



State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

## Solicitation

NUMBER
DEP16074

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE

Alpha Associates, Incorporated  
209 Prairie Avenue  
Morgantown, WV 26501

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ENVIRONMENTAL PROTECTION  
DEPARTMENT OF  
OFFICE OF AML&R  
601 57TH STREET SE  
CHARLESTON, WV

25304

304-926-0499

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DATE PRINTED
12/21/2012

BID OPENING DATE:

01/31/2013

BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
HOPEWELL CHURCH REFUSE & AMD DESIGN						
EXPRESSION OF INTEREST						
THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE HOPEWELL CHURCH REFUSE & AMD PROJECT IN PRESTON COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.						
01/31/13 09:48:19 AM West Virginia Purchasing Division						
***** THIS IS THE END OF RFQ DEP16074 ***** TOTAL:						


SIGNATURE	TELEPHONE 304-296-8216	DATE January 30, 2013
TITLE Principal	FEIN 55-0516286	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**CERTIFICATION AND SIGNATURE PAGE**

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Alpha Associates, Incorporated  
(Company)

  
(Authorized Signature)

Steven V. Buchanan, PE, PS - Principal  
(Representative Name, Title)

304-296-8216                      304-296-8216  
(Phone Number)                      (Fax Number)

January 30, 2013  
(Date)

**ADDENDUM ACKNOWLEDGEMENT FORM****SOLICITATION NO.:** DEP16074

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

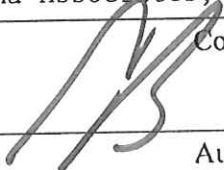
(Check the box next to each addendum received)

- |                                         |                                          |
|-----------------------------------------|------------------------------------------|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Alpha Associates, Incorporated

Company


 Authorized Signature

January 30, 2013

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

RFQ No. DEP16074STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

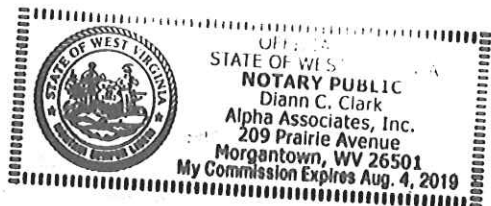
**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**Vendor's Name: Alpha Associates, IncorporatedAuthorized Signature: [Signature] Date: 1/30/13State of West VirginiaCounty of Monongalia, to-wit:Taken, subscribed, and sworn to before me this 30th day of January, 2013.My Commission expires August 4, 2019.

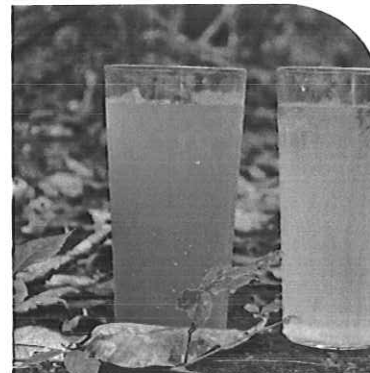
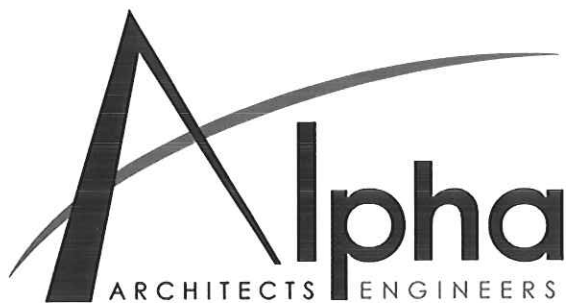
AFFIX SEAL HERE

NOTARY PUBLIC [Signature]

Purchasing Affidavit (Revised 07/01/2012)







## FIRM PROFILE

### Firm Profile

#### FIRM NAME

**Alpha Associates, Incorporated**

#### CORPORATE OFFICE

209 Prairie Avenue  
Morgantown, West Virginia 26501

#### EASTERN REGIONAL OFFICE

535 West King Street  
Martinsburg, West Virginia 25401

#### INCORPORATED

1969; Morgantown, WV

#### FIRM PRINCIPALS

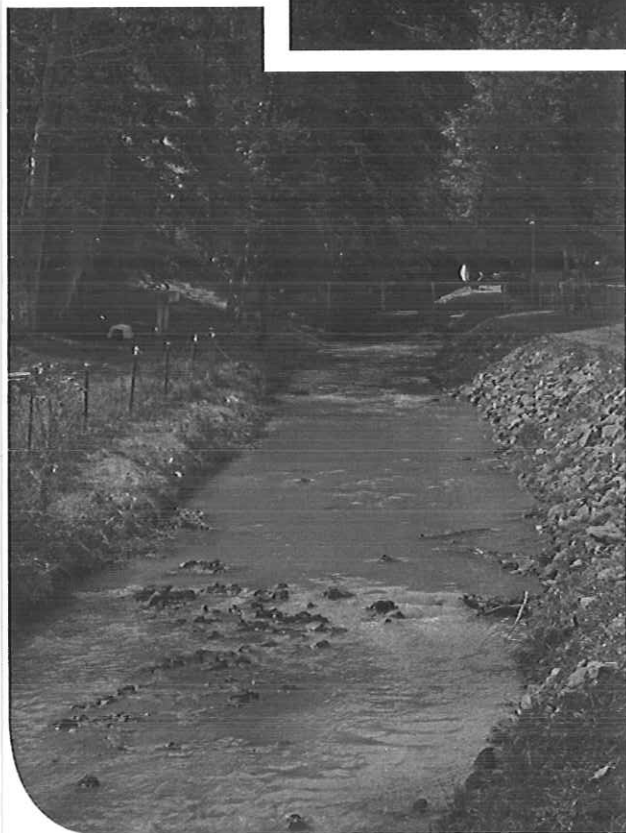
Richard A. Colebank, PE, PS; President and COO  
Richard W. Klein, PE, PS; Chairman and CEO  
Charles B. Luttrell, PE; Principal  
Steven V. Buchanan, PE, PS; Principal  
Matthew S. Breakey, AIA, LEED-AP; Principal  
Charles B. Branch, PE; Principal

#### NUMBER OF EMPLOYEES

33 Employees

#### SERVICES

Architectural Design  
Civil Engineering  
Structural Engineering  
Surveying  
Interior Design  
Landscape Architecture  
Construction Administration



Alpha Associates, Incorporated was established in 1969 and since that time has completed hundreds of projects throughout Morgantown and the state of West Virginia. Alpha's Corporate Office is located in Morgantown with our Eastern Regional Office located in Martinsburg.

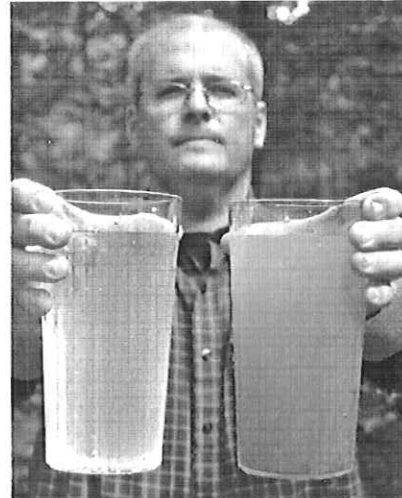


January 31, 2013

Department of Administration  
Purchasing Division  
2019 Washington Street East  
P.O. Box 50130  
Charleston, WV 25305

Attn: Mr. Frank Whittaker

Re: DEP16074 – Hopewell Church Refuse & AMD  
Design



Dear Mr. Whittaker,

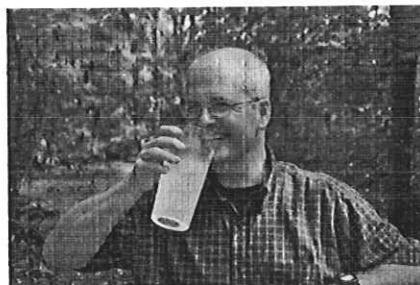
Alpha Associates, Incorporated (Alpha) is very pleased to provide this statement of qualifications for designing passive acid mine drainage (AMD) treatment systems. We are a full service architectural, engineering, and surveying company with thirty three (33) employees in two (2) offices; twenty five (25) in our Morgantown office and eight (8) in our Martinsburg office. We have been in business since 1969 serving a wide spectrum of clients, primarily throughout West Virginia.

Alpha provides services efficiently utilizing state-of-the-art surveying and engineering equipment, computer-aided design and drafting software, and a variety of other tools and software. However, our greatest resource is our dedicated team of professionals and support staff. Resumes are enclosed for the following individuals who have been involved with our design of passive acid mine drainage treatment systems:

Richard A. Colebank, PE, PS, - President and COO  
Steven V. Buchanan, PE, PS, - Principal and Civil Engineer  
Rebecca Y. Morris, PE, - Civil Engineer

Alpha has provided design services for eight (8) passive acid mine drainage treatment systems in the past five (5) years. These have generally implemented the West Virginia Water Research Institute's conceptual analyses and included surveying, design, permitting, contract document preparation, bidding services, and limited construction administration services for the following:

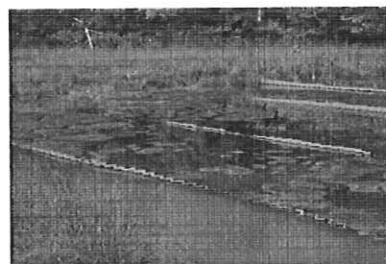
- **Morgan Run – DeAntonis Site** for the Friends of the Cheat (FOC). This project has been constructed and is successfully treating AMD. The treatment system consists of a steel slag leach bed to raise the pH of fresh water, two (2) settling ponds to allow the AMD and treated fresh water to mix and settle, and open limestone channels. The construction cost for this project was approximately \$115,000.
- **Lambert Run – Site 5** – Allen Meadows Property for the Guardians of the West Fork Watershed. This project has been constructed and is successfully treating AMD. The treatment system consists of an open limestone channel with baffles designed to increase the oxygen content of the AMD, a settling pond to allow metals to drop out, and approximately 1 acre of constructed wetlands to polish the treated effluent. The construction cost for this project was approximately \$150,000.
- **Middle Fork of Greens Run - Phase 1** for the Friends of the Cheat (FOC). This project has been constructed and treating AMD with limited success due to leakage problems at two (2) ponds that were constructed on and along an existing, previously-disturbed surface mine area. The treatment system consists of a fresh water pond to collect, store, and release fresh water at a controlled rate, a steel slag leach bed to raise the pH of fresh water, a pond to collect, store, and release AMD at a controlled rate, and swale to mix the AMD and the fresh water from the steel slag leach bed. The construction cost for this project was approximately \$255,000.
- **Sovern Run 62 and Bishoff** – Hudson Road for the Friends of the Cheat (FOC). This project has been constructed and is successfully treating



AMD. The treatment systems consist of two (2) steel slag leach beds to raise the pH of fresh water, multiple settling ponds to allow the AMD and treated fresh water to mix and settle, open limestone channels, and constructed wetlands. The construction cost for this project was approximately \$200,000.



- **Smooth Rock Lick Sites 1, 2, and 3** - for the Buckhannon River Watershed Association (BRWA). This project has been constructed and is successfully treating AMD. The treatment systems consist of limestone leach beds, a settling pond, open limestone channels, and limestone/steel slag ditch checks. The construction cost for this project was approximately \$270,000.



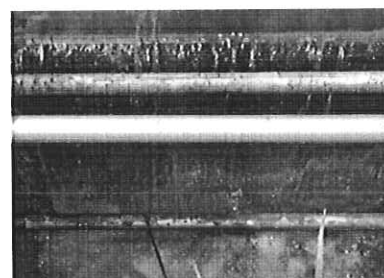
- **Allen Conner/Messenger Site on Glade Run** - for the Friends of the Cheat (FOC). This project has been constructed and is successfully treating AMD. The treatment system consists of three (3) limestone leach with automated solar-powered flushing devices and open limestone channels. The construction cost for this project approximately \$280,000.



- **North Fork of Greens Run** - Dinkenburger Road for the Friends of the Cheat (FOC). This project has been constructed and is successfully treating AMD. The treatment system consists of one (1) limestone leach with an automated solar-powered flushing device as well as an open limestone channel with baffles to increase the oxygen content of the treated AMD and to allow the metals to drop out. The construction cost for this project approximately \$150,000.



- **Lambert Run – Site 6** – Gwinn Portals for the Guardians of the West Fork Watershed. This project has been constructed and is successfully



treating AMD. The treatment system consists of a collection unit with a siphon to convey the AMD under a creek crossing at velocities that will reduce deposition of metals in the line as well as increase the oxygen content of the AMD and constructed wetlands to polish the treated effluent. The construction cost for this project was approximately \$180,000.

On many of these projects, we have successfully employed the subcontracted services of Allstar Ecology, for stream and wetland delineation and Kucera International, Inc. for aerial mapping services. We would anticipate using their services for this project also. Their company profiles and resume are included.

Thank you for the opportunity to submit this statement of qualifications. If there are any questions or if you require additional information, please contact me at 304-296-8216, extension 128 or [steve.buchanan@thinkALPHAfirst.com](mailto:steve.buchanan@thinkALPHAfirst.com).

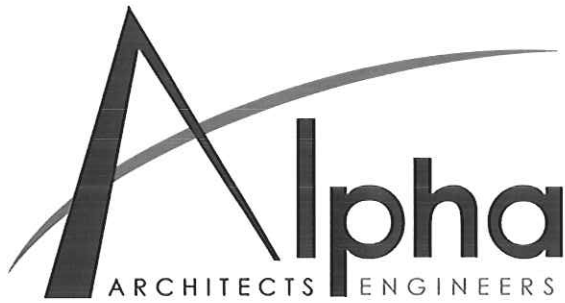
Sincerely,

**ALPHA ASSOCIATES, INCORPORATED**



Steven V. Buchanan, PE, PS  
Principal





## ALPHA RESUMES

### SUMMARY

Mr. Colebank is President and Chief Operating Officer of Alpha. He has been with Alpha Associates, Incorporated since 1985. He began his career with Alpha as a staff engineer and progressed through the ranks from Project Manager to his current position. Mr. Colebank has worked with diverse clients such as WVU, City of Morgantown, WVDOH, WVU Foundation, and the Morgantown Municipal Airport, as well as numerous other public and private clients. Since 1988, Mr. Colebank has been the Principal-In-Charge of many of the Civil Engineering projects developed at Alpha. In his current capacity, Mr. Colebank provides financial and administrative guidance for the day to day operations of the company while continuing to manage Civil Engineering Projects.



### PROFILE

Broad-based responsibilities in the following areas:

- Project Management
- Business Operations and Financial Management
- Quality Assurance/Quality Control
- Civil Engineering Project Management and Design
- New Business Development
- Expert Testimony and Investigation

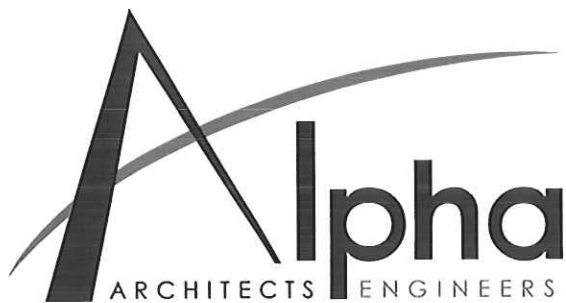
### PROFESSIONAL HIGHLIGHTS

#### Project Manager:

- WVU Research Park; Morgantown, WV
- Federal Bureau of Prisons Hazelton Medium Security Prison
- WV Medal of Honor Recipients Plaza; Hazelton, WV
- North Fork Hughes River Recreation Facilities; Ritchie County, WV
- WVDOH I-77 Welcome Center; Williamstown, WV
- Ices Ferry Bridge; Morgantown, WV
- Monongalia General Hospital Expansion; Morgantown, WV
- Monongalia General Hospital Access Road; Morgantown, WV
- Morgantown Municipal Airport Access Road; Morgantown, WV

#### Indefinite Delivery/Indefinite Quantity Contracts:

- Morgantown Municipal Airport Open End Contract
- West Virginia Division of Highways Open End Contract
- National Energy Technology Laboratories Open End Contract
- West Virginia University Open End Contract
- United States Postal Service Open End Contract



## ALPHA RESUMES

**Richard A. Colebank, PE, PS** | President and COO

### EMPLOYMENT HISTORY

1985 – Current    Alpha Associates, Incorporated  
1983-1985        Charles Townes and Associates, P.C.  
1983                US Army Corps of Engineers

### EDUCATION

West Virginia University  
Masters of Business Administration; 1999  
Bachelor - Civil Engineering; 1982

### QUALIFICATIONS

- **License:** Professional Engineer: West Virginia, Maryland, Pennsylvania, Virginia

Professional Surveyor: West Virginia  
Certified Private Pilot

### AFFILIATIONS

- Former NSPE/PEPP Governor of WV
- ACEC/WV; Former President and National Director
- University High School Foundation; Charter Member; President
- Morgantown Area Chamber of Commerce; Past Chairman
- Monongalia County MPO Technical Advisory Committee; Member
- Morgantown Area Economic Partnership; Member
- American Red Cross, River Valley Chapter B.O.D.

think **Alpha** first.com

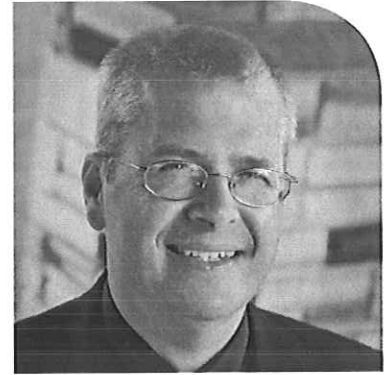
Contact

**Richard A. Colebank**

**304.296.8216**

**800.640.8216**

**rick.colebank@thinkalphafirst.com**



## ALPHA RESUMES

**Steven V. Buchanan, PE, PS** | Principal, Civil Engineer

### SUMMARY

Mr. Buchanan is a Civil Engineer and Principal at Alpha Associates, Incorporated. He has more than 28 years experience working in municipal engineering, storm water management, site planning, hydrologic and hydraulic analysis, wastewater collection systems design, water distribution systems, highway engineering, and traffic engineering.



### PROFILE

Broad-based responsibilities in the following areas:

- Highway Design
- Municipal Engineering
- Wastewater Collection
- Storm Sewer System Design
- Passive Acid Mine Drainage Treatment
- Site Engineering
- Project Management

### PROFESSIONAL HIGHLIGHTS

#### Civil Engineer/Project Manager:

- Borough of Point Marion Engineer; Point Marion, PA
- Mon County BOE Sewage Treatment Plants; Morgantown, WV
- Willowdale Road Sidewalk; Morgantown, WV
- North Fork Hughes River Recreation Facilities; Ritchie County, WV
- WVDOH Rest Areas Sewage Treatment Plants; WV
- WVU Law School Parking Lot; Morgantown, WV
- Uvilla-Shepherdstown Road Project; Jefferson County, WV
- Wheatland Road Widening and Utility Relocation; Berkeley County
- Clay-Battelle High School Sewer Line Extension; Morgantown, WV
- Grade Road Design Study; Berkeley County, WV
- WVDOH I-77 Welcome Center; Williamstown, WV
- WV Medal of Honor Recipients Plaza; Hazelton, WV
- Friends of the Cheat; Five Projects
- Guardians of the West Fork; Two Projects
- Buckhannon River Watershed Association; One Project
- West Buckeye Acrow Bridge; Mon County, WV
- Elkins Bypass; Randolph County, WV





## ALPHA RESUMES

**Steven Buchanan, PE, PS** | Principal, Civil Engineer

### EMPLOYMENT HISTORY

1998 – Current    Alpha Associates, Incorporated  
1989-1998        Widmer Engineering, Incorporated  
1986-1989        Wiley and Wilson, P.C.  
1984-1986        Greiner Engineering Sciences, Incorporated  
Summer-1983    WV Department of Transportation

### EDUCATION

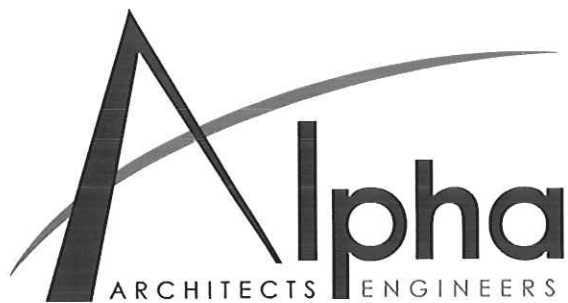
West Virginia University  
Bachelor of Science in Civil Engineering; 1984

### QUALIFICATIONS

- **License:**

Professional Engineer: West Virginia, Pennsylvania, Maryland, Ohio

Professional Surveyor: West Virginia

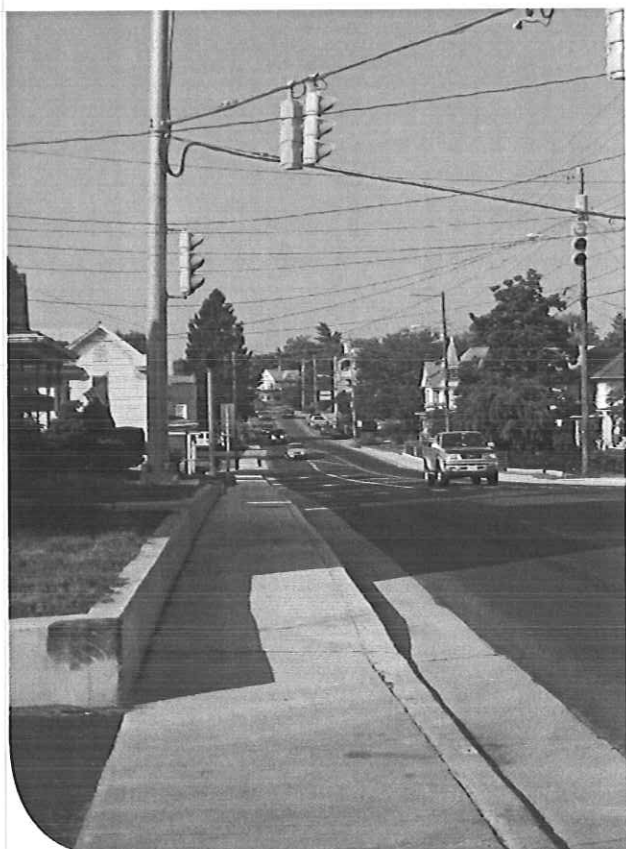


## ALPHA RESUMES

**Rebecca Morris, PE** | Civil Engineer

### SUMMARY

Ms. Morris is a Civil Engineer in the Morgantown Office. She has experience in performing roadway design, storm sewer design, storm water management, environmental permitting and cost estimating. Ms. Morris provides professional civil engineering design services as part of Alpha's team, as well as cost estimating services for architectural and engineering projects.



### PROFILE

Broad-based responsibilities in the following areas:

- Highway Design
- Site Plan Development
- Field Engineering/Inspection
- Traffic Engineering
- Cost Estimating
- Hydrologic and Hydraulic Studies
- Construction Specifications and Permits

### PROFESSIONAL HIGHLIGHTS

#### Civil Engineer/Project Manager:

- Hughes River Recreation Area; North Bend State Park, WV
- Rocky Lane Road; Martinsburg, WV
- WVU Alumni Center; Morgantown, WV
- WVU Research Park Site Design; Morgantown, WV
- WVU Evansdale Redevelopment; Morgantown, WV
- Colonial Hills Subdivision Site Design; Jefferson County, WV
- Springfield Grade Road; Hampshire County, WV
- Mountaineer Middle School; Morgantown, WV
- WVU ESB East Wing Addition; Morgantown, WV
- Mon General Access Road; Morgantown, WV
- Ices Ferry Bridge; Morgantown, WV
- Airport Access Road, Morgantown, WV
- Cheat Lake Elementary School Renovations; Morgantown, WV
- Mountainview Elementary School Renovations; Morgantown, WV
- Mountaineer Place Apartments; Morgantown, WV
- Friends of the Cheat; North Fork of Greens Run; AMD Design



## ALPHA RESUMES

**Rebecca Morris, PE**

Civil Engineer

### PROFESSIONAL HIGHLIGHTS

#### Cost Estimating:

- Hazel Ruby McQuain Riverfront Park; Morgantown, WV
- Hart Field AARF Building; Morgantown, WV
- Ruby Memorial Hospital Emergency Department; Morgantown, WV
- National Energy Technology Laboratory; Morgantown, WV
- Fairmont Federal Credit Union; Bridgeport, WV
- Engineering Sciences Building Addition; Morgantown, WV
- Mountaineer Middle School; Morgantown, WV
- Mon County Sheriff's Building; Morgantown, WV
- Ridgeley Community Center; Ridgeley, WV

### EMPLOYMENT HISTORY

2000 – Current    Alpha Associates, Incorporated

### EDUCATION

West Virginia University  
Bachelor - Civil Engineering; 2003

### QUALIFICATIONS

- **License:** Professional Engineer: West Virginia

### AFFILIATIONS

- WV Society of Professional Engineers
- National Society of Professional Engineers



## CLIENT REFERENCES

The following individuals representing their respective organizations are provided as references:

**Mr. Brady Gutta, Project Manager**

West Virginia Water Research Institute  
202 NRCCE Building  
PO Box 6064  
Morgantown, WV 26506-6064  
[Brady.Gutta@mail.wvu.edu](mailto:Brady.Gutta@mail.wvu.edu)  
Office: 304-293-2867, extension 5445  
Mobile: 304-216-8180

**Mr. Lou Schmidt, Former Non-Point Source Specialist (Now Retired)**

West Virginia Department of Environmental Protection  
Division of Water and Waste Management  
Rt. 5, Box 1016  
Salem, WV 26426  
[louschmidt@frontiernet.net](mailto:louschmidt@frontiernet.net)

**Ms. Amanda Pitzer, Executive Director**

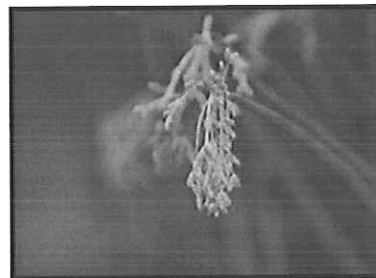
Friends of the Cheat  
119 South Price Street, Suite 206  
Kingwood, WV 26537-1478  
[Amanda@cheat.org](mailto:Amanda@cheat.org)  
Office: 304-329-3621

**Mr. John Eleyette, Executive Director**

Guardians of the West Fork Watershed  
830 Benoni Avenue  
Fairmont, WV 26554  
[jmeleyette@rocketmail.com](mailto:jmeleyette@rocketmail.com)

## **Company Summary**

AllStar Ecology, LLC (ASE) was founded in 2007 to provide sound environmental consulting on natural resource issues. ASE takes pride in its willingness and flexibility to ensure that the goals of its clients are met along with the compliance with natural resource regulations. ASE incorporates the latest scientific research with an extensive knowledge of regulatory policy to provide solutions that are on the cutting edge with the latest technology and methods available. ASE can provide specialized assistance to engineers, consultants, developers, and gas/mineral extraction companies for projects involving streams and wetlands or other ecological issues.



## **Services**

- Stream and Wetland Delineations and Permitting
- Mitigation Planning
- Stream and Wetland Mitigation Acquisition & Construction
- Aquatic Macroinvertebrate Sampling, Sorting, and Identification
- Bird, Amphibian, Mammal, and Plant Surveys
- Stream and Wetland Monitoring
- Invasive Species Control
- Water Quality Monitoring
- GIS Mapping and Analysis
- Threatened and Endangered Species Surveys
- Environmental and Construction Monitoring
- Habitat Assessments
- Forest Inventories
- Archaeology
- Freshwater Mussel Surveys

AllStar Ecology, LLC.  
1582 Meadowdale Rd.  
Fairmont, WV 26554  
[www.AllStarEcology.com](http://www.AllStarEcology.com)

## **Certifications / Trainings**

- Over twenty certified wetland delineators
- Licensed pesticide application business
- North American Benthological certified taxonomist
- Ohio Rapid Assessment Method for Wetlands
- USDA Forest Service Vegetation Specialist Certification
- Pennsylvania Wild Plant Management Permit
- Recognized T&E Species Botanist by USFWS, WV DNR, and PA DCNR
- Contractor's License
- Archaeological and Cultural Resources Protection Training
- Master Planning Historic Structures 1 Training
- Section 106 Advanced Training, Ohio
- Qualitative Habitat Evaluation Index, Ohio
- Advance Scuba Diver Certification
- WV freshwater mussel identification course

## **Select Project Experience**

AllStar Ecology team members have conducted a broad spectrum of environmental resource activities for state and federal agencies, academic institutions, nonprofit organizations, and private consulting firms before founding AllStar Ecology LLC in 2007. Our experience performing biological and natural resource inventories, wetland delineations, construction and permit compliance monitoring, etc. in various parts of the United States allows us to draw upon experiences that enable our team to fulfill clients' needs efficiently and effectively.

Since the creation of AllStar Ecology, LLC, team members have worked on projects around the Mid-Atlantic Region. Below is a selected compilation of projects performed by AllStar Ecology, LLC. Projects selected show the versatility and abilities of the company to carry out projects in various natural resource fields.

### **Wades Run Stream Assessment and Mitigation Planning—Monongalia County, WV**

ASE assisted in assessment of streams using the EPA Rapid Bioassessment Protocols and conducted benthic sampling and identification for stream baseline data for coal mining activities. ASE collected geomorphic stream data and assisted engineers with the development of a concept mitigation plan that involved the reconstruction of a stream post-mining using natural stream design principles.



**Canaan Valley PSD Wetland Delineation and Mitigation Planning—Tucker County, WV**  
ASE located wetlands and streams within the areas proposed for sanitary sewer lines and two wastewater treatment plants. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. ASE assisted with Section 404/401 permitting and the development of a mitigation plan for wetland impacts.

**Fraizer's Bottom Mitigation Monitoring—Putnam County, WV**  
ASE performed a variety of services to assess the condition of a constructed wetland system (approx. 14 acres). Extensive vegetation surveys were conducted to compile a species list of vegetation as well as document invasive species. A wetland delineation was conducted to determine the exact size of the created wetlands for comparison with the clients mitigation liability. Wildlife was surveyed by sight and call (birds and frogs). Monitoring photographs were taken to document the site conditions. All wetlands, vegetation transects, and monitoring points were mapped with a Trimble Geo XH GPS unit.

**Loudoun Valley Stream Construction—Loudoun County, VA**  
ASE personnel provided oversight and assistance in the installation of restoration structures and practices including rock sills, tree installation for riparian buffer creation, livestock/coir matting installation for stream bank stability for an onsite mitigation project. The goals of the activities were to improve water quality, geomorphic stability, and fish/wildlife habitat.

**Moorefield Green Wetland Corrective Actions—Loudoun County, VA**  
ASE installed coir matting, livestock, vegetation monitoring plots and shallow groundwater monitoring wells as part of a corrective action plan for a constructed onsite wetland mitigation project totaling 1.33 acres.

**Kanawha Stream Bank Development—Pocahontas County, WV**  
ASE performed assessment and mapping services for the feasibility of a stream mitigation bank serving the Kanawha River watershed. Services included mapping the locations of streams, fences, roads, food plots, and other manmade features with a Trimble Geo XH GPS unit. Streams were assessed based on possible mitigation activities and the potential improvement of ecological function. A draft prospectus was prepared for submittal to regulatory agencies.

**Potomac Mitigation Bank Development—Hampshire County, WV**  
ASE performed assessment and mapping services for the feasibility of a stream mitigation bank serving the Potomac River watershed. Streams were assessed based on possible mitigation activities and the potential improvement of ecological function. A prospectus was prepared and plan is under development for the construction of the bank including the creation of

approximately 17 acres of wetlands and the restoration/enhancement of approximately 4,000 linear feet of stream channel.

**Carlos Mine Stream Mitigation Construction—Allegheny County, MD**

ASE provided oversight for the installation of stream enhancements along approximately 1,400 linear feet of stream to satisfy compensatory mitigation requirements for stream impacts from coal activities. Enhancements included the installation of rock cross vanes, single arm vanes, rock toe protection, bankfull benches, and trash/debris removal. Goals of the project included the improvement of a low flow channel and pool habitats.

**Belington Pedestrian Trail Delineation—Barbour County, WV**

ASE delineated an approximate 3.16 acre area along the Tygart River where a pedestrian trail was proposed. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. Findings from ASE's delineation were incorporated into the project design to avoid the need for Section 404/401 permitting.

**Hazelton Federal Correction Institute Stream and Wetland Mitigation—Preston County, WV**

ASE constructed onsite compensatory mitigation for a new prison facility in Hazelton, WV. The project included several types of mitigation activities. Splash pools and a diversion ditch for existing storm water were constructed to repair significant erosion at the site. Wetland mitigation included 1.89 acres of forested wetland creation (4 separate cells), 0.86 acres of wetland enhancement (emergent to forested), and 0.54 acres of streamside wetland creation (3 separate cells). Stream mitigation activities included 2,509 linear feet of stream channel relocation/restoration of a high gradient channel which included over 100 stone and log structures, coir matting, livestakes. The project area received tree and shrub plantings. ASE worked extensively with the project engineer and contractor to adapt the construction and design to achieve project goals yet save the contractor money. ASE was able to reduce the overall cost of the project by 15%.

**Elkins Airport Runway Expansion—Randolph County, WV**

ASE investigated the area of a proposed runway expansion for the presence of potential jurisdictional waters. The work involved coordination with the airport manager and security personnel and access around runways and flight operations.



**Mid Atlantic Aerospace Complex Hangar Project at North Central West Virginia Airport—Harrison County, WV**

ASE delineated an approximate 16.25 acre area for the construction of a new hangar. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. Work involved access to secure areas at the airport and coordination with airport security and flight operations.

**Morgantown Airport Industrial Park and Access Road—Monongalia County, WV**

ASE worked with project engineers to assess wetland limits and constraints for a future business park. ASE also performed stream assessments necessary to complete the West Virginia Stream and Wetland Valuation Metric and develop mitigation options for a proposed access road. Work involved coordination with airport security to access the site.

**Charles Connor/Messenger Passive Treatment Site—Preston County, WV**

ASE delineated an approximate 29.5 acre site for the construction of an acid mine drainage treatment facility. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. The site contained extensive emergent and scrub-shrub wetland communities. ASE provided input on potential design modifications to limit impacts to existing aquatic resources while still meeting project goals.

**Sleepy Creek Development—Morgan County, WV**

ASE prepared an compensatory mitigation plan to mitigate wetland impacts with onsite creation of 1.97 acres of PSS wetlands, enhancement of 1.37 acres of wetlands, and preservation of 3.82 acres of wetlands. Stream mitigation was proposed onsite through the relocation of 1,256 linear feet of stream channel using natural stream design, enhancement of 2,652 linear feet of stream, and the preservation of 2,384 linear feet of stream.

**Cowen Public Service District Upper Glade Sewer Project – Phase 1 Treatment Plant Expansion—Webster County, WV**

ASE delineated an approximate 3.67 acre site for the expansion of a wastewater treatment plant. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. The ASE delineation allowed the applicant to avoid most aquatic resources to minimize permitting requirements.



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**Lincoln PSD Griffithsville Extension—Lincoln County, WV**

ASE delineated jurisdictional waters in the vicinity of 5 stream crossing for a water line extension. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. Work was conducted to assist in permitting for the project.

**White Oaks Phase II Delineation—Harrison County, WV**

ASE delineated an approximate 160 acre site for commercial development. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers. ASE's findings were used to avoid jurisdictional areas and still borrow fill material from the site to use on adjacent projects.

**US Customs and Border Protection Advance Training Center—Jefferson County, WV**

ASE delineated a route for a proposed waterline. ASE's findings were used to avoid jurisdictional area. Work required clearance by security and coordination with safety personnel.

**Hampshire County Industrial Rail Spur Delineation—Hampshire County, WV**

ASE delineated an approximate 31.82 acre site for the expansion of a rail spur. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers.

**Wetzel County Commission Plat Delineation—Wetzel County, WV**

ASE delineated an approximate 8.01 acre site for the planning purposes by the Wetzel County Commission. Wetlands were identified, flagged and located with a Trimble Geo XH GPS unit. A report was generated as a formal Jurisdictional Determination Request with the Corps of Engineers.

**Prichard Intermodal Facility—Wayne County, WV**

ASE performed a variety of ecological and environmental services for the construction of an intermodal rail facility. ASE conducted a stream and wetland study to expand the Area of Interest to better evaluate project options. ASE explored various mitigation options and prepared an alternative analysis which included the feasibility of onsite options and offsite opportunities found by ASE. ASE performed a study on Indiana bats including an assessment of onsite habitat and a habitat availability study to assess the impacts of the project on available habitat in the project vicinity. ASE assisted in the preparation of the Section 404/401 permit application.



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**Marcellus Shale Natural Gas Projects--Marion, Wetzel, Harrison, Doddridge, Ritchie Counties, WV and Green County, PA**

ASE has served the natural gas industry by delineating streams and wetlands on over 150 sites totaling more than 6,000 acres for various Marcellus Shale projects. Projects include well pads/pits, freshwater impoundments, water withdrawals, spoil areas, road improvements, water lines and pipelines. ASE prides itself on a quick turnaround time and responsiveness to the needs of clients while conducting work of the highest quality.

**Natural Gas Pad/ Pipeline Location Services**

ASE conducted botanical surveys in request from the U.S Fish & Wildlife Service and the U.S. Forest Service to detect presence or absence of federally listed species and state sensitive species prior to the development of Marcellus Shale gas pads and associated pipelines within the Monongahela National Forest, WV.

**Natural Gas Pipeline Feasibility**

ASE conducted a pipeline feasibility study to assess the possible routes to construct a new pipeline within Monongahela National Forest, WV. ASE staff successfully routed the pipeline with consideration of sensitive areas including streams, wetlands, wildlife habitat, and plant habitat.

**Natural Gas Pipeline Impact Botanical Survey**

ASE conducted botanical surveys in request from the Fish & Wildlife Service and the U.S. Forest Service to detect presence or absence of federally listed species and state sensitive species prior to updating several pipelines within the Monongahela National Forest, WV.

**Natural Gas Pipeline Route Development Permitting Support**

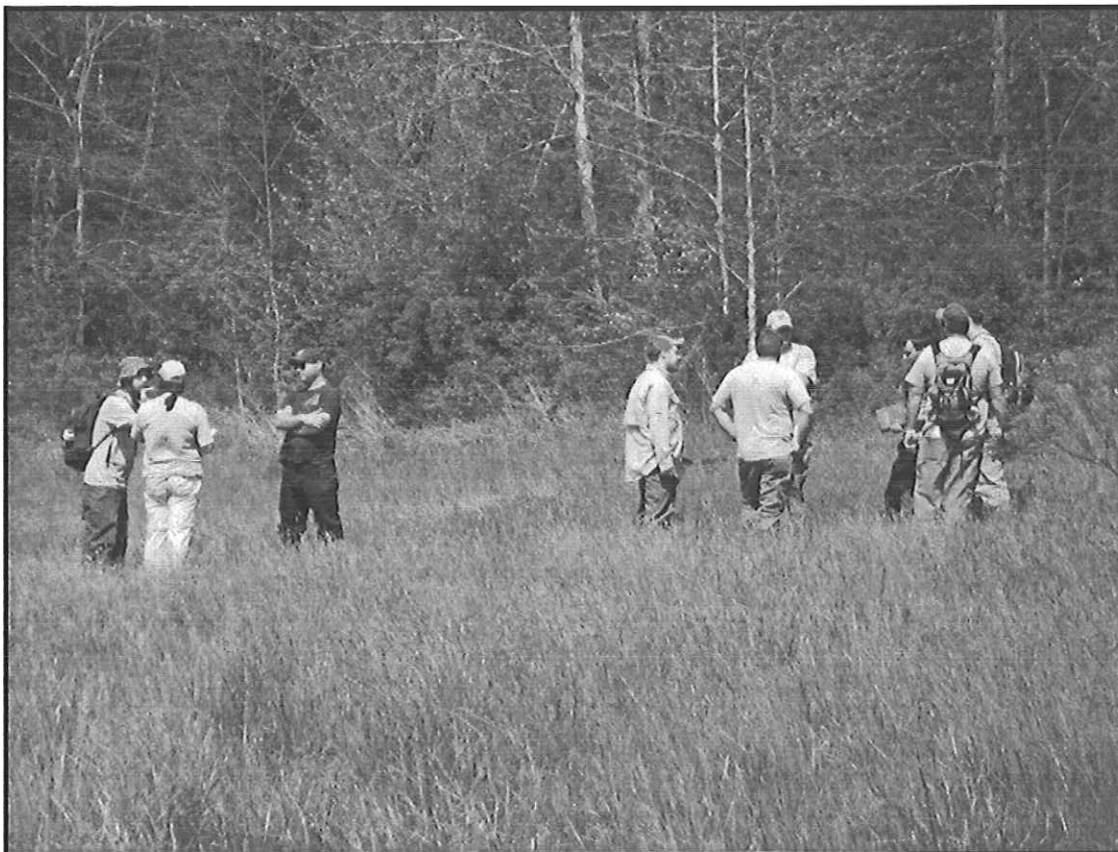
ASE assisted in conducting a pipeline feasibility study to assess the possible routes for construction of a new pipeline within the northern panhandle of WV. ASE staff documented all streams and wetlands and conducted ecological community classifications for all stands within the project area. Efforts coincided with Nationwide 12 permitting for the pipeline project.

**Stream Monitoring and Reporting for NPDES Permitting – Grant, Harrison, Monongalia, Taylor, Tucker, and Upshur, Counties, WV.**

ASE conducted physical habitat, water chemistry, and benthic macroinvertebrate sampling for over 30 stream locations in 2012 for NPDES permitting requirements. Benthic macroinvertebrates were sub-sorted, identified to the lowest taxonomic level possible (typically genus), and used to calculate West Virginia Stream Condition Index Scores. All data was compiled into survey reports for WVDEP NPDES permitting requirements.

## **Resumes of Key Staff**

AllStar Ecology, LLC relies on an experienced, well-trained, and knowledgeable staff with a diversity of skills to meet the needs of our clients. ASE employs over twenty different environmental scientists with specialists in wetlands, streams, botany, endangered species, forestry, regulatory/permitting, archaeology, and general biology/natural resource management. ASE further invests in its employees by providing top-notch training and professional development opportunities to ensure staff have the most up to date skills and knowledge to perform at a high level of excellence. Attached are the resumes of the company owners and key personnel.



## **Walter E. Veselka**

- *Senior Environmental Scientist/Project Manager*



Walter Veselka is an owner in AllStar Ecology and has worked throughout the United States with focuses on industry consulting and environmental research. Mr. Veselka specializes in wildlife biology and wetland issues with specific focus on the ecological and functional assessment of wetlands for regulatory purposes and mitigation. Mr. Veselka is an experienced wetland scientist and has worked on projects for oil/gas, coal, and residential/commercial development.

### **Education**

M.S. (2008): Wildlife and Fisheries Resources, West Virginia University, Morgantown, WV

B.S. (2000): Wildlife Ecology, University of Maine, Orono, ME

### **Experience**

Senior Environmental Scientist/Project Manager - AllStar Ecology, LLC	2007-current
Wildlife Biologist - WVU Research Corporation, Morgantown, WV	2008-2012
Research Assistant - West Virginia University, Morgantown, WV	2005-2008
Staff Biologist - Impact Sciences, Inc., CA	2004
Biological Technician - US National Park Service, CA	2004
Biological Consultant - Clark Biological Consulting, Plumas County, CA	2004
Biological Consultant - BioEnvironmental Associates, Kern County, CA	2004
Desert Tortoise Consultant - Southern Nevada Ecology, Inc., Clark County, NV	2003
Desert Tortoise Consultant - Nevada Biological Consulting, Clark County, NV	2003
Desert Tortoise Consultant - Psomas Inc., Imperial County, CA	2003
Biologist - Garcia and Associates Inc., San Bernardino County, CA	2002-2003
Wildlife Biologist - US Forest Service, Giant Sequoia NP	2001-2002
Environmental Inspector - Blanton and Associates Inc., CA	2000-2001
Research Technician - Virginia Tech University, Montgomery County, VA	2000
Wildlife Research Technician - Massachusetts Military Reservation, Cape Cod	2000
Research Assistant - University of Maine, Sagadahoc County, ME	1999

### **Professional Development**

The Wildlife Society

The Society of Wetland Scientists

Army Corps of Engineers, U.S. EPA, USDA Natural Resources Conservation Service

—Reg V Interagency Federal Wetland Delineation Training

WVDEP—Construction Storm Water 101 Workshop

U.S. Forest Service/ Roane-Jackson Technical Center—Wetland Construction Workshop

Canaan Valley Institute/ WVDEP —A New Direction: Approaches and Strategies for Stream



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Mitigation in West Virginia

WVDEP—Smart Solutions: Community-based Decentralized Wastewater Management

### **Publications**

**Veselka, W.**, Anderson J.T., Kordek, W. (2009). Using dual classifications in the development of avian wetland indices of biological integrity for wetlands in West Virginia, USA. Environmental Monitoring and Assessment. *Published online 29 April 2009.*

**Veselka, Walter** (2008). Developing Wetland Indices of Biological Integrity for Wetlands in West Virginia. M.S. Thesis. West Virginia University

**Veselka, W.**, Anderson J.T., Kordek, W. (2008) “*Getting the most from wetland Indices of Biological Integrity*” A presentation to the Annual Meeting of Society of Wetland Scientists. Washington, D.C. .

**Veselka, W.**, Anderson J.T., Kordek, W. (2007) “*Comparing Cowardin and Hydrogeomorphic Classifications in Building a Wetland Bird Index of Biotic Integrity for West Virginia*” A presentation to the Annual Meeting of Society of Wetland Scientists. Sacramento, CA.

Christ, M., Hansen, E., **Veselka W.** (2007) “*A Framework for Rivers and Streams Nutrient Criteria in West Virginia.*” West Virginia Rivers Coalition Report submitted to WV Department of Environmental Protection.

**Veselka, W.**, Anderson J.T., Kordek, W. (2006) “*Using Landscape Characteristics to Explain Avian Communities in Wetlands of West Virginia.*” A presentation to the Northeast Associations of Fish and Wildlife Agencies. Burlington, VT.



## Ryan L. Ward

- *Senior Environmental Scientist/Project Manager*



Ryan Ward is an owner of AllStar Ecology and has worked throughout the United States on various projects with an emphasis on wildlife research. Mr. Ward has studied in environments in Texas, New Mexico, Arizona, and Oklahoma. He also has extensive regulatory experience throughout the Mid-Atlantic region, especially in West Virginia and Virginia where he is a Certified Professional Wetland Delineator. Mr. Ward specializes in stream and wetland issues including delineation, compensatory mitigation, permitting, natural stream

design, and wetland restoration.

### **Education**

M.S. (2005): Wildlife and Fisheries Resources, West Virginia University, Morgantown, WV.

B.S. (2003): Wildlife and Fisheries Management (Minor: Biology), Texas Tech University, Lubbock, TX.

### **Experience**

Senior Environmental Scientist/Project Manager - AllStar Ecology, LLC	2009 -current
Owner/Operator - Spring Peeper Farm & Nursery	2007-current
Environmental Scientist/President - Mountain State Aquatic Resources, LLC	2007-2009
Environmental Scientist - Virginia Waters and Wetlands Inc., Warrenton, VA.	2005-2009
Research Assistant - West Virginia University, Morgantown, WV	2003-2005
Research Technician - Texas Cooperative F&W Research Unit, Lubbock, TX	2002-2003
Forestry Technician GS-462-4 - USDA Forest Service, Carlsbad, NM	2001
Research Technician - Texas Tech University, Lubbock, TX	2000

### **Professional Development**

Society of Wetland Scientists

The Wildlife Society

West Virginia University Natural Stream Design Short Courses

-Introduction to Stream Functions and Processes—Course 1

-Methods for Stream Assessment and Analysis—Course 2

North Carolina State Stream Restoration Program

-Level III: Advanced Stream Restoration Design Principles

-RC 401 Construction Practices for Stream Restoration

WVDEP—Construction Storm Water 101 Workshop

ISA Certified Arborist (MA-4989A)

U.S. Forest Service/Roane-Jackson Technical Center--Wetland Construction Workshop

Wetland Training Institute, Inc—Basic Wetland Delineation Course



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Virginia Professional Wetland Delineator (#3402000105)

### **Publications**

**Ward, R. L., J. T. Anderson, and J. T. Petty.** 2008. Effects of road crossing on stream and streamside salamanders. *Journal of Wildlife Management* 72:760-771.

**Anderson, J. T., J. D. Osbourne, and R. L. Ward.** 2004. Integrating riparian restoration to promote wildlife habitat with natural stream channel design on mine land habitats. *Proceedings of the 21<sup>st</sup> Annual American Society of Mining and Reclamation Meeting* 21:47-73.

**Kamler, J. F., W. B. Ballard, J. C. Bullock, D. A. Butler, and R. L. Ward.** 2003. Prey remains found in great horned owl (*Bubo virginianus*) pellets from Union County, New Mexico. *The New Mexico Journal of Science* 43:68-72.



## **Gregory L. Short Jr.**

— *Senior Botanist/Project Manager*



Greg Short is an owner in AllStar Ecology and has worked throughout the eastern United States conducting vegetation surveys and threatened & endangered species surveys. Mr. Short has conducted floristic inventories in Ohio, Pennsylvania, Virginia, West Virginia, Delaware, and New Jersey. He has been affiliated with various private, state, and federal agencies conducting threatened & endangered species surveys for plants and mammals throughout Pennsylvania and West Virginia. Mr. Short is an experienced wetland delineator and has worked on

projects for oil/gas, coal, and residential/commercial development.

### **Education**

A.S. (2005) Natural Resources and Wildlife, Garrett College of Maryland, McHenry, MD

### **Experience**

Senior Environmental Scientist/Botanist - AllStar Ecology, LLC	2009-current
Ecologist/Botanist - USDA Forest Service Research Station, Dunbar, WV	2009
Environmental Resource Specialist III - Hatch Mott MacDonald, Morgantown	2007- 2009
Ecologist/Botanist - USDA Forest Service, White Sulphur Springs, WV	2007
Field Botanist/Biological Technician - USDA Forest Service, Morgantown, WV	2006
Ecology Project Assistant - WV Natural Heritage Program WVDNR, Elkins, WV	2005-2006
Invasive Species Technician - WVDNR, Kingwood, WV	2004
Biological Science Technician - WVDNR, Kingwood, WV	2003

### **Professional Development**

Society of Wetland Scientists  
 USDA Forest Service Northern Research Station, Vegetation Specialist Certification  
 Richard Chinn's 40 Hour Wetland Delineation Certification  
 PADI Advanced Scuba Diver Certification  
 Pennsylvania Wild Plant Management Permit  
 Recognized botanist to conduct T&E Species by the US Fish & Wildlife, West Virginia DNR,  
 and Pennsylvania DCNR

### **Publications**

Streets, B. P., J. P. Vanderhorst, C. Good, and **G. L. Short**. 2008. Floristic Inventory of the  
 National Bluestone Scenic River. National Park Service.  
[http://www.nps.gov/nero/science/FINAL/Blue\\_floristic/Blue\\_flora.htm](http://www.nps.gov/nero/science/FINAL/Blue_floristic/Blue_flora.htm)

## **Sarah E. Veselka**

- *Senior Environmental Scientist/Project Manager*



Sarah Veselka is an owner of AllStar Ecology and specializes in stream ecosystems. She has over twelve years of experience working within aquatic research laboratories and for non-profit organizations conducting stream water quality monitoring, and fish and macroinvertebrate community assessments. Ms. Veselka has also served as an environmental consultant in Colorado, Georgia and in West Virginia. Her skills include southern and central Appalachian freshwater fish, mussel, and aquatic benthic macroinvertebrate identification.

### **Education**

M.S. (2004): Wildlife and Fisheries Resources, West Virginia University, Morgantown, WV.

B.S. (2000): Biology, University of Georgia, Athens, GA

### **Experience**

Senior Environmental Scientist/Project Manager - AllStar Ecology, LLC	2007-current
Executive Director - Friends of Deckers Creek, Morgantown, WV	2007-2012
Environmental Consultant - Downstream Strategies, Morgantown WV	2006 -2008
Americorps/Office of Surface Mining VISTA - Friends of Deckers Creek	2006 -2007
Environmental Research Teacher - Regional Math & Science Center, MD	2006
Laboratory Technician II - West Virginia University, Morgantown, WV	2005-2006
Fisheries Consultant - Water Quality Technology, Inc. Fort Collins, CO	2004 -2005
Graduate Research Assistant, PhD Candidate - WVU, Morgantown, WV	2005
Graduate Research Assistant - West Virginia University, Morgantown, WV	2002- 2005
Research Technician I-III - University of Georgia, Athens, GA	2001-2002

### **Professional Development**

The American Fisheries Society  
 Certified Family Taxonomist--North American Benthological Society  
 Certified Wetland Delineator – The Swamp School  
 WV Freshwater Mussel Course – WVDNR and WVU Environmental Research Center  
 Ohio Rapid Assessment Method (ORAM) Training  
 Friends of Deckers Creek Board of Directors

### **Publications**

**McClurg (now Veselka), S.E., J.T. Petty, P. Mazik, and J. Clayton.** 2007. Stream ecosystem response to limestone treatment in acid impacted watersheds of the Allegheny Plateau, West Virginia. *Ecological Applications*. 17(4):1087-1104.

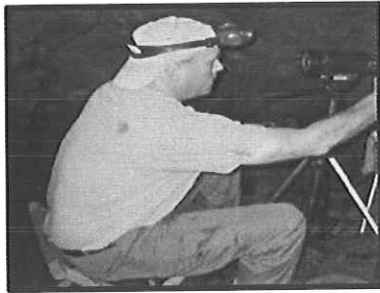


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## **Jack L. Wallace**

— *Rare, Threatened and Endangered (RTE) Animal Specialist*



Jack Wallace joined the AllStar Ecology team in 2012. Mr. Wallace is a 24 year RTE specialist with the West Virginia Division of Natural Resources, and has an intimate knowledge of West Virginia's imperiled species and their habitats and requirements. Mr. Wallace has worked with private, state, federal and international entities on a variety of RTE issues in West Virginia, Kentucky, Maryland, Pennsylvania, Tennessee and Virginia. Mr. Wallace has extensive experience working with West Virginia endemics (WV northern flying squirrel,

Cheat Mountain Salamander, and Cheat threetooth snail), as well as bats (Indiana and VA big-eared), mussels, and birds of prey (bald and golden eagles and peregrine falcons).

### **Education**

B.S. (1990): Wildlife Management. West Virginia University, Morgantown, WV

### **Experience**

RTE Specialist - AllStar Ecology, LLC	2012-current
Endangered Species Specialist - WV Division of Natural Resources, Elkins, WV	1988-2012
Contract Trapper - USDA Forest Service, Marlinton WV	1995

### **Professional Development**

PADI and YMCA SCUBA Certified, including Advanced Open Water, SLAM (SCUBA Lifesaving and Accident Management), Emergency Oxygen Administration, Public Safety Diver, Drysuit Diver

Qualified by USFWS, USFS and WVDNR to do biological inventory work with RTE species  
Sonobat Acoustic Sampling Training Workshop, Bat Conservation and Management, Inc.

Introduction to Cave Rescue, National Speleological Society

Cave and Mine Gating Workshop, American Cave Conservation Association

### **Publications**

Clayton, J.L., C.W. Stihler, and J.L. Wallace. 2001. Status of and potential impacts to the freshwater bivalves (Unionidae) in Patterson Creek, West Virginia. *Northeast Naturalist* (8(2):179-188.

Stihler, C.W., J.L. Wallace, and A. Jones. 1998. Use of Elkhorn Cave, Grant County, West Virginia, by Virginia big-eared bats (*Corynorhinus townsendii virginianus*) (abstract). *WV Acad. Sci., Proc.* 70(1):5.



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- Stihler, C.W., **J.L. Wallace**, and A. Jones. 1997. Use of Elkhorn Cave, Grant County, West Virginia, by a bachelor colony of *Corynorhinus townsendii virginianus* (abstract). Bat Research News. 38(4):130.
- Stihler, C.W., V.M. Dalton, **J.L. Wallace**, and V. Brack, Jr. 1996. Radio telemetry and light-tagging studies of *Corynorhinus townsendii virginianus*: Preliminary results (abstract). Bat Research News. 37(4):152
- Stihler, C.W. and **J.L. Wallace**. 1994. Monitoring of nest boxes for the endangered northern flying squirrel (*Glaucomys sabrinus fuscus*) on the Monongahela National Forest, Mower Tract, 1992-1993. Report prepared for the USDA Forest Service, Monongahela National Forest.
- Stihler, C.W. and **J.L. Wallace**. 1993. Results of surveys for eastern woodrats, (*Neotoma floridana magister*) at 16 sites on the Monongahela National Forest. Report prepared for the USDA Forest Service, Monongahela National Forest.
- Stihler, C.W. and **J. Wallace**. 1988-2011. Endangered Species Federal Assistance Performance Report, Project WVDNR. (yearly report)

## **Mitzy L. Schaney**

- *Lead Archaeologist*



Mitzy Schaney is the Lead Archaeologist for AllStar Ecology and has worked in Appalachia as an Archaeologist for over ten years. She has worked extensively both for and with federal agencies including the U.S. Army Corps of Engineers and private consulting firms. She is certified to conduct archeological surveys in West Virginia, Ohio, and Pennsylvania. Ms. Schaney also specializes in soil and wetland sciences and is a certified wetland delineator.

### **Education**

M.S. (2005): Geology, West Virginia University, Morgantown, WV

B.S. (2000): Anthropology/Archaeology, Mercyhurst College, Erie, PA

### **Experience**

Lead Archaeologist – AllStar Ecology, LLC	2012-current
Archaeologist – U.S. Army Corps of Engineers, Nashville, TN	2010-2012
Archaeologist – U.S. Army Corps of Engineers, Huntington, WV	2009-2010
Environmental Scientist – Burgess & Niple, Inc., Columbus, OH	2005-2009
Visiting Instructor of Geology - Mercyhurst Archaeological Institute, PA	2004-2005
Geoarchaeologist – Michael Baker Jr., Inc., Moon Township, PA	2002-2005
Field Assistant (Soil Science) – West Virginia University, Morgantown, WV	2004
Head Teaching Assistant (Geology) - West Virginia University, Morgantown	2001-2004
Geoarchaeologist - West Virginia University, Morgantown, WV	2003
Geoarchaeologist Intern – Troodos Archaeological and Environmental Survey	2001
Field Director – American Archaeological Services, Ltd., Youngstown, OH	2002-2003
Archaeologist I-III – R. Christopher Goodwin and Associates, Frederick, MD	1999-2001

### **Professional Development**

Archaeological Resources Protection Training Program, Homeland Security.  
 Cultural Resources, Corps of Engineers Training Course.  
 Master Planning Historic Structures I, Corps of Engineers Training Course.  
 Civil Works Orientation, Corps of Engineers Training Course.  
 Section 106 Fundamentals, Workshop by Ohio Historic Preservation Office.  
 Section 106 Advanced, Workshop by Ohio Historic Preservation Office.  
 Cultural Resource Essentials, Pennsylvania State Historic Preservation Office, Harrisburg, Pennsylvania.  
 Basic Wetland Delineation – Richard Chinn Environmental Training, Inc. Certification based on U.S. Army Corps of Engineers Wetland Delineation Manual (1987).



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Wetland Flora – Institute of Botanical Training, LLC.  
Ohio Rapid Assessment Method for Wetlands v. 5.0 Training, State of Ohio Environmental  
Protection Agency.  
Qualitative Habitat Evaluation Index / Biocriteria Training, State of Ohio Environmental  
Protection Agency.  
Identifying Plants, Methods and Skills, Wetland Training Institute, Dowling, Michigan.  
Basic Processes in Hydric Soils – North Carolina University, Savannah, Georgia.  
Advanced Problems in Hydric Soil Evaluation – North Carolina University, Savannah, Georgia.

### **Publications**

Grote, T., R. Robinson, **M. Schaney**, E. Straffin, and A. Myers (2009). Late Quaternary  
stratigraphy of the Upper Ohio-Allegheny River Basin: A developing framework for  
geoarchaeological investigations. Geological Society of America Annual Meeting Programs  
with Abstracts v. 41, p. 204.

## **James R. King**

- *Soil / Environmental Scientist*



Jim King joined the AllStar Ecology team in 2011. Mr. King has extensive experience in mining reclamation and significant wetland experience within the Mid-Atlantic region. Mr. King has worked extensively on mining projects and oil and gas projects delineating and assessing streams and wetlands for permitting and avoidance for the construction of well pads, frac pits, freshwater impoundments, access roads, and pipeline routing. Mr. King plays an important role in overseeing many of our mitigation construction projects.

### **Education**

M.S. (tentative): Soil Science, West Virginia University, Morgantown, WV.

B.A. (2001): Environmental Protection, West Virginia University, Morgantown, WV.

A.S. (1986): Pre-Professional Forestry, Allegany College, Cumberland, MD.

### **Experience**

Soil/Environmental Scientist - AllStar Ecology, LLC	2011-current
Environmental Scientist - Hatch Mott MacDonald, Morgantown, WV	2006-2010
River Guide - White Water Adventurers, Inc, Ohiopyle, PA	1988-current
Carpenter - Laurel Ridge Builders, Friendsville, MD	2004-2005
Research Assistant - West Virginia University, Morgantown, WV	2001-2003
Environmental Technician - Catenary Coal Company, Eskdale, WV	2001

### **Professional Development**

American Society of Mining and Reclamation

Society of Wetland Scientists

Soil Science Society of America

American Society of Agronomists

Wildlife and Fisheries Management Course Study (09/1986 - 05/1988): Frostburg State University, Frostburg, MD.

The Swamp School: Wetland Delineation and Regional Supplements (40 hour course)



### Company Profile

Kucera International Inc. is a leading provider of geospatial data acquisition/production and application services, with primary expertise in aerial imaging, and remote sensing, ground and airborne control surveying, photogrammetry and orthophotography, surface modeling, cadastral mapping, data conversion, and geographic information systems.

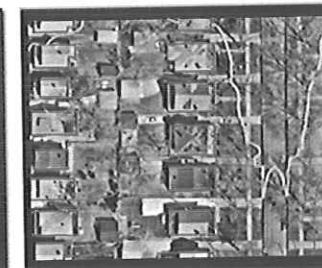
Kucera has throughout its 58-year history operated as the same independently owned professional firm known for high quality, cost-competitive service. Today, Kucera stands as one of the largest private mapping operations in the world, with a staff of over 80 experienced geomatics professionals and four production offices. These offices complete aerial surveying, mapping, and related services for hundreds of individual projects annually, covering areas ranging in size from a few acres to thousands of square miles.

Kucera's in-house aerial acquisition/sensing technology includes a fleet of twin and single-engine aircraft equipped with the most advanced vertical and oblique aerial cameras, multispectral and hyperspectral sensors, and lidar/laser scanners, all integrated with high accuracy airborne GPS/IMU systems for in-flight georeferencing. Kucera's aerial data processing and mapping technologies include dedicated aerotriangulation and orthophoto production workstations, terrain/surface modeling stations, digital and analytical stereoplotters, GIS and CAD systems, film and map scanners, and high resolution plotters, and imaging laboratories. Kucera's ground survey technologies include latest generation GNSS/GPS receivers, total stations, and high definition ground laser scanners.

Kucera's staff is comprised of professional photogrammetrists, surveyors, geodesists, engineers, geographers, pilots, photographers, photo interpreters, cartographers, CAD and GIS specialists, computer analysts and other related experts. All staff members have received relevant education and/or training prior to joining and as part of the Kucera organization. The average practical experience level of the Kucera staff is over 15 years per individual.

Kucera maintains rigorous internal production and quality management systems, with full review, documentation, tracking, and reporting for each phase of every project. The systems are implemented through a dedicated project management team and computerized project database. Cost control and reporting is accomplished through an automated cost accounting system.

Kucera's clientele include numerous local, state, and federal government departments, commercial/industrial organizations, utilities, private professional firms, colleges/institutions, and other



entities. Kucera has performed work throughout the US and numerous other countries.

Kucera is a longstanding corporate member of the American Society of Photogrammetry and Remote Sensing (ASPRS), Management Association for Private Photogrammetric Surveyors (MAPPS), and a number of national, state, and local GIS, surveying, engineering, and related organization.

### Kucera's In-House Service Experience

#### Service, Provided Since:

Film Aerial Photography, 1953	Aerial lidar surveys, 2003
Digital Aerial Photography, 2005	Digital Terrain Modeling, 1980
Digital oblique aerial photo, 2009	Digital Plan/Topo Mapping, 1986
Multispectral Sensing - 1975	Orthophoto Production, 1983
Ground Surveying, 1953	Metadata Generation, 1996
Ground GPS, 1991	Aerial Volume Surveys, 1960
Airborne GPS/IMU, 1999	Cadastral Mapping, 1975
Analytical Aerotriangulation, 1975	GIS/Data Conversion, 1988
Softcopy Aerotriangulation, 1996	



### In-House Geomatic Services

#### Aerial Surveying:

- Film and digital black & white, natural color, color infrared aerial photography
- Vertical and oblique digital aerial photography
- Pushbroom and frame digital aerial photo
- Multispectral, hyperspectral, and thermal IR aerial surveys
- Aerial LiDAR surveys
- Airborne GPS and GPS / IMU surveying
- On-call / emergency response aerial surveys
- Low altitude helicopter / LAMP surveys
- Aerial survey aircraft rental

#### Ground Surveying and Georeferencing:

- GPS and conventional ground control and geodetic surveying
- Base station operation
- Monumentation
- Hydrographic, utility, boundary, obstruction, topographic surveys
- Field edit and accuracy verification
- Analytical and softcopy aerotriangulation

#### Aerial Image Acquisition and Conversion / Processing:

- Film scanning and digital image processing
- Photographic enlargements / prints, reproduction services
- Digital image rectification, orthophotography, mosaics
- Historical aerial photography research, acquisition, processing
- Digital image plots, mounting, lamination, framing backlighting, wall hangings
- Satellite image distribution

#### Digital Terrain and Surface Feature Mapping:

- Digital elevation, terrain, and surface models
- Cross-section and profile mapping
- Planimetric / topographic feature stereocompilation and digitizing
- Photogrammetric and non-stereo update mapping
- 3D visualization development and support
- Aerial RADAR / IFSAR surface data processing

#### Property, Land Use, and Address Mapping:

- Map scanning, vectorization, heads-up digitizing
- Best-fit digitized and COGO cadastral mapping
- Photo interpretation and land use / land cover mapping
- Road centerline and E911 mapping, addressing, conversion
- Asset / infrastructure / GASB34 mapping

#### Special Application Surveying/Mapping and Photogrammetry:

- Highway and utility corridor infrastructure and vegetation feature mapping
- Facility / complex master plan mapping
- Impervious surface / NPDES mapping
- Hydrographic study / FEMA FIS mapping
- Tide / water-level contingent coastal and shoreline / FERC photography and mapping
- Aerial and ground-based volumetric / earthwork / airspace surveys
- Terrestrial, industrial, medical photogrammetry

#### GIS and General Support/Consulting:

- GIS and CAD data conversion, database design, data maintenance and distribution
- GIS, CAD, and aerial image processing / plotting systems, consulting, installation, training
- Photogrammetric consulting, QA / QC inspection / review, expert witness, specification writing
- Photogrammetric continuing education, articles, presentations, reports, facility tours.

## Kucera Offices

### HEADQUARTERS

#### Kucera International Inc.

38133 Western Parkway  
Willoughby, Ohio 44094  
Tel (440) 975-4230, Fax (440) 975-4238  
map@kucerainternational.com  
www.kucerainternational.com

**Headquarters Contacts:**  
John Antalovich Sr., CEO  
John Antalovich Jr., President  
John Leskovac, Vice President  
Scott Antalovich, Vice President  
Ronald Martin, Chief Photogrammetrist

### BRANCH PRODUCTION OFFICES

#### Henderson Aerial Surveys

3889 Grove City Road  
Grove City, OH 43123  
Tel (614) 539-3925, Fax (614) 539-3928  
s.smetters@hendersonaerial.com  
Steve Smetters, Manager

#### Keddal Aerial Mapping

1121 Boyce Road, Suite 3100  
Pittsburgh, PA 15241  
Tel (724) 942-2881, Fax (724) 942-2885  
map@keddalaerial.com  
Pete Quigley, Manager

#### South Division

110 W. Reynolds St., Suite 202  
Plant City, FL 33563  
Tel (813) 754-9247, Fax (813) 754-9830  
l.towles@kucerasouth.com  
Larry Towles, Manager

#### Kucera Southeast

41 Andover Place  
Bluffton, SC 29909  
Tel (843) 705-2592, Cell (843) 540-2157  
r.mangus@kucerainternational.com  
Ralph Mangus, Manager

## Kucera Staff Profile

### DEPARTMENTAL BREAKDOWN

Management/Administration - 9

Aircraft Pilots - 7

Aerial Photographers / Sensor Operators - 7

Airborne GPS / Aerotriangulation Technicians - 6

Surveyors / Civil Engineers - 6

LiDAR Processing Technicians - 10

Digital Orthophoto / Imaging Technicians - 12

Stereocompilers - 12

GIS/CAD Specialists - 12

Cadastral / Land Use Mapping Technicians - 4

### PROFESSIONAL REGISTRATION / CERTIFICATION

Professional Engineers - 3

Professional Surveyors - 9

Certified Photogrammetrists / Mappers - 8

Certified GIS Specialists - 4

Certified Computer Specialists - 2

### EDUCATION / TRAINING

Doctorate's Degrees - 1

Master's Degrees - 11

Bachelor's Degrees - 32

Associate's Degrees - 21

Military Training - 10

Trade School - 10

### In-house Technology

#### Aircraft

- \* Four (4) twin-engine Piper Navajo Chieftain fixed-wing aircraft with dual sensor ports
- \* Two (2) single-engine Cessna TU206 fixed-wing aircraft
- \* One (1) Bell Jet Ranger Helicopter with camera/sensor mount (rented)

#### Film-Based Aerial Cameras

- \* Two (2) Zeiss RMK TOP 15 with FMC, gyromount
- \* Two (2) Zeiss LMK 1015 with FMC, gyromount
- \* Three (3) Zeiss RMK 15/23

#### Digital Aerial Cameras / Sensors

- \* Two (2) Leica ADS40/SH51 large-format airborne digital sensor with PAV30 gyromount
- \* Two (2) Vexcel UltraCamX (UCX) large format digital frame camera with GMS3000 gyromount
- \* One (1) GeoVista 21 megapixel digital oblique imaging system
- \* Two (2) RIT WASP multispectral/thermal imagers

#### Aerial LiDAR

- \* One (1) Leica ALS60 250 kHz LiDAR system with auto roll compensation, MPiA (Multiple Pulse In Air) return
- \* One (1) Leica ALS70 500 kHz LiDAR system with auto roll compensation, MPiA (Multiple Pulse in Air) return, and waveform data collection capability

#### Photo Labs

- \* Two (2) Kodak Versamat automatic film processors
- \* Four (4) LogE Mark IV-V contact printers
- \* Three (3) Pako/Dupont large-format film processors
- \* Four (4) Zeiss SEGV and Saltzman photo enlargers
- \* Two (2) ACTI computerized engineering copy cameras
- \* One (1) Colex color contact printer

#### Airborne / Ground Control Surveying

- \* Two (2) Applanix 510 POS/AV AGPS/IMU systems
- \* Two (2) Leica IPAS airborne GPS/IMU systems
- \* Two (2) Novatel SPAN airborne GPS/IMU systems
- \* Five (5) Trimble 5700/5800 series geodetic ground GPS receivers
- \* One (1) Topcon GRS-1 dual frequency GNSS receiver
- \* Four (4) Leica NA2000 automatic levels
- \* Two (2) TOPCON ET2 Total stations
- \* Terratech TerraPOS AGPS processing station

#### Photogrammetric Scanning

- \* Two (2) Z/I imaging 3600 dpi PhotoScan 2002 with film autowinder

#### Softcopy Aerotriangulation

- \* Two (2) Inpho MATCH-AT aerotriangulation stations
- \* Two (2) Leica ORIMA aerotriangulation stations

#### Analytical Aerotriangulation

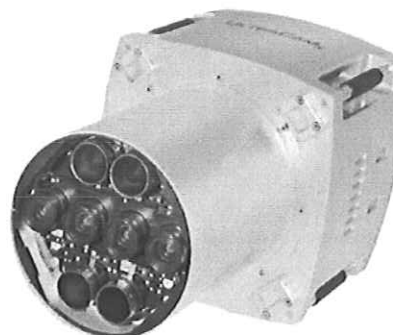
- \* One (1) Kern CPM1 precision analytical pugging system
- \* One (1) Wild PUGIII precision analytical pugging system
- \* Two (2) Zeiss C100/P2 analytical stereoplotters with Softmap AP3
- \* Inpho PatB-GPS aerotriangulation adjustment software
- \* Kenefick PC RABATS/BRATS aerotriangulation adjustment software

#### Orthophotography / Image Processing

- \* Ten (10) Leica GPro/XPro image processing nodes
- \* Eight (8) Inpho Orthomaster and Z/I OrthoPro digital orthophoto stations
- \* Agfa Apertune image processing software
- \* Inpho OrthoVista image processing software
- \* Lizardtech GeoExpress/MrSID image compression software
- \* ER Mapper ECW image compression software



Leica ADS40 Digital Aerial Camera



Vexcel UCX Digital Aerial Camera

### In-house Technology (Continued)

#### Softcopy Stereocompilation

- Two (2) Z/I Imaging SSK softcopy stereoplotters
- Four (4) Cardinal Systems VR2 softcopy stereoplotters
- Three (3) BAE SOCET SET softcopy stereoplotters

#### Analytical Stereocompilation

- Six (6) Zeiss P3 analytical stereoplotters
- One (1) Leica BC1 analytical stereoplotter

#### Terrain/Surface Modeling

- ArcView 3D Analyst (DTM/TIN/3D visualization)
- Trimble Terramodel (DTM/TIN/contour generation)
- TerraSolid Terramodeler and TerraScan (DTM/LiDAR)
- BAE N-GATE (DEM autocorrelation)
- Inpho SCOP (DTM/contour generation)
- Leica CIP (DTM/contour generation)
- Microstation InRoads (DTM/TIN/contour generation)
- Leica XPro surface modeling/autocorrelation software
- Geocue/QCoherent LP360

#### GIS and CAD

- ESRI ArcGIS/ArcGIS server (six stations)
- Autodesk AutoCAD (six stations)
- Bentley Microstation (six stations)
- Intergraph GeoMedia (one station)
- Cardinal Systems VR (ten stations)
- PLS-CAD (utility mapping - one station)
- Global Mapper (GIS/CAD utility software - three stations)
- ERDAS Imagine GIS (two stations)

#### Hardcopy Plotting and Scanning

- One (1) Canon iPF9100 60" 2400 dpi color plotter
- One (1) Hewlett Packard 5500 1200 dpi color inkjet plotter
- One (1) Hewlett Packard 1050C 600 dpi color inkjet plotter
- One (1) Ideal 8300 800 dpi 36" monochrome scanner
- One (1) Vidar HD4250 1200-9600 dpi 42" color scanner
- One (1) ProSeal 44" mounting and lamination system

#### Computer / Internet Systems

- Eighty (80) Windows NT/2000 XP workstations
- Sixteen (16) Linux servers-64 TB aggregate storage
- Four (4) Windows 2003 servers
- Gigabit Ethernet switching technology (CISCO)
- T1 1.544 Mbps Internet access

Softcopy Stereocompiling



Analytical Stereocompiling



**KUCERA INTERNATIONAL INC.****MANAGEMENT TEAM RESUMES****John Antalovich, Jr., PE, PS****President****Project Responsibilities****Project Manager****Education and Formal Training**

BS, Civil and Environmental Engineering – Cornell University (1981)

MBA, Management Information Systems – Case Western Reserve University (1983)

Leica, Zeiss, Applanix User Group Meetings (1995 – 2009)

**Registration and Certification**

1989, Professional Engineer, OH (Reg. No. E-52690)  
 1995, Professional Surveyor, FL (Lic. No. LS 5463)  
 1999, Professional Land Surveyor, NC (Lic. No. L-4208)  
 2004, Photogrammetric Surveyor, SC (Lic. 24071)  
 2010, Professional Land Surveyor, VA (0408000154)

**Professional Affiliations**

**Photogrammetry & Remote  
Sensing**  
 ASPRS  
 MAPPS

**Surveying**  
 ACSM  
 Various state surveying societies

**GIS**  
 URISA  
 GITA

**Personal Experience History****Years with Kucera: 31****Years of Experience: 31**

*Mr. Antalovich's experience with Kucera International has included positions as a photo lab technician, cartographic draftsman, ground survey party member, aerotriangulation specialist, stereocompiler, CAD computer operator, and analytical orthophoto system operator. He has served as a Kucera project manager since 1987 and as President and a project administrator since 1997. He previously served as the chairman of the ASPRS Softcopy Committee and currently serves on the ASPRS Eastern Great Lake Region Board of Directors. His management/administration experience includes:*

- **2012 – Denver Regional Council of Government** – project manager for digital aerial photo and orthophotography covering 11 county, 7000 square mile area around Denver, Colorado
- **2011 - 2012 – State of Kansas** – project manager for 25 county, 22,000 sq. mile aerial lidar survey and hydro-flattened DEM – contract value \$1.7 million
- **2010 – Cook County, IL; Pike County, OH; Newport News, VA** – project manager for county and citywide digital aerial oblique photo flyovers – contract value - \$450,000
- **2011 – State of South Carolina** – Project manager for 13 county, 7,900 sq. mile digital aerial photo and orthophoto project – contract value \$230,000
- **2006 – 2008 – Wisconsin Department of Natural Resources** – project manager for color infrared aerial photography and orthophotography covering 14- county, 12800 square mile region – contract value \$463,750
- **2007– 2012 – Florida Department of Revenue** – chief administrator for ADS digital aerial photo, color and IR digital orthophoto covering 15-county, 12200 square mile area – contract value \$1.2 million
- **2000 – 2008 – South Carolina Geodetic Survey** – project manager for color film or digital aerial photo, aerial lidar surveying, color digital orthophotography, plan/topo mapping, cadastral mapping of 28 counties, 21000 square miles – total contract value \$5 million
- **2007 – 2011 - 9 NC Counties (Mecklenburg, Moore, Hoke, Davidson, Rutherford, Rowan, Yadkin, Alexander, Jackson)**– project manager for countywide digital aerial photo, 0.5' resolution orthophoto, plan feature mapping – contract value - \$900,000
- **2005 – 2010 – Bi-State Commission, IA – IL** – project manager for 2005 and 2010 color aerial photo, aerial lidar survey, color digital ortho, plan/topo mapping of three county, four city region in IA/IL – 1700 square miles – contract value \$600,000
- **2010 – Atlanta Regional Commission/Dewberry** - project manager for digital aerial photo and orthophoto aerial lidar survey, DTM, contours for 3 county, 1200 square mile area around Atlanta, Georgia – contract value \$452,361

## KUCERA INTERNATIONAL INC.

## PROJECT RESUMES

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- **2002 – 2009 – Texas General Land Office** – project manager for color infrared aerial photography and digital orthophotography covering 1100 miles of TX coastline and other sites throughout TX - contract value \$130,000.



**Ronald Martin, ASPRS CP****Chief Photogrammetrist****Project Responsibilities**

Production Manager

**Education and Formal Training**

Graduate of Cleveland Engineering Institute (1961)

**Registration and Certification**

1991, ASPRS Certified Photogrammetrist, No. 855 (active)

**Professional Affiliations**

**Photogrammetry & Remote Sensing**  
ASPRS

**Engineering & Surveying**  
Various state surveying and  
county engineering societies

**GIS**  
URISA  
Various state and local organizations

**Personal Experience History****Years with Kucera: 27****Years of Experience: 45**

*Mr. Martin has over 40 years of practical experience in photogrammetry and surveying, including 10 years as a draftsman and stereocompiler for Kucera, 17 years as a surveyor and stereocompilation supervisor for Aerocon Photogrammetric Surveys of Willoughby, Ohio, and 15 years as Kucera's Chief Photogrammetrist and Production/Project Manager. His recent management experience with Kucera includes:*

- **2011 – MRT/Harrison and Carroll Counties, OH** – project manager for rapid mobilization, digital aerial photo and orthophotography, digital oblique aerial imagery covering 800 sq. mile, multi-county area
- **2010 – IMAGIS** – project manager for aerial lidar survey and 1m bare earth DEM covering 4 county, 1700 sq. mile area around Indianapolis, IN – Value \$167,950
- **2010 – Saginaw/Bay/Midland Counties, MI** – multi-county digital aerial photo and orthophotography- 1800 sq miles – Value \$250,000
- **2010 – Summit/Wayne/Portage Counties and Cities of Wooster and Hudson, OH** – multi-county, multi-city digital aerial photography and digital orthophotography, selected area aerial lidar survey, DTM, plan/topo mapping – 1500 sq. miles – Value \$270,000
- **2008 – 2009 – Kosciusko and Marshall Counties, IN** – digital aerial photography and color digital orthophotography covering approximately 1000 square miles. Aerial lidar survey, 2' contour grade DEM and 2' contour topography covering Marshall County (450 square miles)
- **2008 – Muskegon and Ottawa Counties, MI** – project manager for digital aerial photo, color and IR digital orthophoto, plan feature mapping of 1100 square miles – contract value \$278,000
- **2004–2008 – Mahoning County, OH** – Project manager for countywide film and digital aerial photography, aerial LiDAR survey, color and IR digital orthophoto, DTM and plan/topo – 460 sq. mi. – 2 surveys – contract value \$1.16 million
- **2007– Black Hawk County, Cedar Falls, Waterloo, Iowa** – Project manager for countywide ADS40 digital aerial photography, aerial lidar survey, orthophotography (630 sq. mi.) and citywide DTM and topo mapping (100 sq. mi.) – Value - \$240,000
- **2006 – 2007 Allen and Hamilton Counties, IN** – project manager for digital aerial photo, color digital orthophoto, topo updated mapping of 1200 square miles – 2 surveys – contract value \$578,000
- **2005-2006 Saginaw, Midland, Bay Counties, MI** – project manager for color aerial photo, aerial lidar surveying, digital orthophotography, Planimetric feature mapping – 1800 sq miles – contract value \$350,000
- **2005 – Hardin and Logan Counties, OH** – project manager for aerial photo, FEMA lidar survey, color digital orthophoto, contour DEM – 950 square miles – contract value \$270,000
- **2004–2005 – Ohio Department of Natural Resources** – Project manager for color aerial photography, aerial LiDAR survey, digital orthophotography, ArcGIS digital contour and geomorphic feature mapping covering entire Ohio Lake Erie shoreline and islands – 250 mi. Value \$201,000.
- **2002–2010 – City of Jamestown, NY** – Project manager for large-scale citywide color aerial orthophotography, digital orthophotography, ArcGIS digital planimetric/topographic mapping, and 3D GIS visualization – 10 sq. mi. Value \$750,000

**William Loetz, PS****Chief Surveyor****Project Responsibilities**

Ground Control Survey Manager

**Education and Formal Training**

BS, Surveying – Ohio State University (1987)

**Registration and Certification**1992, Professional Surveyor, OH (No. 7552)  
2008, Professional Surveyor, SC (24151)**Professional Affiliations**PLSO (ASKEGA Chapter Past President)  
ASPRS**Personal Experience History**

Years with Kucera: 9

Years of Experience: 25

*Mr. Loetz has worked for Kucera since 2003 and has over 15 years of experience as a survey technician and party chief for the Geauga County, Ohio Engineer's Office. He has performed numerous photogrammetric control, lidar checkpoint, street route, boundary, and topographic surveys using both conventional survey and GPS technology. He currently serves as Kucera's Chief Surveyor and primary operator of Kucera's Trimble and Topcon survey grade GPS receivers. His recent experience with Kucera includes:*

- **2011 – 2012 – State of Kansas** – establishment of 300 GPS ground control points and GPS surveying of approximately 1700 QA checkpoints in four land cover classes for 25 county, 22000 square mile aerial lidar survey project
- **2010 – Sanborn Corporation/USGS** – base station operation for aerial lidar surveys covering approximately 9000 sq. miles in eastern and western Iowa
- **2010 – ARC 6 County Region, Atlanta, GA** – targeted existing and newly established GPS ground control for aerial photo and lidar survey – 90 points
- **2010 – Pike County, OH** – targeting, monumentation, and GPS control survey for countywide oblique and orthophoto mapping – 15 points
- **2010 – State University of NY – Syracuse, NY** – GPS ground control survey and report for lidar bare earth return accuracy assessment – 30 points
- **2010 – Clarksville, TN** – GPS ground control survey and report for lidar bare earth return accuracy assessment – 20 points
- **2003 – 2009 – Ohio Department of Natural Resources** – photo-id conventional and GPS control surveys and survey reports covering approximately 50 abandoned mine land (AML) sites in southeastern, OH
- **2009 – ASI/State of Oregon** – GPS ground control survey, semi-permanent monumentation, and targeting for statewide NAIP contract aerial photo flyover – 100 points, 96000 sq miles
- **2008 – 2009 Licking County, OH** – control recovery and targeting (approx. 30 points) for two countywide aerial photos surveys
- **2005 – 2008 – Maryland DOT** - photo-id conventional and GPS control surveys covering six highway project sites in Maryland
- **2005, 2010 – Summit and Portage Counties, OH** – control recovery and targeting (approx. 40 points) for mutli-county aerial photo and ortho survey
- **2005 – Hardin and Logan Counties, OH** – ground control and FEMA 100 pts/5 land cover category accuracy survey – 900 sq. miles

- **2003 – Placer County, CA** – field cross-sections and stream profiles for flood insurance study mapping of Linda and Pleasant Grove Creeks – 25 miles of stream

**Gary Cox****Flight Operations Manager****Project Responsibilities**

Chief Project Pilot

**Education and Formal Training**

B.A., Geography – Miami University of Ohio (1973)  
Kodak Aerial Photography Quality Control Seminar (1998)

**Registration and Certification**

Single- and multi-engine, land, commercial,  
and instrument pilot ratings (FAA Cert. #2187139)

**Professional Affiliations**

Aircraft Owners and Pilots Association (AOPA)  
American Society of Photogrammetry and Remote Sensing (ASPRS)

**Personal Experience History**

Years with Kucera: 35

Years of Experience: 36

*Mr. Cox currently has over 11000 pilot-in-command aerial survey flight hours and has served as Kucera's flight operations manager and chief pilot since 1993. Responsible for operation and maintenance of Kucera's three twin- and two single-engine aircraft. Before becoming a pilot he worked for 11 years as Kucera's chief aerial photographer. His recent flight operations management experience includes:*

- **Spring 2012 – Denver Regional Council of Governments (DRCOG) –** ADS digital aerial photo at 0.5' and 1' resolution covering 11 county, 7000 square mile area around Denver, Colorado
- **Winter 2009 – 2012 – Mosaic Fertilizer –** annual ADS digital aerial photo flyover covering 2100 square mile AOI in Central Florida
- **Winter 2006 – 2012 – Florida Department of Revenue –** annual countywide and multicounty ADS digital aerial photo – 13 countywide surveys/12000 square miles covered
- **Winter 2010 – Atlanta Regional Commission –** air traffic control coordination and flyover of 11 county Atlanta Metro region – 3250 sq. miles
- **Winter 2011 – TWDB/Brazos County, Texas –** UCX digital photo and ALS lidar flyover – 770 square miles
- **Spring 2008 – Story, Hamilton, Hardin Counties, IA –** 3-county ADS40 digital aerial photography at 0.5' GSD – 1800 square miles
- **Spring 2007 – 2008 – Photo Science/PA MAP Project –** Aerial lidar survey of 4 Pennsylvania Counties – 3800 square miles
- **Winter 2007 – Sumter, Aiken, Orangeburg Counties, SC, Richmond County, GA –** ADS40 digital aerial camera flyover at 0.5 GSD of 4-County, 3600 square mile area
- **Winter 2006 and 2007 – Lake County, FL –** countywide low altitude aerial photo and lidar survey for digital orthophoto and 1' contour mapping, rapid response digital aerial photo acquisition following tornado in February 2007
- **Fall 2006 and 2007 – Wisconsin DNR –** color infrared forestland aerial photo at 1"=1320' scale of 14-county area – 12800 square miles
- **Spring 2007 – Moore, Hoke, Mecklenburg Counties, NC –** countywide ADS40 digital aerial photo acquisition at 0.5 GSD – 1600 square miles
- **Spring 2005 – Upper Cumberland Homeland Security Region, TN –** 14-county color aerial photo at 1"=1320 scale – 5075 square miles
- **Spring 2003 – Pee Dee COG, SC –** Color aerial photo at 1"=2000' and/or 1"=1000' covering 3500 square-mile region in SC for regionwide digital orthophotography
- **Spring 2002, 2003, 2004 – US National Park Service –** Color infrared aerial photo at 1"=500' scale covering approximately 2000 sq. mi. of national park, historical, recreation sites in DC, MD, VA, WV, and PA, including entire National Capital Region, C&O Canal, Camp David – required access to highly restricted airspace and coordination with US Secret Service and Military Airspace Control
- **Fall 2003 – Minnesota Department of Natural Resources –** Color infrared aerial photo at 1"=1320' scale covering 3120 square miles of Koochiching County, MN - taken at time of peak leaf coloration
- **Winter 2002, 2004, 2006 – Houston-Galveston Area Council, TX –** film and digital aerial flyover covering ~7000 square miles, 6 county region around Houston, TX

**Dave Cook****Senior Sensor Operator****Project Responsibilities**

Chief Camera/Sensor Operator

**Education and Formal Training**

Graduate of U.S. Air Force Photo Processing Technical School (1975)  
 Kodak Aerial Photography Quality Control Seminar (1998)  
 AGFA Film School – Brussels, Belgium (2001)  
 Leica Sensor Training (2005 – 2006)

**Personal Experience History**

**Years with Kucera: 18    Years of Experience: 38**

*Mr. Cook joined the Kucera staff in 1994, after serving 20 years as a photo lab/image production technician at various US Air Force installations throughout the world, including Langley Air Force Base, Virginia. At Langley AFB, he was in charge of operation and preventive maintenance of imaging equipment, quality assurance of black and white and color photo production, and training. He currently serves as an image processing technician and aerial data acquisition systems manager at Kucera, and has logged over 5000 aerial survey flight hours. Responsible for operation of Kucera's UCX digital frame aerial cameras, Leica ADS40 digital pushbroom aerial cameras, and Leica ALS60/70 aerial lidar systems. His chief photographer/sensor operator experience includes:*

- **Spring 2012 – Denver Regional Council of Governments (DRCOG)** –digital aerial photo at 0.5' and 1' resolution covering 11 county, 7000 square mile area around Denver, Colorado
- **Winter 2009 – 2012 – Mosaic Fertilizer** – annual digital aerial photo flyover covering 2100 square mile AOI in Central Florida
- **Winter 2006 – 2012 – Florida Department of Revenue** – annual countywide and multicounty digital aerial photo – 13 countywide surveys/12000 square miles covered
- **Winter 2010/2011 – State of Kansas** – aerial lidar survey of 14 county, 1200 sq. mile area in central Kansas
- **2009 ASI/USDA – States of Oregon and North Dakota NAIP** – sensor operator for high altitude digital aerial photo covering entire State of Oregon (96000 sq. miles) and 25000 sq. miles in North Dakota
- **Fall 2009 – IMAGIS** – aerial lidar survey of 4-county area in Central Indiana – 1680 sq. miles
- **Winter 2008 – City of Columbia/Richland County, SC** – aerial photo and 1m return aerial lidar survey covering 1000 sq. miles
- **Spring 2008 – Story, Hamilton, Hardin Counties, IA** – 3-county digital aerial photo at 0.5' GSD 1800 square miles
- **Winter 2008 – Lake County, FL** – 0.5' GSD digital aerial photo covering 1000 sq. miles
- **Winter 2007 – Richmond County, GA, Sumter/Orangeburg/Aiken Counties, SC** – 0.5' GSD digital aerial photo of 4-County, 3600 square mile area
- **Spring 2007 – 2008 – Photo Science/PA MAP** – 2' contour grade aerial lidar survey covering 4 County, 3800 square mile area of northwestern PA
- **Winter 2006 – Lake County, FL** – 1' contour grade aerial lidar survey and 1"400', 800' scale aerial photo covering 1160 square miles
- **Winter 2006 – Houston Galveston Aerial Council, TX** – 1' GSD digital aerial photo flyover of five county, 7000 square mile area
- **Spring 2006 – LOJIC/Jefferson & Oldham Counties, KY** – 0.5' GSD digital aerial photo and ortho DEM grade aerial lidar survey of 1270 sq. miles

- **Spring 2005 – Upper Cumberland Homeland Security Region, TN** – color aerial photo at 1"=1320' covering 14 county, 5100 square mile area
- **Spring 2005 – Bi State Commission, IA/IL** – color aerial photo at 1"=800'/1600' and aerial lidar survey covering 3 county, 1700 square mile area



**Matt Albring****Digital Camera Imagery AGPS/IMU and  
Aerotriangulation Manager****Project Responsibilities**

GPS/IMU and Aerotriangulation Management

**Education and Formal Training**

BS, Environmental Studies – College of Environmental Science and Forestry, NY (2002)

Basic Terrain Analysis – NIMA, Fort Belvoir, VA (1994)

AAS, Forest Technology – College of Environmental Science and Forestry, NY (1993)

**Professional Affiliations**

Association of American Geographers

American Society of Photogrammetry and Remote Sensing

**Personal Experience History****Years with Kucera: 11    Years of Experience: 24**

*Before joining Kucera in 2001 Matt served as a terrain analyst with the US Army where he utilized remotely sensed imagery and GIS to create various map products for the Joint Intelligence Center Pacific and as an assistant forester for the Mead Corporation where he updated forest maps. He has worked as a lidar, orthophoto, and AGPS/IMU processing technician for Kucera, and since 2006 has overseen ADS40 digital camera image georeferencing and triangulation using Leica GPro and ORIMA technology. His recent AGPS/AT management experience includes:*

- **2012 – Denver Regional COG** – 0.5' and 1' GSD ADS digital aerial imagery covering 10-county, 7000 sq. mile Denver, CO region
- **2011 – 2012 – State of South Carolina** – 0.75' and 1' ADS digital aerial imagery covering 15-county, 10000 sq. mile area in South Carolina
- **2010 – Atlanta Regional Commission/Dewberry** – 0.5' ADS digital aerial imagery covering 11 county, 3200 sq. mile Atlanta, GA region
- **2006 – 2012 – Florida Department of Revenue** – 1' and 0.5' ADS digital aerial imagery for surveys of 13 counties and 12000 sq. miles
- **2010 – Summit, Portage, Wayne Counties, OH** – triangulation of 0.5' GSD aDS40 digital camera imagery covering 1500 sq. mile area
- **2009 – Hardin and Licking Counties, OH** – triangulation of 0.5 GSD ADS40 digital camera imagery covering 1300 sq. miles
- **2008 – Story, Hardin, Hamilton Counties, IN** – 0.5' GSD imagery covering 1800 sq. miles – AGPS/IMU and targeted ground control
- **2008 – Richland, Greenwood, Greenville Counties, SC** – 0.5' GSD imagery covering 2500 sq. miles – AGPS/IMU and targeted control
- **2008 – Muskegon and Ottawa Counties, MI** – 0.5' GSD imagery covering 1100 sq. miles – AGPS/IMU and targeted control
- **2007 – Moore, Hoke, Mecklenburg Counties, NC** - 0.5 GSD imagery covering 1600 sq. miles – AGPS/IMU and targeted control
- **2007 – Aiken, Orangeburg, Sumter Counties, SC** - 0.5 GSD imagery covering 2900 sq. mi. – AGPS/IMU and targeted control
- **2006 – Hamilton County, IN** - 0.5 GSD imagery covering 1200 sq. miles - AGPS/IMU and targeted control
- **2006 – Jefferson, Oldham Bullitt County, KY** – 1' and 2' GSD imagery covering 1270 sq. miles – AGPS/IMU and targeted control

· 2006 – Houston-Galveston Area Council, TX – 1' GSD imagery covering ~7000 sq. miles

**Eric Baker****Softcopy Stereocompilation Manager****Project Responsibilities**

Stereocompilation Management

**Education and Formal Training**

B.S., Geography - Pennsylvania State University (1998)

**Registration and Certification**

Penn State University Post-Baccalaureate GIS Certification (2008)

**Professional Affiliations**

American Society of Photogrammetry and Remote Sensing

**Years with Kucera: 13      Years of Experience: 13**

*Joined the Kucera staff in 1999, after graduating from Penn State University and working as a stereocompiler in New Hampshire. Experienced on both analytical and softcopy compilation systems – has overseen Kucera's Socet Set softcopy stereoplotters since 2005. In 2008 received post-graduate GIS certification from Penn State University. His softcopy stereocompilation management experience includes:*

- **2011 – State of Kansas** – lidargrammetry-based hydro breakline feature collection for 26 county, approximately 21000 sq. mile area in central United States
- **2010 – ARC Region - Atlanta, GA** – hydro breakline augmentation of 2' contour grade lidar DEM covering 3 county, 900 sq. mile area
- **2009 – 2010 – City of Columbia/Richland County, SC** – hydro and road edge breakline augmentation of 2' contour grade lidar DEM covering approximately 1000 sq. miles
- **2006-2008 - Lake County, FL** - photogrammetric review/edit of new countywide lidar DEM and augmentation with compiled hydro and road edge breaklines to produce DTM supporting 1' and 2' contour topo generation - 1000 square miles
- **2008- Aiken County, SC** - photogrammetric review/edit of existing countywide lidar DEM and augmentation with compiled hydro and road edge breaklines to produce DTM supporting 5' contour topo generation, updated structure footprint mapping - 1100 square miles
- **2008 - Augusta-Richmond County, GA** - photogrammetric review/edit of new countywide lidar DEM and augmentation with compiled hydro and road edge breaklines to produce DTM supporting 2' contour topo generation - 330 square miles
- **2005 and 2008 - Mahoning County, OH** - photogrammetric review/edit of new lidar DEM and augmentation with new hydro and updated road edge breaklines to produce DTM supporting 2' contour topo generation - 460 square miles
- **2005 and 2008 - Cobb County, GA** - photogrammetric update of existing countywide 2'-contour grade DTM and 1"=100' scale impervious surface, hydro and road edge plan feature mapping - 340 square miles
- **2007 - Davidson County, TN** - photogrammetric review/edit of new countywide lidar DEM and augmentation with compiled hydro and road edge breaklines to produce DTM supporting 4' contour topo generation - 650 square miles
- **2007 - City of Hunstville, TX** - photogrammetric compilation of new citywide 1"=100' scale planimetry, review/edit of new lidar DEM and augmentation with breaklines to produce DTM supporting 2' contour topo generation - 200 square miles
- **2007 - Cities of Waterloo and Cedar Falls, IA** - photogrammetric compilation review/edit of new citywide lidar DEM and augmentation with hydro, road edge, and road centerline breaklines to produce DTM supporting 2' contour topo generation - 100 square miles
- **2007 - City of Eau Claire, WI** - photogrammetric compilation review/edit of new citywide lidar DEM and augmentation with hydro and road edge breaklines to produce DTM supporting 2' contour topo generation - 118 square miles

**Bill Scott****Digital Orthophoto Rectification Manager****Project Responsibilities**

Orthophoto Rectification Management

**Education and Formal Training**

BA, Photography – Cleveland State University (1984)

**Professional Affiliations**

American Society of Photogrammetry and Remote Sensing

**Personal Experience History****Years with Kucera: 11    Years of Experience: 27**

*Before joining Kucera in 2001 Bill worked as a film and digital photographer and graphic arts specialist for several firms, including a senior photography position with Lubrizol Corporation. He initially worked for Kucera as a lab technician and scanner operator, and has been performing ortho image rectification since 2004. He currently oversees ortho rectification and post-rectification edit using Kucera's Leica G-Pro and Inpho orthomaster image rectification technologies. His recent orthophoto rectification management experience includes:*

- **2012 – Denver Regional COG** – orthorectification of 1' and 0.5' GSD 4-band ADS digital aerial imagery covering 10 county, 7000 sq. mile Denver, CO region
- **2011 - State of South Carolina Geodetic Survey** - ortho rectification of 1' GSD, 3-band Leica ADS digital camera imagery covering 12 county, 7900 square mile area in northern South Carolina
- **2004-2012 - State of Florida Dept. of Revenue**- ortho rectification of 0.5' and 1' GSD, 3 or 4-band Leica ADS digital camera imagery for 12 countywide surveys, 13000 square miles
- **2012 - Orange County FL** - ortho rectification of 0.25' GSD, 3-band Leica ADS digital camera imagery covering 700 square mile area around Orlando, FL – 2 countywide surveys
- **2010 - Atlanta Regional Commission/Dewberry** - orthorectification of 0.5' GSD, 3 or 4 band Leica ADS digital camera imagery covering 11 county, 3330 square miles area around Atlanta, GA
- **2007-2011 - 9 counties in North Carolina** - orthorectification of 0.5' GSD, 3-band Leica ADS digital camera imagery covering 4500 square miles
- **2007-2011 - 15 counties in Ohio** - orthorectification of 0.25', 0.5', 1' GSD 3-band Leica ADS digital camera imagery covering 7100 square miles
- **2008 -2010 - 6 counties in Michigan** - orthorectification of 0.5', 1' GSD 3 or 4-band Leica ADS digital camera imagery covering 3200 square miles
- **2009 - ASI/USDA NAIP** - ortho rectification of 1 m GSD 4-band Leica ADS digital camera imagery covering State of Oregon - 96000 square miles
- **2010 - State of Texas Water Board** - orthorectification of 0.5' and 1' GSD, 3-band Vexcel UCX digital camera imagery covering 700 square miles of Brazos County/College Station TX
- **2008 - Central Iowa Orthophoto Consortium** - orthorectification of 0.5' GSD 3-band Leica ADS digital camera imagery covering 3-county, 1800 square mile area
- **2002,2004,2006 - Houston-Galveston Area Council, Texas** - orthorectification of 1' and 0.5' GSD scanned film and Leica ADS digital camera imagery covering 6 county, 7000 square mile area - three surveys performed

**Steve Hunt****Orthophoto Image Edit Manager****Project Responsibilities**

Orthophoto Image Edit Management

**Education and Formal Training**

Lowry AFB Technical School, CO - Photographic Science (1988)  
AGFA Aerial Film School, Brussels, Belgium (2000)

**Registration and Certification**

U.S. Air Force Precision Processing Specialist

**Personal Experience History****Years with Kucera: 21      Years of Experience: 23**

*Mr. Hunt joined Kucera in 1991 after serving for four years as a Precision Photo Processing Specialist and Senior Airman for the US Air Force at Offutt AFB, Nebraska. With the Air Force he operated a variety of image processing and printing systems and performed film titling and editing of highly sensitive materials. Mr. Hunt started as a scanner operator in 1997, after working four years as a Kucera photo lab technician. He has served as Kucera's digital ortho edit/finishing manager since 2001. His image edit management experience includes:*

**2011 - 2012 – State of South Carolina – 1' and 0.75' pan-sharpened 3-band OrthoExpress ortho imagery covering 15 county, 10000 sq. mile area**

**2010 – Atlanta Regional Commission/Dewberry – 4-band 0.5' and 1' GSD ortho imagery for 11 county, 3300 sq. mile area around Atlanta, GA**

**2009 – ASI/State of Oregon and North Dakota NAIP – 4 band uncompressed DOQQ tiles and compressed County mosaics (CCNs) from ADS40 digital camera imagery covering 96,400 sq. miles of Oregon, preparation of raw georeferenced ADS imagery covering 25000 sq. miles in North Dakota**

**2008 – 2012– Mosaic Fertilizer – digital 4-band image processing/finalization for annual digital aerial photo surveys of 2000 square mile area in central Florida**

**2008 – Story, Hamilton, Hardin County, IA – 0.5 resolution RGB orthophoto from digital camera imagery covering 1800 sq. miles**

**2008 – Columbia/Richland County, SC – 0.5' resolution RGBIR preliminary and final orthophoto from digital camera imagery covering 1100 sq. miles**

**2007 – 2012 – Florida Dept. of Revenue – image processing/finishing manger for 0.5' and 1' resolution color and duplicate color IR orthophotography covering 12-county, 13000 sq. mile area**

**2004 – 2008 – Mahoning County, OH – image processing/finishing manager for production of countywide 0.5' pixel color orthophotography, including SID compression and development of "true" orthophotography for urban/developed area of the County – 2 surveys – 460 sq. miles**

**2003 – 2011 – Cobb County, GA – image processing/finishing manager for production of annual countywide 0.5' pixel color digital orthophotography, including full correction of numerous elevated highway/overpass areas – two surveys – 1000 tiles**

**2007 – Moore, Mecklenburg, Hoke Counties, NC – digital image processing/finishing manger for countywide color and IR digital aerial photography and orthophotography – 1600 square miles**

**2006 – 2007 – Allen and Hamilton Counties, NC – digital image processing/finishing manager for countywide color and IR digital aerial photography and orthophotography - 1100 square miles**

**2007 – Richmond County, GA and Aiken, Orangeburg, and Sumter Counties, SC – digital image processing manager for regionwide 0.5' digital color photography and orthophotography– 3200 square miles**

**2005 – Bi-State Commission, IA/IL – 0.5' and 1' resolution color orthophoto from film camera imagery covering 1700 sq. miles**

**2002-2009 – Texas General Land Office – image processing/finishing manager for production of 1"=400' scale/1 m pixel resolution in 2002/2003 – individual full-exposure images in LZW TIF and countywide mosaics in ECW compressed format at 1"=100' scale, 0.5' resolution in 2009 covering 1500 miles of TX coastline**

**2002, 2004, 2006 – Houston-Galveston Area Council – image processing/finishing manager for production of uncompressed 1' pixel color orthophotography covering approximately 7000 sq. mi. (1660 tiles) and 0.5' pixel color orthophotography covering 460 sq. mi. (450 tiles)**

**Scott Antalovich, PE, PS****Vice President****Project Responsibilities**

Quality Control Manager

**Education and Formal Training**

B.S., Surveying/Civil Engineering – Ohio State University (1985)  
 Leica, Zeiss, Agfa, Applanix User Group Meetings – (1995 – 2009)

**Registration and Certification**

1986, Surveying Intern, OH  
 1991, Professional Engineer, OH (#56921)  
 2004, Photogrammetric Surveyor, SC (#L-24024)  
 1995, Professional Surveyor, FL (#LS5460)  
 1999, Professional Land Surveyor, NC (#L-4107)  
 2008, Professional Surveyor, OR (#80805RPP)

**Professional Affiliations****Photogrammetry & Remote Sensing**

ASPRS  
 MAPPS

**Surveying**

ACSM  
 Various state surveying societies

**GIS**

URISA  
 GITA

**Personal Experience History****Years with Kucera: 26****Years of Experience: 27**

Mr. Antalovich graduated with honors with a dual degree in surveying and civil engineering and was a recipient of the 1986 ACSM Schonstedt Award for excellence in surveying studies. His experience with Kucera includes serving as an operator of Kucera's analytical and softcopy orthophoto and stereoplotting systems (6 years), as a CAD/GIS technician (5 years), and as head of Kucera's GIS/CAD Department (6 years). For the past six years he has served as a Vice President and Quality Control Manager responsible for oversight of Kucera's quality control program and management of quality control for large contracts. His recent management experience includes:

- **2012 – Denver Regional COG** – QC review manager for 0.5' and 1' GSD 4-band ortho imagery covering 10 county, 7000 sq. mile Denver, CO area
- **2012 – Metro Washington Airports Authority (MWAA)** – QC manager for large scale mapping, orthophoto, and integrated field utility survey covering Washington Dulles International and Reagan National Airports, DC
- **2011 – State of Kansas** – QC manager of hydro-flattened lidar DEM covering 15 county, 12000 sq. mile area in central Kansas
- **2010 – ARC Region/Atlanta, GA** – QC of 0.5' 4-band ortho, hydro-augmented lidar DTM and 2' contour covering 11 county, 3200 sq. mile area
- **2010 – City of Davenport, IA** – QC of lidar DTM-based 2' contour topo and 1"=100' scale plan feature mapping – 50 sq. miles
- **2009 – Marshall County, IN** – quality control manager for countywide lidar DTM and 2' contour topo mapping – 450 square miles
- **2008 – 2009 – Greenville County, SC** – quality control manager for countywide 0.5' GSD 3-band ortho, lidar DTM and 1"=200' planimetric feature mapping – 790 square miles
- **2007 – 2008 – City of Germantown, TN** – project/quality control manager for citywide color aerial photo and ortho, aerial lidar survey, new DTM/2' contour topography, updated planimetric feature mapping – 20 square miles
- **2006 – 2008 – Lake County, FL** – quality control manager for countywide LiDAR DTM/1' contour topographic mapping and repeat survey (film and digital camera) digital orthophotography– 1100 square miles
- **2003 – 2008 – Davidson County, TN** – project manager for multi-survey countywide film and digital aerial photo and orthophoto, updated planimetric feature mapping, new 4' contour DTM mapping, building height mapping – 50 square miles
- **2002 – 2011 – Cobb County, GA** – quality control manager for annual countywide new and update 0.5' GSD 3-band orthophoto and ArcGIS planimetric/topographic and impervious surface base mapping project - 343 sq. mi. – 4 surveys
- **2006 – American Electric Power** – production and quality control manager for aerial and bathymetric LiDAR data integration, DTM, digital topographic and orthophoto mapping covering Leesville and Smith Mountain Lakes, VA for FERC compliance – 200 sq. miles
- **2004 – Devine Tarbell Assoc./Duke Power Co.** – project and quality control manager for orthophoto and Microstation planimetric and topographic mapping of 1700 miles of reservoir shoreline in NC and SC for FERC permitting





**Nat Phillips****LiDAR Systems Manager****Project Responsibilities**

LiDAR Survey Management

**Formal and Recent Continuing Education**

B.S., Cartography – Ohio University (1995)  
 Leica, Applanix, Zeiss User Group Meetings – (1998 – 2009)

**Professional Affiliations**

American Society of Photogrammetry and Remote Sensing

**Personal Experience History**

**Years with Kucera: 17    Years of Experience: 20**

*Mr. Phillips joined the Kucera staff in 1995 after earning his degree in cartography from Ohio University. While at Ohio U. he was a member of the Geographic Honor Society and served as Assistant Production Manager for the University Cartographic Center, where he helped design, digitize, and produce new maps for the City of Athens and Vinton and Meigs Counties, Ohio. Prior to this he worked as a ground survey crew member/instrument operator for Jerry Finley Surveying of Zanesville, Ohio. At Kucera he has served as an aerotriangulation specialist and currently oversees Kucera's Applanix POS/AV airborne GPS/IMU and Leica ALS60/70 aerial LiDAR systems. His aerial lidar survey management experience includes*

- **2011 - 2012 – US Forest Service** – phase manager for high density aerial lidar surveys covering controlled burn sites in NJ Pinelands and Elgin AFB FL forest areas
- **2011 - 2012– State of Kansas** – overall lidar survey management for aerial lidar survey of 25 county, 22000 square mile area in central Kansas
- **2011 - 2012 – GUGIK/Country of Poland** – overall lidar survey management for aerial lidar and photo survey covering approximately 12000 square miles in northwestern/Gdansk area (Lot 1) and eastern/Warsaw area (Lot 3)
- **2010 – Sanborn/USGS** – operations manager for aerial lidar acquisition survey covering approximately 9000 sq. miles in Iowa
- **2009 – 2010 – IMAGIS** – Management of aerial lidar survey and 1m DEM bare earth return for four county, 1680 sq. mile area in Central Indiana
- **2010 – RIT/World Bank/Country of Haiti** – management of aerial lidar survey and 1m DEM for 300 sq. mile earthquake area and fault around Port-au-Prince, Haiti
- **2009 – City of Davenport, IA** – citywide aerial lidar survey and 2' contour grade DEM – 100 sq. miles
- **2009 – Ogle County, IL** – countywide aerial lidar survey and ortho grade DEM -0 770 sq. miles
- **2008 – Marshall County, IN** – countywide aerial lidar survey and 2' contour grade DEM – 450 sq. miles
- **2008 - City of Columbia, SC** – 1' contour grade/FEMA spec aerial lidar survey covering 1000 square mile area around Columbia, SC – bare earth and 1st and 2nd return deliverable
- **2007 - City of Auburn, AL** – aerial lidar survey of 200 square miles and classification of 2' contour grade bare earth ground DEM and structure top elevations
- **2007 - City of Huntsville, TX** – aerial lidar survey of 200 square miles and classification of 2' contour grade bare earth ground DEM, FEMA accuracy test and report
- **2007 - Mecklenburg County, NC** – countywide lidar survey and 2' contour grade bare earth DEM, draft 2' contour generation – 530 sq. miles
- **2007 - Florida Dept. of Revenue** – aerial lidar survey for ortho-rectification grade DEM covering 3-county, 2200 sq. mile area
- **2007 - Nebraska Public Power** – aerial lidar survey of 70 miles of transmission line corridor for ground and feature mapping, wire clearance determination
- **2007 - Photo Science/PA MAP** – aerial lidar survey of 4 county area in PA and delivery of 2' contour grade bare earth DEM – 3800 sq. miles
- **2007 - American Electric Power/Claytor Lake, VA** – aerial lidar survey and production of 2' contour grade bare earth DEM covering 200 miles of lake shoreline area
- **2006 - Lake County, FL** – countywide aerial lidar survey and production of 1' contour grade bare earth DEM – 1100 square miles

- 2006 - Galileo Corporation – combined acquisition and processing of hyperspectral and lidar bare earth survey data for 13 sq. mile area – Natchez, MS

**AML CONSULTANT QUALIFICATION QUESTIONNAIRE**

Attachment B

PROJECT NAME: Hopewell Church Refuse & AMD DEP16074		DATE (DAY, MONTH, YEAR): January 31, 2013		FEI: 550516286																																					
1. FIRM NAME: Alpha Associates, Inc.		2. HOME OFFICE BUSINESS ADDRESS 209 Prairie Avenue Morgantown, WV 26501		3. FORMER FIRM NAME																																					
4. HOME OFFICE TELEPHONE 304-296-8216	5. ESTABLISHED (YEAR) 1969	6. TYPE OWNERSHIP Individual      Corporation Partnership    Joint-Venture		6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES                      NO																																					
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE 209 Prairie Avenue Morgantown, WV 26501 / 304-296-8216 / Richard A. Colebank, PE, PS / 3																																									
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Richard A. Colebank, PE, PS - President and COO Richard W. Klein, PE, PS - Chief Executive Officer Matthew S. Breakey, AIA - Secretary and Treasurer			8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Steven V. Buchanan, PE, PS, Principal, 304-296-8216 Charles B. Branch, PE, Principal, 304-296-8216 Charles B. Luttrell, PE, Principal, 304-296-8216																																						
9. PERSONNEL BY DISCIPLINE																																									
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<p><b>TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE:5</b></p> <p>*RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.</p>																																									
10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?		YES	NO	N/A																																					



YES Description and Number of Projects: \_\_\_\_\_

NO

B. Are your firm's personnel experienced in Soil Analysis?

YES Description and Number of Projects: \_\_\_\_\_

NO

C. Are your firm's personnel experienced in hydrology and hydraulics?

YES Description and Number of Projects: Scopes of highway, bridge, site planning, utilities, and other civil engineering projects.

NO

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?

YES Description and Number of Projects: \_\_\_\_\_

NO We field survey smaller projects. On larger projects, we set and survey control points and have Aerial Photography graph and mapping completed by a subconsultant.

E. Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: Scopes of civil engineering projects including domestic waterline design. No experience in evaluation of aquifer degradation.

NO

F. Are your firm's personnel experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: Passive Acid Mine Drainage Treatment Systems for the Friends of the Cheat, Two PAMDTS for the Guardians of the West Fork Watershed, and one PAMDTS for the Buckhannon River Watershed Association.

NO



NAME & TITLE (Last, First, Middle Int.) Buchanan, Steven, V. Principal	<table border="1"> <tr> <th colspan="3">YEARS OF EXPERIENCE</th> </tr> <tr> <td>YEARS OF AML DESIGN EXPERIENCE: 6</td> <td>YEARS OF AML RELATED DESIGN EXPERIENCE: 6</td> <td>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 29</td> </tr> </table>			YEARS OF EXPERIENCE			YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 6	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 29
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Brief Explanation of Responsibilities Mr. Buchanan is a Civil Engineer and Principal at Alpha Associates, Incorporated. He has more than 29 years' experience working in municipal engineering, storm water management, site planning, hydrologic and hydraulic analysis, wastewater collection systems design, water distribution systems, highway engineering, and traffic engineering.									
EDUCATION (Degree, Year, Specialization) <b>BS/1984/Civil Engineering</b>									
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) <b>PE: 1990-WV, 1990-PA, 2001-MD, 2002-OH</b>  <b>PS: 1995-WV</b>							
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)									
NAME & TITLE (Last, First, Middle Int.) Colebank, Richard, A. President and COO	<table border="1"> <tr> <th colspan="3">YEARS OF EXPERIENCE</th> </tr> <tr> <td>YEARS OF AML DESIGN EXPERIENCE: 6</td> <td>YEARS OF AML RELATED DESIGN EXPERIENCE: 6</td> <td>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 30</td> </tr> </table>			YEARS OF EXPERIENCE			YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 6	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 30
YEARS OF EXPERIENCE									
YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 6	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 30							
Brief Explanation of Responsibilities Mr. Colebank is President and Chief Operating Officer of Alpha. He has been with Alpha Associates, Incorporated since 1985. He began his career with Alpha as a staff engineer and progressed through the ranks from Project Manager to his current position. Mr. Colebank has worked with diverse clients such as WVU, City of Morgantown, WVDOH, WVU Foundation, and the Morgantown Municipal Airport, as well as numerous other public and private clients. Since 1988, Mr. Colebank has been the Principal-In-Charge of many of the Civil Engineering projects developed at Alpha. In his current capacity, Mr. Colebank provides financial and administrative guidance for the day to day operations of the company while continuing to manage Civil Engineering Projects.									
EDUCATION (Degree, Year, Specialization) <b>MS/99/Business Administration</b> <b>BS/82/Civil Engineering</b>									
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS <ul style="list-style-type: none"> <li>• ACEC/WV; Former President and National Director</li> <li>• Morgantown Area Chamber of Commerce; Past Chairman</li> <li>• Morgantown Area Economic Partnership; Member</li> <li>• American Red Cross, River Valley Chapter B.O.D.</li> </ul>		REGISTRATION (Type, Year, State) <b>PE: 1988-WV, 1998-PA, 1998-VA, 2002-MD</b>  <b>PS: 1995-WV</b>							

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML  
DESIGN SERVICES

AutoCAD – Computer Aided Drafting

ACAD Civil 3D 2009

Eagle Point – Civil/Surveying

HY – 8 – Culvert Analysis

TR – 20 – Storm Water Management

TR – 55 – Urban Hydrology

HECRAS – Hydraulic Profiling

SED CAD – Storm Water Management

FHWA – Transportation Modeling

AMD Treat

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
<b>Airport Access Road Design</b> Morgantown, WV	Monongalia County Development Authority Morgantown, WV	Civil Engineer and Surveying	\$5,700,000	99% Design 0% Construction
<b>Point Marion Water System Improvements Design</b> Point Marion, PA	Point Marion Borough 426 Morgantown Street Point Marion, PA 15474	Civil Engineering	\$2,200,000	100% Design 80% Construction
<b>Clarksburg GSA Office Building Design</b> Clarksburg, WV	State of West Virginia Charleston, WV	Architecture, Engineering and Surveying	\$26,000,000	99% Design 0% Construction
<b>CPASS &amp; Student Health Bldg. Design</b> Morgantown, WV	West Virginia University Morgantown, WV	Architecture, Engineering and Surveying	\$30,000,000	99% Design
<b>Renovation of Building 770</b> Charleston, WV	WV Regional Technology Park Charleston, WV	Architecture, Engineering and Surveying	\$10,500,000	80% Design
<b>Med Center Drive Access Road</b> Morgantown, WV	West Virginia University Morgantown, WV	Civil Engineer and Surveying	\$10,000,000	5% Design
<b>Huff Consolidated School</b> Wyoming County, WV	Wyoming County BOE Pineville, WV 24874	Architecture, Engineering and Surveying	\$10,500,000	35% Design
<b>Martinsburg Wastewater Treatment Plant</b> Martinsburg, WV	The City of Martinsburg Martinsburg, WV 25401	Architecture, Engineering and Surveying	TBD	60% Design
TOTAL NUMBER OF PROJECTS: 8		TOTAL ESTIMATED CONSTRUCTION COSTS: \$94,900,000		

[illegible]

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
I-79 Burnsville & Servia Rest Area Sewage Treatment Plant Interstate 79, WV	WVDOH 1900 Kanawha Blvd., East Bldg. 5, Room 109 Charleston, WV 25305	\$1,600,000	2007	Yes
US Route 11 Wheatland Road Berkeley County, WV	WVDOH 1900 Kanawha Blvd, East Bldg. 5 Room 109 Charleston, WV 25305	\$2,340,000	2008	Yes
South Jefferson High School Charles Town, WV	Jefferson County Board of Education 110 Mordington Avenue Charles Town, WV 25414	\$32,500,000	2008	Yes
Morgantown Municipal Airport South Apron Rehabilitation Morgantown, WV	City of Morgantown 389 Spruce Street Morgantown, WV 26501	\$700,000	2008	Yes
Morgantown Municipal Airport North Terminal Expansion Morgantown, WV	City of Morgantown 389 Spruce Street Morgantown, WV 26501	\$400,000	2008	Yes
Fairmont Federal Credit Union Bridgeport, WV	Fairmont Federal Credit Union 10 Eleventh Street Fairmont, WV 26554	N/A	2008	Yes
Don Nehlen Drive Sidewalk Morgantown, WV	West Virginia University 979 Rawley Lane Morgantown, WV 26506	\$550,000	2008	Yes
Mon General Medical Office Parking Morgantown, WV	Mon General Foundation 1200 JD Anderson Drive Morgantown, WV 26505	\$500,000	2008	Yes
WVU Engineering Sciences Addition Morgantown, WV	West Virginia University 979 Rawley Lane Morgantown, WV 26506	\$10,500,000	2008	Yes

Stormwater Management and Parking Lots Morgantown, WV				
Robert C. Beach Deck Replacement	WVDOH 1900 Kanawha Blvd. East Charleston, WV 25305	\$300,000	2009	Yes
WVU Burn Room	West Virginia University 979 Rawley Lane Morgantown, WV 26506	\$750,000	2009	Yes
Ices Ferry Bridge	West Virginia Division of Highways	\$8,200,000	2009	Yes
Morgantown Municipal Airport Runway Safety Area Morgantown, WV	City of Morgantown 389 Spruce Street Morgantown, WV 26505	\$15,000,000	2009	Yes
WVU Research Park E-1 Morgantown, WV	WVU Research Corporation PO Box 6416 Morgantown, WV 26506	\$800,000	2009	Yes
Suncrest Town Centre Traffic Control Morgantown, WV	Town of Granville	\$108,000	2010	Yes
443 LLC, Entry Design Morgantown, WV	HF, LLC	\$2,000,000	2010	Yes
Mountaineer Middle School Morgantown, WV	Monongalia County BOE 13 South High Street Morgantown, WV 26501	7,000,000	2010	Yes
Cheat Lake Elementary School Morgantown, WV	Monongalia County BOE 13 South High Street Morgantown, WV 26501	4,000,000	2011	Yes



Morgantown, WV	2 <sup>nd</sup> Floor Courthouse Morgantown, WV 26505			
Mon General Access Road Morgantown, WV	Mon General Hospital 1200 JD Anderson Drive Morgantown, WV 26505	\$4,500,000	2012	Yes
Federal Bureau of Prisons Hazelton – Medium Security (Design – Build)	Federal Bureau of Prisons Washington, DC	\$90,000,000	2012	Yes
Grumbein's Island Feasibility Study	West Virginia University Morgantown, WV	N/A	2012	No
Shepherd University Underpass	Shepherd University Shepherdstown, WV	\$3,800,000	2012	Yes
Winchester & Western Railroad	Amtrac Railroad Hagerstown, MD		2012	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
WVU Alumni Center Morgantown, WV	WVU Alumni Association	\$13,000,000	2008	Yes	IKM, Incorporated

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.

20. The foregoing is a statement of facts.

Signature:  \_\_\_\_\_

Title: Principal

Date: \_\_\_\_\_

Printed Name: Steven V. Buchanan, PE, PS

ALPHA

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Nitigation/ Replacement	Construction Inspection/Managem ent	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability						
Morgan Run	C&P	1				X					X		X	X				M	P	P			
Middle Fork of Greens Run	C&P	1				X					X		X	X				M	P	P			
Sovern Run 62 & Bishoff	C&P	1				X					X		X	X				M	P	P			
Allen Conner/Messenger Site	C&P	1				X					X		X	X				M	P	P			
North Fork of Greens Run	C&P	1				X					X		X	X				M	P	P			
Lambert Run Site 5	C&P	1				X					X		X	X				M	P	P			
Lambert Run Site 6	C&P	1				X					X		X	X				M	P	P			
Smooth Rock Lick 1, 2, & 3	C&P	1				X					X		X	X				M	P	P			

\* List whether project experience is corporate or personnel based or both.  
\*\* Use this area to provide specific sections or pages if needed for reference.  
\*\*\* List Primary Design personnel and their functional capacity for the projects listed.