforestation initiatives to the Ethiopian Department of Natural Resources.
- Coordination of data from a variety of sources.
- Interagency exchange of spatial data in order to develop and maintain a reliable and professional GIS library.
- Geospatial analysis for use in professional scientific papers, map creation, and GIS software related recommendations to the Board of Directors and staff.

May 2004 – February 2006 (Volunteer)

- Geospatial analysis and creation of spatial data for the Foundation's GIS library and development of maps for field expeditions in Ethiopia.
- Organize and implement data cleanup and metadata creation for the existing GIS library.
- Provide technical assistance to the staff with regard to use of GPS receivers, GIS data collection methods and implementation.
- Field expeditions in Ethiopia gathering spatial data with a GPS receiver for use in habitat modeling and species population estimates.

**GIS Specialist
Current Archaeological Research
June 2005 – April 2007**

- Responsible for development and management of the geospatial database.
- Coordination of GIS data preparation, entry, and analysis for cultural and energy related resources.
- Map creation for use by staff in the field and office, as well as cartographic products included in the final reports presented to the BLM.
- Digitizing and database creation with appropriate metadata.
- Queries and spatial overlays using layers, aerial orthophotos, geodatabases, and various themes within the GIS software.
- Staff assistance & training with ESRI ArcGis 9.1 software, various map creation, geodatabase development, and historic trails analysis, and exchange of external data while monitoring data quality.
- Field work assisting with block and linear surveys, and site analysis and recordation. Use of Magellan/Locus GPS receivers to accurately map various cultural and natural resources.

**GIS Specialist
Western Land Services, Inc.
October 2004 – June 2005**

- Development and management of Archaeological spatial data for the Cultural Resources GIS.
- Coordination and technical direction of GIS data preparation, entry, and analysis for both renewable and non-renewable resources.
- Responsible for the supervision of data accuracy, and metadata creation.

- Map creation for use by staff in the field and office, as well as cartographic products included in the final reports for clients and the BLM.
- Digitizing and database creation/maintenance.
- Support staff with various GIS related projects. This includes assistance/training with ESRI ArcGis 9.0 software, various map creation, database development, organization, and analysis, obtaining new external data and monitoring data quality.
- Serve as a primary consultant for GIS related projects.
- Participate in field work assisting with block and linear surveys, and site descriptions.
- Provide orientation and basic GIS/GPS training for employees.

GIS Specialist

**Bureau of Land Management, Rock Springs WY, Field Office (Seasonal – Chicago Botanic Gardens)
April 2004 – October 2004**

- Assisting Archaeology staff with GIS applications including organization and transmittal of GIS data to other Federal and State agencies, spatial analysis of historic sites, map creation for field use, special interest groups and professional meetings.
- Regular analysis techniques include digitizing, scanning, geometric rectification, remote sensing, and use of Trimble GPS receiver and GPS pathfinder software to create, polygon, point, and line coverage's.
- Recommendations for equipment upgrades, project coordination, and technical support.
- Field work assistance with site inventories, and field data collection, and implementation of data standards with respect to accuracy and quality.
- Provide GIS support to a variety of resource disciplines, including Range, Fire, Wildlife, Minerals, Realty, and Engineering projects as needed.
- Data analysis, and map creation for specific applications regarding data calls and various projects according to established standards and deadlines.
- Assistance in preparing various environmental assessments in compliance with the National Environmental Policy Act (NEPA) including trail settings and data generation.

Natural Resource Ecology Lab (NREL),
Colorado State University, Fort Collins, Colorado 80523

April 2001- Sept. 2001

Field Crew

- Navigation using topographical maps, and Trimble GPS receiver.
- Set up of modified-Whittaker sampling plots, collection of ancillary data including soil samples, detailed site description, still photography and VMS2000 video mapping system (Red Hen Technologies), and equipment inventory.
- Gained experience in techniques with respect to formal plant collection and field identification.
- Wilderness First Aid and emergency preparedness training, and also considerable backcountry experience collecting data.

Sept. 2001 – March 2004

Data Management Specialist

- Worked with BLM officials (Kanab, UT Field Office) and landscape ecologists at NREL integrating GPS and field data into a GIS Database.
- Development and implementation of a project using ArcView3.3 integrating various data layers and multi-media in a comprehensive format.
- This project was part of an ongoing 6-year vegetation assessment with the BLM in Grand Staircase-Escalante National Monument, Utah. Using ArcView3.3 and later ArcGIS8.2, I was able to create an interactive layout of the Monument with sample plots shown according to UTM Coordinates. Users could perform queries on the field data, and also view an image of the plot. The project is designed to be comprehensive and easy for BLM officials to use. I presented the results at the Ecological Society of America Conference in Tucson, AZ, fall - 2002.
- Landscape evaluation in a large riparian area monitoring the spread of *Tamarisk* sp., mapping existing stands using Trimble GPS receivers and then preparing the data for GIS analysis.
- Analyses using ArcGIS, ArcInfo and ERDAS Imagine software to determine patterns of growth and

the extent of the affected riparian area.

Professional Publications:

Evangelista, P., J. Norman III., L. Behanu, S. Kumar and N. Alley. (2008). **Predicting habitat suitability for the endemic mountain nyala (*Tragelaphus buxtoni*) in Ethiopia.** *Wildlife Research* 35:409-416.

Stohlgren, T.J., D. Guenther, P. Evangelista, and N. Alley. (2005). **Patterns of plant rarity, endemism, and uniqueness in an arid landscape.** *Ecological Applications* 15:715-725.

Alley, N.W., T. J. Stohlgren, P. H. Evangelista, and D. A. Guenther. (2004). **Iterative model development for natural resource managers: a case example in the Grand Staircase-Escalante National Monument.** *Geographic Information Science*. 10(1):1-9.

Symposia, Book chapters & Reviews:

Evangelista, P. N. Alley and E. Bergquist. (*In Review*). **Effects of coal-bed methane development on native and non-native plants, and soil chemistry.** *In:* Naugle, D., editors. Energy Development and Wildlife Conservation.

Technical Reports:

Waters, M. A., T. J. Stohlgren, P. Evangelista, D. Guenther, N. Alley, G. J. Newman, editors. (2004). Landscape-Scale Assessment of Grand Staircase-Escalante National Monument. Technical Report for the Bureau of Land Management, Kanab, UT. 205pp.

Honors, Awards, and Memberships:

- Active Volunteer - The Murulle Foundation (Non-profit conservation group working in Ethiopia) – May 2004 – Present
- Xi Sigma Pi – Forestry Honor Society, Inducted May 2000
- Member – The Nature Conservancy, 2003 – Present

Professional Skills:

- **Computer:** ArcGIS 9.3, ArcEditor, ArcInfo, ArcView 3.3, ERDAS Imagine, Microsoft Office, MS Excel, MS Access, MS Powerpoint, Adobe Acrobat.
- **Communication:** Excellent verbal and written communication abilities, multiple professional presentations.
- **Organization:** Strong ability to organize data for analysis, and logistics pertaining to efficient field work.
- **Identification:** Species identification of trees, shrubs, forbs, and grasses.
- **Measurement:** Variety of field sampling designs including modified-Whittaker, Forest Health Monitoring (FHM), Daubenmire and line transects, linear and Block survey.
- **Outdoor Skills:** Proficient with a variety of GPS receiver models, topographic maps, compass orientation, and pacing.