



# EXPRESSION OF INTEREST

WEST VIRGINIA DIVISION OF NATURAL RESOURCES

A/E Services for Palestine Hatchery Facility—DNR200000006  
*Wirt County, West Virginia*

April 14, 2020

04/14/20 09:03:50  
WV Purchasing Division



## CHARLESTON

7012 MacCorkle Avenue, SE  
Charleston, WV 25304  
(304) 342-1400

## MORGANTOWN

125 Lakeview Drive  
Morgantown, WV 26508  
(304) 225-2245

## WINCHESTER

15 South Braddock Street  
Winchester, VA 22601  
(540) 450-0180

*Project Number: 0101-20-0085*

# TABLE OF CONTENTS

<b>Executive Summary</b> .....	<b>Page 1</b>
<b>Corporate Summary</b> .....	<b>Page 3</b>
<b>Mills Group</b> .....	<b>Page 5</b>
<b>Qualifications</b> .....	<b>Page 6</b>
<b>Project Approach</b> .....	<b>Page 10</b>
<b>Hatchery Projects</b> .....	<b>Page 11</b>
<b>Water Supply Projects</b> .....	<b>Page 12</b>
<b>Wastewater Projects</b> .....	<b>Page 18</b>
<b>Mills Group Representative Projects</b> .....	<b>Page 24</b>
<b>Proposed Staffing Plan</b> .....	<b>Page 28</b>
<b>Staff Qualifications</b> .....	<b>Page 29</b>
<b>Management Plan</b> .....	<b>Page 32</b>
<b>References</b> .....	<b>Page 33</b>

## **Appendices**

<b>Service Briefs</b> .....	<b>Appendix A</b>
<b>Staff Resumes and Certifications</b> .....	<b>Appendix B</b>
<b>Disclosure of Interested Parties to Contracts, DNR 2000000006 Solicitation Form, Certification and Signature Page, Purchasing Affidavit, Addendum Acknowledgement Form</b> .....	<b>Appendix C</b>



# Expression of Interest

## EXECUTIVE SUMMARY



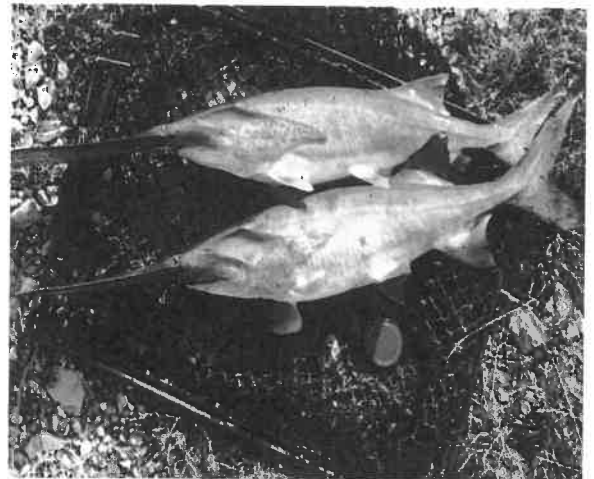
Potesta & Associates, Inc. (POTESTA) appreciates the opportunity to submit this Expression of Interest to the West Virginia Division of Natural Resources (WVDNR) to provide engineering services and any other related professional services to design and specify for construction of hatchery facilities including mussel rearing capabilities for the Palestine State Fish Hatchery (Palestine Hatchery) located near Elizabeth in Wirt County, West Virginia.

Many of West Virginia's fish hatcheries were built more than 50 years ago and are deteriorating, thus in need of rehabilitation, restoration, and improvements. Fishing opportunities in West Virginia add millions of dollars per year into our economy. Conservation and protection of the fish hatcheries is vital to the WVDNR's ability to provide fish for recreational angling. The Palestine Hatchery is the state's primary facility dedicated to the production of warmwater species, including walleye, musky, tiger musky, channel catfish, hybrid striped bass, saugeye, sunfish, and largemouth and smallmouth bass. This hatchery is considered the key to most of West Virginia's fishery management successes.



POTESTA's team of engineers and scientists have extensive experience in aquaculture and civil and environmental engineering projects. POTESTA has strategically teamed with The Mills Group, a West Virginia operated award-winning architectural firm. Our team has the necessary experience and qualified personnel to efficiently implement an optimal design and construction plan in a timely, cost effective manner. POTESTA's client centric approach will provide a direct line of communication with the WVDNR and Palestine Hatchery personnel throughout the project.

POTESTA understands the WVDNR wishes to design and construct an approximately 9,000 SF hatchery building on the existing property. The facility will contain office space, lab space, fish and mussel rearing areas along with adequate storage. Design will also include the use of surface water from the on-site reservoir and a proposed well to be drilled for additional water supply.



Services include:

- Design of facilities
- All necessary utility extensions
- Site work
- Environmental and other permitting
- Construction contract administration

Mussels play an important role in maintaining water quality, removing particulates and lots of sediment. The sheepnose and the spectaclecase mussels found in West Virginia are listed on the federal Endangered Species List, and the numbers in West Virginia are declining. POTESTA understands the need to cultivate mussel stems from the loss of mussel habitat. In order to be successful cultivating mussels, a variety of fish species will need to be cultivated as well. POTESTA's success with hatchery projects comes from the combination of experienced engineers and biologists collaborating on design. We will design a recirculating hatchery with temperature control and biosecurity in mind. This will allow the hatchery managers the control necessary to cultivate a wide variety of mussels and fish with excellent results. The design of the hatchery building will emphasize the separation of mussel and fish aquaculture. The main goal of fish hatcheries is to propagate fish for stocking in streams, lakes, reservoirs, and farm ponds. Mussel hatcheries are trying to reverse the decline and actively recover freshwater mussels to promote cleaner waters.

# Expression of Interest

## EXECUTIVE SUMMARY

### **SIMILAR PROJECT EXPERIENCE**

POTESTA recently completed a similar project at the Buller Hatchery and Aquatic Wildlife Conservation Center (AWCC) in Marion, Virginia for the Virginia Department of Game and Inland Fisheries (Virginia DGIF). The facility provides trout (coldwater), muskie and walleye (warmwater) for stocking the waters of Western Virginia. It also included a major upgrade to the AWCC which cultivates many species of endangered mussels for restocking in suitable river habitat. The facility utilized gravity fed river water from a dammed section of the South Holston River and a small artesian spring source.



An engineer and scientist served as co-project managers, integrating science into engineering workflows. Real world solutions require both for the development and implementation process. Dr. Daniel Miller, Ph.D. and Mr. Terence Moran, P.E. drew on each other's strengths for the design process. POTESTA projects routinely involve collaboration between scientists and engineers and it shows in the quality of our work and relationships. The Virginia DGIF was so pleased with the outcome of the Buller Hatchery and AWCC, additional services were requested for a second hatchery in the state—King and Queen Fish Hatchery. Virginia DGIF stated POTESTA was the first firm to pair scientists and engineers on one of their hatchery projects, and they believed this was integral to successfully addressing the wide array of the project's needs.

POTESTA's staff aquatic biologist, **Dr. Miller, Ph.D.**, has over 30 years of operational and project management experience that includes commercial, research, and education pertinent to hatchery production. Uniquely, he has direct experience with artificially spawning paddlefish for WVDNR approximately 15 years ago while working for the West Virginia University's aquaculture extension program. Dr. Miller has designed, assessed, modified, managed and trained personnel for a variety of production scenarios: from flow through to 98 percent recirculating facilities. His knowledge of biosecurity options and the importance of regular training and educational updates make him a critical component of our team.



**Mr. Moran, P.E.** brings as over 25 years of extensive experience on water supply/wastewater projects, liner system projects, sampling/flow metering projects, and projects for the State of West Virginia. He has completed 100+ water supply/wastewater projects. He is well versed in attending pre-bid meetings to present the project and answer questions, administering construction contracts, overseeing construction technicians, reviewing applications for payments, etc. He has served as project engineer/project manager for approximately 70 projects (contracts) with the State of West Virginia, including contracts with the West Virginia Department of Environmental Protection, West Virginia Department of Health and Human Resources, and West Virginia Department of Transportation; these projects for the State of West Virginia included projects involving liner systems, water supply systems, wastewater systems, flow metering, and sampling.

**Mills Group** was on POTESTA's team for the Virginia DGIF Buller Hatchery Project as an architectural consultant. The conceptual design included a mechanical/filter room, storage area, brine shrimp prep room, two offices and a small kitchen, a mud room, as well as a male and female bathroom.

POTESTA and Mills Group has the necessary experience in-house to complete all the services anticipated under this contract. POTESTA will assign adequate personnel to complete work in a timely and cost-efficient manner. We look forward to continuing our relationship with the WVDNR on this exciting project and are available to meet to answer any questions you may have or to discuss your needs in more detail.

# Expression of Interest

## **CORPORATE SUMMARY**



### **HISTORY**

POTESTA was founded in 1997 as a full service engineering and environmental consulting firm headquartered in Charleston, West Virginia. We have now expanded to a diverse staff of approximately 80 experienced engineers, scientists, and support personnel with branch offices in Morgantown, West Virginia, and Winchester, Virginia. Our clients include local, state and federal agencies; mining, manufacturing and chemical companies; utility companies; waste management companies; K-12 schools/colleges/universities; land developers; attorneys; financial institutions; insurance companies; construction companies; and architects.



### **SERVICES**

- Aquaculture
- Air Permitting
- Biological and Toxicological
- CADD/GIS
- Civil Engineering and Design
- Construction Monitoring
- Environmental Site Assessment
- Geotechnical Engineering
- Groundwater
- Hydrology and Hydraulics
- Landfills and Solid Waste
- Litigation Support
- Mining
- Occupational Safety and Health
- Oil and Natural Gas Consulting
- Permitting
- Remediation
- Roadway Engineering
- Sampling
- Site Design
- Storage Tanks
- Surveying and Mapping
- Water and Wastewater
- Water Quality
- Wetlands

### **LEADERSHIP**

Our firm is managed by two principals driving POTESTA forward with their experience and emphasis on exceeding expectations. Ronald R. Potesta, President, has served as the Director and Deputy Director of West Virginia's Department of Natural Resources (WVDNR) which, during his tenure housed all of the environmental regulatory programs, had an annual budget of \$23 million and 700 full-time employees. The agency at that time encompassed state environmental regulatory programs, wildlife management and law enforcement.

Dana L. Burns, P.E., Vice President, has more than 40 years' experience with civil, geotechnical, mining and environmental engineering projects. Mr. Burns, P.S., P.E., has managed numerous multi-discipline projects, and understands the importance of client communication and the internal coordination of various disciplines on a project. Mr. Burns served as the Principal-in-Charge for the Virginia DGIF Buller Hatchery and AWCC Project. The public service and experience of our principals has provided POTESTA with personal relationships with many of the regulatory staff members and in-depth program knowledge of West Virginia and surrounding states regulatory programs. POTESTA builds our contact base, stays informed on current issues, and strengthens relationships with the regulatory community by contributing and serving on various boards and commissions.

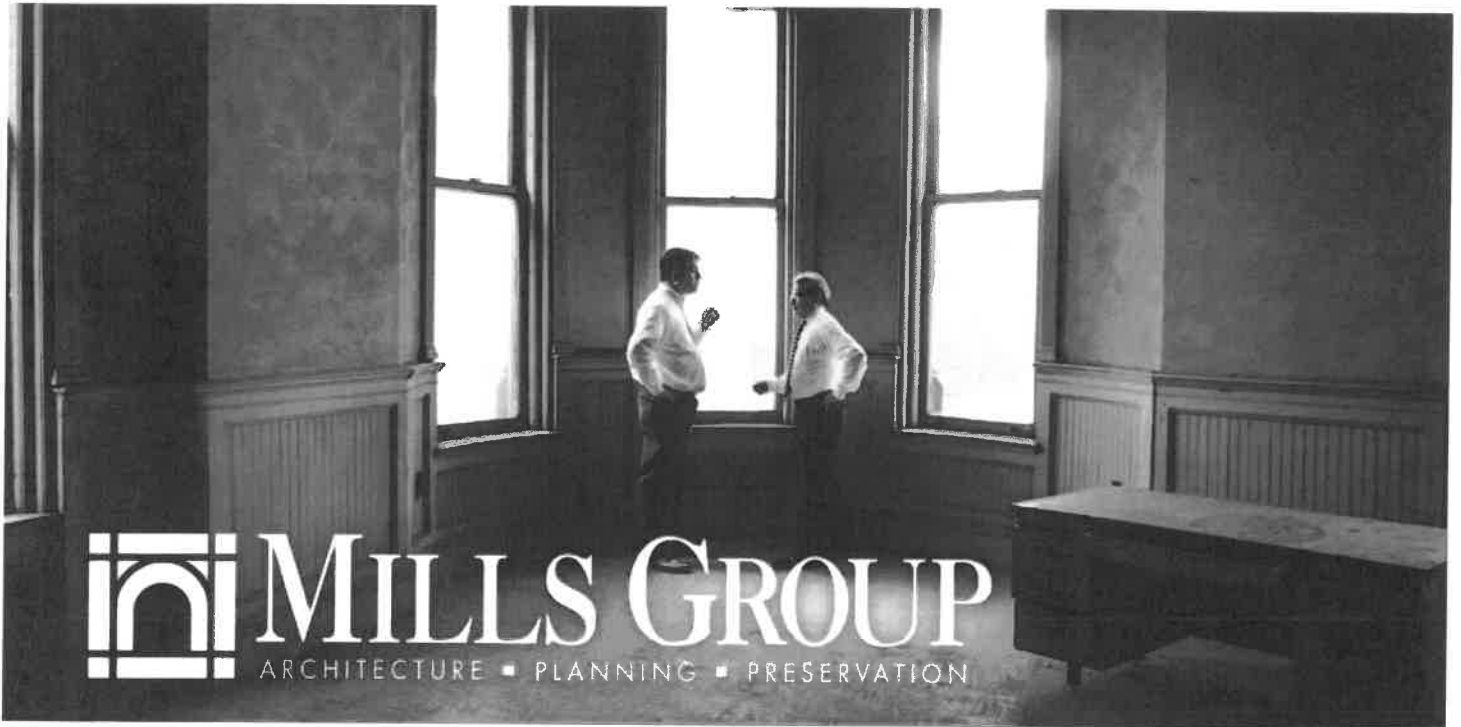
POTESTA's staff is committed to delivering innovative, cost-effective solutions to meet our client's complex requirements. The firm's environmental department consists of biologists, geologists, chemists, environmental scientists and environmental engineers, many with advanced degrees (Masters and Ph.D. level). POTESTA's engineering department includes civil, geological, geotechnical, environmental, mining and mechanical engineers.

POTESTA's large group of experienced professionals and support staff will allow us to assign adequate personnel to complete work activities and the project within WVDNR required schedule timeframe. POTESTA offers a large staff with the efficiency and rates normally associated with a small firm.



## Expression of Interest

### MILLS GROUP



 **MILLS GROUP**  
ARCHITECTURE ■ PLANNING ■ PRESERVATION

**“Designing on  
the principles  
of the past and  
preserving  
for the  
future”**

**LOCATIONS:**  
**THE WEISS BUILDING**  
63 Wharf Street, Suite 300  
Morgantown, WV 26501  
304.296.1010

**THE KALEY CENTER**  
53 14th Street, Suite 607  
Wheeling, WV 26003  
304.233.0048

**SITE:**  
[millsgrouponline.com](http://millsgrouponline.com)

Mills Group represents a collection of architects, designers, and researchers dedicated to innovative design and quality work. In 2005 Michael Mills, AIA, answered a market demand for architects with a special skill set. By 2013 the firm expanded to Wheeling to include more talent over a broader geographic range.

The firm's success is a product of diligently understanding client needs, existing conditions, design goals and budget. Our process is built on the foundation of research, client collaboration, and creative solutions. The team looks to the region's architectural heritage for inspiration to celebrate the best of the past and promote economic vitality for the future.

Mills Group happily serves public and private clients. Public sector patrons who have sought our services include cultural agencies, development offices, municipalities, non-profits, and schools. Other architects and engineers, developers, homeowners, and business people are counted among our private clients.

The firm is committed to a quality end product derived from experience, diligence, and collaboration. Clients can always count on us to maintain our efforts from concept to ribbon cutting.

# Expression of Interest

## QUALIFICATIONS



POTESTA's extensive experience with projects like this one has taught us that the avenue to success begins with the interview process to determine the future needs of production (species, size, quantities) and to provide insight into disease issues, water and space limitations, or water quality challenges. POTESTA can provide the required expertise to complete this project in a timely, economical, and efficient manner.

Services anticipated to be required for a project of this nature include, but are not limited:

- **Fish and Mussel Production**
- **Biosecurity**
- **Water Management**
- **Wastewater Management**
- **Civil Engineering and Design**
- **CADD**
- **Construction Monitoring**
- **Stormwater Management**
- **Geotechnical Engineering**
- **Groundwater/Springs**
- **Hydrology and Hydraulics Design**
- **Permitting**
- **Roadway Design**
- **Site Design**
- **Surveying and Mapping**



Additional information on the primary service areas for this project is included in **Appendix A**.

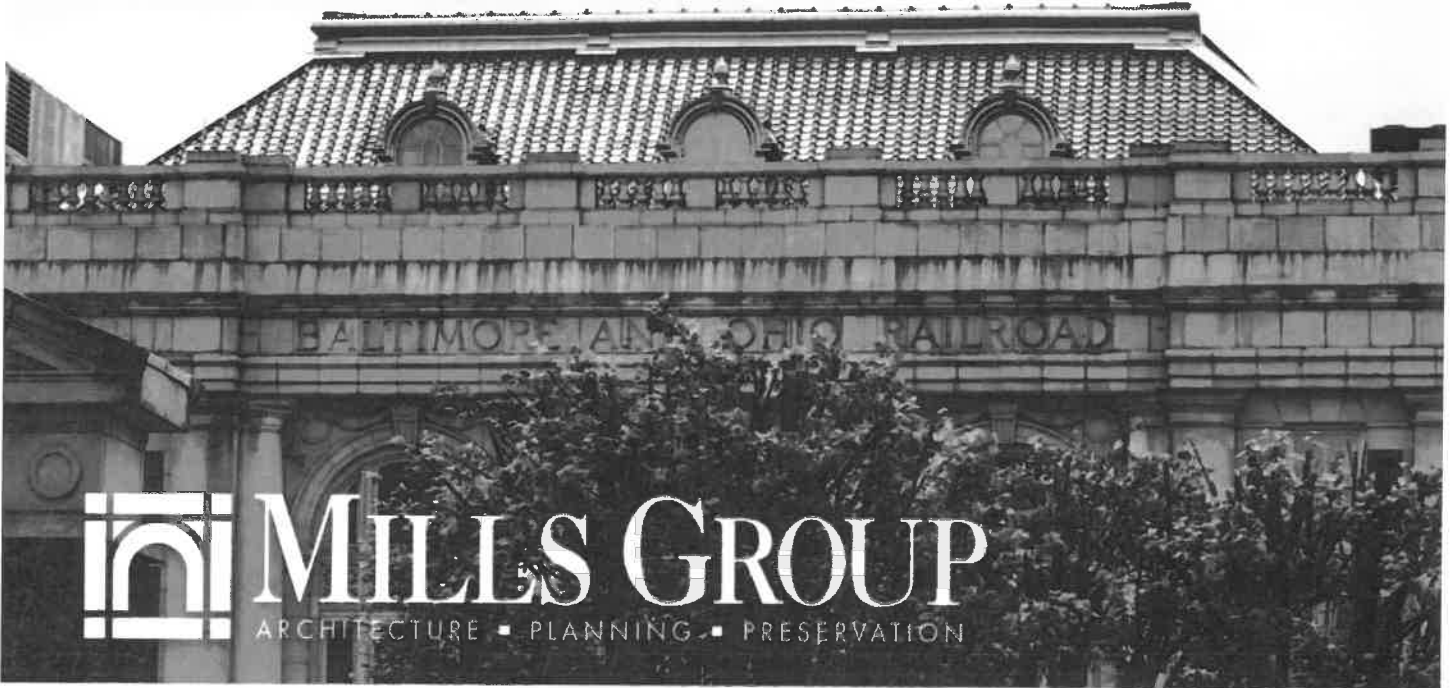
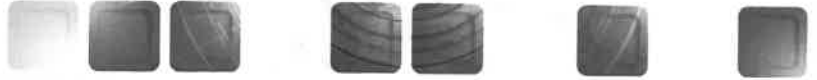
Our qualifications are an exceptional fit for Palestine's Fish Hatchery Upgrades Project. We believe we are the only firm who has extensive hatchery experience, completion of numerous water, wastewater and liner system projects, and a unique combination of engineers and environmental scientists to meet the challenges of this project.

DISCIPLINE	STAFF MEMBER	EXPERIENCE
<i>Fish Production/Biosecurity/Recirculation Technology and Hatchery Design/Educational</i>	Daniel Miller, Ph.D.	<ul style="list-style-type: none"> <li>• Designed/operated tilapia, shrimp, trout and bass hatcheries/grow-out facilities</li> <li>• 11 years with WVU Extension Service for public education</li> </ul>
<i>Water Management</i>	Mark Sankoff, PE, PS	<ul style="list-style-type: none"> <li>• 20 years engineering/operations manager for large water utility (300 tanks, 1,700 miles line, numerous pumps, etc.)</li> </ul>
<i>Wastewater Management</i>	Terence Moran, PE	<ul style="list-style-type: none"> <li>• Masters in Sanitary Engineering, 100+ wastewater projects (collection/pump stations/treatment options)</li> </ul>
<i>Roadways/Stormwater/Resources Evaluations</i>	Joe Knechtel, PE	<ul style="list-style-type: none"> <li>• Extensive civil/site, stormwater/roadway design expertise</li> </ul>
<i>Soils/Stabilization/Foundations</i>	Chris Grose	<ul style="list-style-type: none"> <li>• Masters in Geological Engineering, soil/geotechnical studies</li> </ul>
<i>Liner Systems</i>	Mark Kiser, PE, LRS	<ul style="list-style-type: none"> <li>• Hundreds of acres of liner system design and QA/QC</li> </ul>
<i>Water Quality</i>	Lisa Burgess	<ul style="list-style-type: none"> <li>• Ability to manage facility's compliance during major improvement projects</li> <li>• Specializing in regulatory issues addressing water</li> </ul>
<i>Water Quality</i>	Mindy Armstead, Ph.D.	<ul style="list-style-type: none"> <li>• Aquatic toxicologist experienced in water quality issues</li> <li>• Conducted toxicity assessments and developed programs to minimize or eliminate instances of aquatic toxicity</li> </ul>



# Expression of Interest

## QUALIFICATIONS



Our firm currently has ten technical staff members located in the Morgantown office and an office manager/administrator. Our Wheeling office has five technical associates and an office manager. Although we have two offices, we work very closely together and frequently meet through the use of interactive web conferencing and in-person get-togethers. Each team member has a well-rounded architectural background while also possessing a specific area of excellence.

### Architecture

COMMERCIAL  
RESIDENTIAL  
PUBLIC

### Planning

ENABLE  
EXTEND  
ENHANCE

### Preservation

RENTALIZE  
REHABILITATE  
CONSULT

Mills Group is a proven leader in many specialized areas of architecture and design. With experience in commercial, public, and cultural facilities, our firm has a breadth of exposure, which gives us confidence to approach any design challenge. Through engagement and collaboration we develop solutions based on shared visions and focused needs.

Our firm provides careful planning and design for commercial, public, and residential clients both as a necessary asset to an overall architecture project and as a stand-alone service. The firm follows the 'measure twice, cut once' principle, and approaches planning as a forward thinking, cost saving, and practical application for all projects.

We maintain a commitment to the cultural heritage of our region. We strive to raise awareness of the significant history and culture that is the foundation of who we are and ultimately, will become. Our team performs historical research as well as assessing and documenting existing conditions. We compile our findings into a comprehensive narrative, a feasibility study and/or historic structures report for the owner to implement planning for the next phase of use for the building.

# Expression of Interest

## **PROJECT APPROACH**



### **GOAL/OBJECTIVE 1: REVIEW EXISTING PLANS– COMMUNICATE WITH OWNER**

Once the contract is awarded, POTESTA will visit Palestine to gather additional information and have dialogue with onsite personnel. From this effort, we anticipate preparing our detailed scope of services. POTESTA will work with WVDNR to develop a successful team approach to the project.

### **GOAL/OBJECTIVE 2: DESIGN SERVICES**

POTESTA will take information gathered from Goal/Objective 1 and develop preliminary plans for the WVDNR to review and make comments.

POTESTA will proceed with the final design and preparation of project specifications for the project once WVDNR has reviewed the preliminary design and we have received comments on the same, and the necessary funding has been obtained. The design can be flexible and POTESTA will adjust the design accordingly as the situation and/or funding may dictate.

However, some issues we intend to take into account in final design are summarized as follows:

- Biosecurity and sustainability are two issues that all hatchery rehabilitation plans are dealing with. Recirculating Aquaculture Systems (RAS) have been incorporated into numerous state hatchery rehabilitation plans (Cleghorn Springs, SD; Montebello hatchery, VA; Wild Rose Hatchery, WI) over the past decade. POTESTA is able to provide an evaluation of options available for incorporating partial recirculating capacity within the context of wastewater treatment systems and biofilter sizing.

Construction drawings and specifications will be prepared for WVDNR and regulatory review and approval prior to advertisement and bidding. POTESTA will prepare a preliminary estimate of probable construction cost broken down by major work items. We routinely track bid tabulations available from entities such as the West Virginia Division of Highways and the Contractors Association of West Virginia so that we have ready “access” to up-to-date unit prices. Separate estimates will be made for each facility. The preliminary estimate will be submitted with a draft submittal of the drawings and specifications. A final estimate of probable construction cost will be prepared and submitted with the final drawings. The final estimate will be used for evaluation of project costs and subsequent contractor bids.

Several permits and/or permit modifications may be required for the proposed project. These may include a NPDES General Stormwater Permit, United States Army Corps of Engineers Permit, West Virginia Public Land Corporation Permit. Modifications to applicable facility NPDES permits will be required.

POTESTA will prepare a construction bid form and required bidding (i.e., contract) documents, and will assist the Agency in the appropriate procedures regarding advertisement and procurement of bids. POTESTA will also help present the project at public meetings (if desired), and assist with the pre-bid conference for contractors. Upon receipt of bids, POTESTA will aid WVDNR in evaluation of the bids for cost, completeness and qualifications.

### **GOAL/OBJECTIVE 3: CONSTRUCTION CONTRACT ADMINISTRATION SERVICES**

After bid evaluation and contractor selection by WVDNR, POTESTA proposes to complete the following construction administration and observation tasks during construction. The scope of services described below is based in part on terms and requirements of the *Standard General Conditions of the Construction Contract*, prepared by the Engineers Joint Contract Documents Committee, which has been used for other projects and is assumed to be used as the basis of the contract between the Agency and the contractor.

# Expression of Interest

## PROJECT APPROACH



### **GOAL/OBJECTIVE 3: CONSTRUCTION CONTRACT ADMINISTRATION SERVICES (CONT.)**

- Attend pre-construction conference.
- Review underground facilities not shown on contract documents to determine potential changes to contract documents.
- Review substitutes and "or equal" items, and issue written acceptance/denials.
- Review and approve shop drawings and samples (if required), including review of revised shop drawings if necessary.
- Review contractor work plan, if required by specification special conditions.
- Attend progress meetings and as needed meetings.
- Issue written clarifications or interpretations of the requirements of the contract documents, including issuance of additional specifications and drawings.
- Provide a nearly full-time representative to observe construction for compliance with the contract documents, and observe testing by the contractor and record results on appropriate forms.
- Prepare weekly reports summarizing construction activities.
- Prepare change orders for the work, including issuance of additional specifications and drawings, if necessary.
- Review contractor invoices (i.e., Applications for Payment) and issue written recommendations for payment or denial.
- Issue Certificate of Substantial Completion to the Agency, as typically required by the contract documents.
- Provide record drawings showing "as-built" features.



# Expression of Interest

## SIMILAR EXPERIENCE



### HATCHERY PROJECTS

POTESTA's team of engineers and scientists have extensive experience in aquaculture, civil, and environmental engineering projects. POTESTA's engineers understand the biological consequences of design. This deep knowledge base uniquely qualifies POTESTA to effectively complete this project for WVDNR.

#### Virginia Department of Game and Inland Fisheries (DGIF) *Marion, Virginia*

POTESTA was retained by Virginia DGIF to prepare a comprehensive preliminary engineering report for the Buller Hatchery and Aquatic Wildlife Conservation Center. This facility located near Marion, Virginia, provides trout (coolwater), muskie and walleye (warmwater) for stocking the waters of Western Virginia. The scope of services also included a major upgrade for the Aquatic Wildlife Conservation Center which cultivates many species of endangered mussels for restocking in suitable river habitat.

The final report included design recommendations for both facilities to improve the production, efficiency, biosecurity and health of fish and mussels. New technologies were proposed into the upgrades which would allow for improved water quality and better growth of all species.

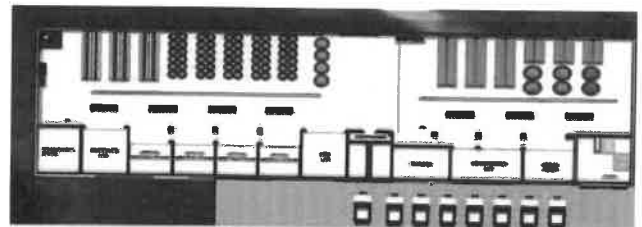
The detailed appendices to the report included:

- Drawings of preliminary layout; estimate of water needs
- Photographs of an external pond harvest system
- Calculations of optimum loading capacity and improved wastewater treatment
- New building design
- Preliminary opinion of probable construction cost and anticipated operational costs



Mills Group was hired as the architectural consultant to develop a concept for the complex. The 6,000 SF building has designated areas such as a mechanical/filter room, storage area, brine shrimp prep room, two offices and a small kitchen, a mud room as well as male and female bathrooms. Production area for the hatchery was planned to contain:

- 6 x 6 ft. circular tanks
- 6 x 10 ft. x 1.5 ft. fry tanks
- 8' x 20' ft. x 3 ft. holding tanks
- 24 hatching jars (removable in a 3 ft. x 16 ft. area)
- 12' x 12' overhead door may be needed for the mechanical room for large filters (2 sand filters, 3 pumps, heat exchange, UV filter)



The Virginia DGIF requested additional services from POTESTA for a second hatchery in the state that ran concurrent with the Buller Hatchery project. Both hatchery projects were delivered on time and within the budget anticipated.

# Expression of Interest

## SIMILAR EXPERIENCE



### HATCHERY PROJECTS

CLIENT	PROJECT MANAGER	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
<b>Buchart Horn</b> <i>Stevensville, Virginia</i>	Terry Moran, PE tcmoran@potesta.com	Renovations to King and Queen Hatchery	<ul style="list-style-type: none"> <li>• Surveys of ponds</li> <li>• Conceptual Plan of renovations</li> <li>• Final Design</li> <li>• Construction Phase Services</li> <li>• Preparation of Erosion and Sediment Control Plan</li> </ul>
<b>Mountaineer Trout Farm</b> <i>Raleigh County, West Virginia</i>	Dan Miller, Ph.D. dmiller@potesta.com	Reduce solids from a series of parallel raceways for commercial production of rainbow trout in order to meet NPDES limits	<ul style="list-style-type: none"> <li>• Evaluated feed management and farm operations to allow for early solids removal to reduce TSS at the discharge.</li> <li>• Settling pond and composting area were included in the recommendations.</li> </ul>
<b>High Tech Fisheries</b> <i>Uniontown, Pennsylvania</i>	Dan Miller, Ph.D. dmiller@potesta.com	Continual disease problems causing low survival in 200 gallon tanks	<ul style="list-style-type: none"> <li>• Modified biosecurity protocols.</li> <li>• Installed large UV units and a quarantine tank to control disease.</li> </ul>
<b>Trout Lodge and Anglers Resort</b> <i>Monroe County, West Virginia</i>	Dan Miller, Ph.D. dmiller@potesta.com	Increase production and acquire more water flow in the raceways	<ul style="list-style-type: none"> <li>• Custom set of low head oxygenators for the upper levels of the raceway system, which allowed an increase in stocking densities and improved production.</li> <li>• Demand feeders over the raceways reduced the labor needed for feeding the trout.</li> </ul>
<b>West Virginia University- Dogwood Lake Aquaculture Site</b> <i>Monongalia County, West Virginia</i>	Dan Miller, Ph.D. dmiller@potesta.com	Development of aquaculture research and demonstration facility	<ul style="list-style-type: none"> <li>• Responsible for production, research, and maintenance of the facility.</li> <li>• Training undergraduate and graduate students for data collection and daily maintenance.</li> <li>• The site has become a private trout production facility supplying high quality trout for live stockings.</li> </ul>
<b>Center for Great lake Studies Recirculating Hatchery</b> <i>Milwaukee, Wisconsin</i>	Dan Miller, Ph.D. dmiller@potesta.com	Design, assembly and testing of a 10,000 gallon recirculating tank for research	<ul style="list-style-type: none"> <li>• Biofilter design was a sand based fluidized bed reactor and was sized for intense feeding.</li> <li>• Options for ozone and UV were included.</li> <li>• Personnel training for operation included biosecurity measures and feed management evaluation.</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE



### **WATER SUPPLY PROJECTS**

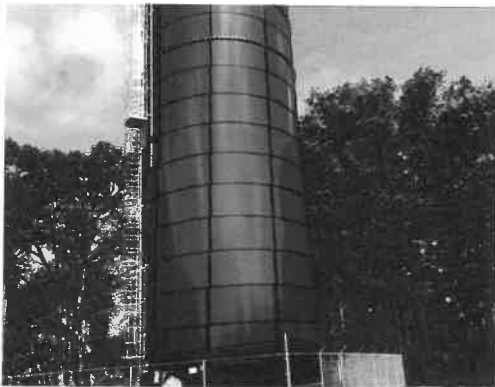
POTESTA has assembled a project team that is highly qualified and unprecedented for being able to complete public utility projects. Our project management staff has managed hundreds of projects and understands what it takes to bring ideas to fruition through cost-effective and often innovative designs. We take pride in our ability to work with our clients from the conceptual idea through the construction process, which is the most critical part of the project. POTESTA often assists in determining the best options for funding which will provide the best outcome with the least financial impact possible to the client's users.



### **COWEN PUBLIC SERVICE DISTRICT** Cowen, WV

Erbacon Water Lines and Upgrade to Water Distribution System

- 7,200 LF 8" PVC main replacement
- Reconnection of 50 existing customers
- Elimination of 50 gpm of leakage
- 4 new fire hydrants



### **PRESTON COUNTY PUBLIC SERVICE DISTRICT #2**

Preston County, WV

Howesville Area Water Line Extension

- 74,000 LF of water line
- 260,000-gallon water storage tank
- 280 GPM booster station
- 3 pressure reducing valves



### **WEST VIRGINIA AMERICAN WATER** WV

Master Services Agreement

- Assisted in replacing over 100 sections of water lines
- Projects have included a major upgrade of the Central Avenue system of over 2 miles of old 6" lines replaced with 12" and 16" pipe eliminating a booster station
- Work on projects has included design, permitting, contract documents, drawings, construction observation, project management, and invoice approval

# Expression of Interest

## SIMILAR EXPERIENCE



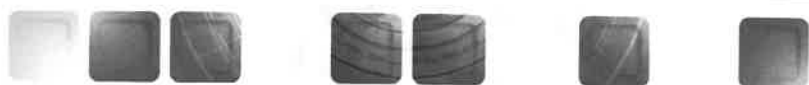
### WATER SUPPLY PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Preston County Public Service District #2/ Howesville, West Virginia	Dave Sharp, PE, Branch Manager dsharp@potesta.com (304) 225-2245	Howesville Area Water Line Extension	<ul style="list-style-type: none"> <li>• WVIJDC and PER for funding agency purposes</li> <li>• Construction drawings, including replacement and extension of 74,000 feet of water line, including a 260,000- gallon water storage tank, a 280 GPM booster station, and three pressure reducing valves</li> <li>• Environmental impact statement for the federally funded project that resulted in a finding of no significant impact (FONSI)</li> <li>• Preliminary estimate of probable construction cost</li> </ul>
Boone County Public Service District/ Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Stephens Auto/Betsy Lane Water Line Extension	<ul style="list-style-type: none"> <li>• Surveyed a proposed railroad crossing</li> <li>• Construction drawings</li> <li>• Permit applications</li> <li>• Water line extension that including approximately 4,800 linear feet of 6-inch and 2-inch water line, two fire hydrants, one river crossing, one railroad crossing and 19 potential customers</li> </ul>
City of Philippi/ Philippi, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Relocation of Water Line	<ul style="list-style-type: none"> <li>• Prepare construction documents</li> <li>• Permit applications</li> <li>• Construction monitoring for relocation of waterlines disrupted by the WVDOH Philippi Bridge Bypass Project</li> </ul>
Boone County Public Service District/ Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Joe's Creek Water Line Extension	<ul style="list-style-type: none"> <li>• Site reconnaissance to locate pathway of the water line, identify potential customers, etc.</li> <li>• Met with utility officials</li> <li>• Hydraulic calculations</li> <li>• Prepared report summarizing preliminary design</li> </ul>
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Trace Branch at Robinson Water Line Extension	<ul style="list-style-type: none"> <li>• Design of 3,100 feet of 6-inch and 2-inch water line with multiple stream crossings, roadway crossings, and a railroad crossing</li> <li>• Surveying for the railroad crossing</li> <li>• Preparation of construction drawings</li> <li>• Prepare permit applications</li> </ul>
West Virginia American Water/Cabell County, West Virginia	Dana Burns, PE, PS, Vice President dlburns@potesta.com (304) 342-1400	Cabell County Water Line Extensions	<ul style="list-style-type: none"> <li>• Design and prepare construction/bid documents for approximately 23 miles of 2 through 8-inch diameter water line</li> <li>• Field reconnaissance and coordination with public and private utility companies</li> <li>• Bid quantities and an engineer's cost estimate</li> <li>• Construction management</li> </ul>
West Virginia American Water/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Lick Creek Water Line Extension– WVIJDC application	<ul style="list-style-type: none"> <li>• Application package to WVIJDC to obtain various funding sources</li> <li>• Preliminary Engineering Report</li> <li>• Preliminary design of 17,700 linear feet of 8-inch water line, 900 linear feet of 6-inch water line, and 3,475 feet of 2-inch water line to serve 190 customers</li> </ul>
West Virginia American Water/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Lick Creek Water Line Extension– Phase I	<ul style="list-style-type: none"> <li>• Water line service to approximately 200 customers</li> <li>• Hydraulic evaluation of existing and proposed water line</li> <li>• Prepared drawings and specifications</li> <li>• Preparation of permit applications</li> <li>• Construction phase services</li> <li>• 32,000 LF of 8-inch, 6-inch, and 2-inch water line</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE

### WATER SUPPLY PROJECTS



PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Hatfield-McCoy/ Waterways Water Line Extension	<ul style="list-style-type: none"> <li>• Extending water lien from Julian to approximately 10 new customers, crossing a four-lane highway, and a river.</li> <li>• Approximately 12,000 LF of 12-inch, 8-inch, and 6-inch water line were designed, as well as four river crossings</li> <li>• Hydraulic evaluation</li> <li>• Prepare funding applications</li> <li>• Prepare drawings, specifications, and a cost estimate</li> <li>• Preparing permit applications</li> <li>• Construction management/administration</li> </ul>
Fairview Oaks, LLC/ Morgan County, West Virginia	K. Joe Knechtel, P.E., Branch Manager kjknechtel@potesta.com (540) 450-0180	Fairview Oaks Water Line Extension	<ul style="list-style-type: none"> <li>• Prepare base mapping for water line extension</li> <li>• Site reconnaissance</li> <li>• Fire hydrant flow tests of the existing water system to obtain data for hydraulic evaluation</li> <li>• Hydraulic evaluation</li> <li>• Construction drawings and technical specifications</li> <li>• Permit applications</li> </ul>
West Virginia American Water/Putnam County, West Virginia	Dana Burns, P.E., Vice President dlburns@potesta.com (304) 342-1400	Buff's Branch/ Trace Fork Water Line Extension	<ul style="list-style-type: none"> <li>• 35,000 LF of 8-inch, 12-inch, and 16-inch diameter water line</li> <li>• Field reconnaissance and coordination with public/private utilities</li> <li>• Developed bid quantities and an engineer's cost estimate</li> <li>• Permit applications</li> </ul>
West Virginia American Water/Putnam County, West Virginia	Dana Burns, P.E., Vice President dlburns@potesta.com (304) 342-1400	Spite Road Water Line Extension	<ul style="list-style-type: none"> <li>• Construction administration/observation for construction of approximately 13,000 LF of 2-inch and 8-inch water line</li> </ul>
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Mud River Road/Cox's Fork Road Water Line Extension— Phase I	<ul style="list-style-type: none"> <li>• 30,000 LF water line extension, including 8-inch, 6-inch, and 2-inch pipe</li> <li>• Potable water service to approximately 130 commercial and residential customers</li> <li>• Prepare construction drawings</li> <li>• Hydraulic evaluation</li> <li>• Permit applications</li> <li>• Prepare contract documents</li> <li>• Construction observation</li> </ul>
West Virginia American Water/Logan County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Miffin- Sharples Water Line Extension	<ul style="list-style-type: none"> <li>• Provide services to approximately 25 new customers</li> <li>• Approximately 11,000 LF of 8-inch, 6-inch, and 2-inch water line</li> <li>• Flow testing of existing system</li> <li>• Hydraulic evaluation</li> <li>• Prepared drawings, specifications, and a cost estimate</li> <li>• Permit applications</li> <li>• Construction management/observation</li> </ul>
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tcmoran@potesta.com (304) 342-1400	Six Mile to Corridor G Water Line Extension	<ul style="list-style-type: none"> <li>• 8,700 feet of 8-inch and 2-inch water line with multiple stream crossings, and branch connection roadways crossings</li> <li>• Construction drawings</li> <li>• Hydraulic evaluation</li> <li>• Permit applications</li> </ul>



# Expression of Interest

## SIMILAR EXPERIENCE

### WATER SUPPLY PROJECTS



PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tmoran@potesta.com (304) 342-1400	Joes Creek Water Line Extension—Phase II	<ul style="list-style-type: none"> <li>• One booster station</li> <li>• Approximately 4,800 feet of 6-inch and 2-inch water line with multiple stream crossings and roadway crossings for “spurs”</li> <li>• Water supply for approximately 18 potential customers</li> <li>• Construction drawings</li> <li>• Sizing 60-gallon per minute booster station</li> <li>• Hydraulic evaluation</li> <li>• Permit applications</li> </ul>
Boone County Public Service District/Boone County, West Virginia	Terence Moran, PE, Senior Engineer tmoran@potesta.com (304) 342-1400	Dartmont Park Water Line Extension	<ul style="list-style-type: none"> <li>• 1,500 feet of 6-inch and 2-inch water line designed to serve a church, parsonage, and public park</li> <li>• Construction of a river crossing and installation of fire hydrant</li> <li>• Prepared construction drawings</li> <li>• Hydraulic evaluation</li> <li>• Quantifying materials and preparing a bid form</li> <li>• Construction observation</li> </ul>
Putnam County Commission/West Virginia American Water/Putnam County, West Virginia	Dana Burns, P.E., Vice President dlburns@potesta.com (304) 342-1400	Fisher Ridge Water Line Extension—Phase II	<ul style="list-style-type: none"> <li>• Revised existing construction drawings of 11,000 LF of 8-inch diameter water line along Fisher Ridge Road</li> <li>• Prepared environmental impact statement</li> <li>• Identified and collated bidding document</li> <li>• Prepared a preliminary estimate of probable construction cost</li> <li>• WVIJDC application</li> <li>• Construction administration/observation</li> </ul>
Kingwood Water Board Preston County, WV	Mark Sankoff, P.E., Chief Engineer masankoff@potesta.com (304) 342-1400	Evaluation of Water System	<ul style="list-style-type: none"> <li>• Evaluate the condition of the distribution system of the Preston County PSD, O&amp;M costs, system debt, unaccounted for water, ability to repay Kingwood for outstanding water purchases and provide recommendations for option to purchase Preston County PSD.</li> </ul>
Berkeley Springs Development Morgan County, WV	K. Joe Knechtel, P.E., Branch Manager kjknechtel@potesta.com (540) 450-0180	Public Water Supply System	<ul style="list-style-type: none"> <li>• Prepare the design of a public water supply system to provide service to approximately 1,300 customers, including commercial customers, at the proposed Villages at Coolfont.</li> </ul>
City of Glenville Glenville, WV	David Sharp, P.E., Branch Manager dsharp@potesta.com (304) 225-2245	Water Distribution System Upgrade	<ul style="list-style-type: none"> <li>• Study phase, design phase, bidding phase and construction phase services involving upgrades and construction monitoring to their existing potable treatment and water distribution system.</li> </ul>
City of Philippi Philippi, WV	Terence C Moran, P.E., Senior Engineer tmoran@potesta.com (304) 342-1400	Water Distribution System Upgrade	<ul style="list-style-type: none"> <li>• Study phase, design phase, bidding phase and construction phase services for a project involving upgrades and construction monitoring to their existing potable water distribution system.</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE



### WATER SUPPLY PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
City of Wellsburg Wellsburg, WV	Dave Sharp, P.E., Branch Manager dsharp@potesta.com (304) 225-2245	Water System Improvement Project	<ul style="list-style-type: none"> <li>• Preparation of a preliminary engineering report</li> <li>• Application to the West Virginia Infrastructure and Jobs Development Council for funding for a water system improvement project</li> <li>• Overall system needs assessment</li> <li>• Prepared an opinion of cost associated with the proposed upgrades and prioritized the list based on financial capabilities</li> </ul>
WV Development Office Boone County, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Concept for Water Supply and Sanitary Wastewater Services	<ul style="list-style-type: none"> <li>• Prepare a concept for extending water supply and sanitary sewer service to the proposed Rock Creek Development Park—Phase I                             <ul style="list-style-type: none"> <li>⇒ Visited the site</li> <li>⇒ Completed preliminary engineering for concepts to extend 100,000 gallons per day of water supply and sanitary sewer service to the site</li> <li>⇒ Prepared a memorandum summarizing our findings, presenting details of the estimate, and a supporting figure on alignment</li> </ul> </li> </ul>
Mingo—Logan Coal Co. Logan County, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Potable Water Supply for Mountain Laurel Complex	<ul style="list-style-type: none"> <li>• Design concept for the potable water supply for a new deep mine complex</li> <li>• Completed hydraulic evaluation of the extension</li> <li>• Prepared drawings and specifications</li> <li>• Prepared a permit application to the WVDHHR</li> <li>• Provided bidding phase services, construction management services, and full-time construction observation</li> </ul>
West Virginia American Water Company Putnam County, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Poca Water Waterline Extension	<ul style="list-style-type: none"> <li>• Prepared a design and develop bidding/construction documents for approximately 68,000 linear feet of 6 to 8-inch diameter waterline following the Poca River</li> </ul>
Town of Pineville Pineville, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Preliminary Inventory of Water System	<ul style="list-style-type: none"> <li>• Preliminary inventory</li> </ul>
Town of Ceredo Wayne County, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Water Distribution System Upgrades	<ul style="list-style-type: none"> <li>• Design, permitting, bidding and construction phase services for an upgrade to the town's water distribution system</li> <li>• Included in the design was field testing to develop "C" values for modeling of existing water distribution system</li> <li>• Hydraulic modeling</li> </ul>
Town of Mill Creek Randolph County, WV	Dana Burns, PE, PS, Vice President dlburns@potesta.com (304) 342-1400	Water Improvement Project	<ul style="list-style-type: none"> <li>• Prepared a plan to evaluate the distribution system to identify areas that experience water loss</li> <li>• Secured funding to replace the Town's entire distribution system</li> <li>• Water storage tank</li> </ul>
West Virginia American Water Boone County, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Permitting Water Line Ext	<ul style="list-style-type: none"> <li>• Permit applications for the Lower White Oak Drive water line extension</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE



### WATER SUPPLY PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
West Virginia American Water Kanawha County, WV	Mark Sankoff, P.E., Chief Engineer masankoff@potesta.com (304) 342-1400	Water Distribution System Improvements	<ul style="list-style-type: none"> <li>• Engineering services on water improvement projects                             <ul style="list-style-type: none"> <li>⇒ Water line extensions</li> <li>⇒ Water line replacements</li> <li>⇒ Water storage tanks</li> <li>⇒ Service line replacements</li> <li>⇒ New booster stations</li> <li>⇒ ASTs</li> </ul> </li> </ul>
West Virginia Department of Environmental Protection Office of Abandoned Mine Lands Kanawha and Fayette Counties, WV	Terence Moran, P.E., Senior Engineer tcmoran@potesta.com (304) 342-1400	Burnwell Water Line Extension- Pathway and Source Study	<ul style="list-style-type: none"> <li>• Study evaluating possible water line extension to the Collinsdale/Burnwell area from neighboring public water systems</li> <li>• WVDEP directed POTESTA to complete a study that compared alternate pathway from alternate sources</li> <li>• Design water line extension from the preliminary engineering report</li> <li>• Geotechnical exploration and assessment for tank and booster sites</li> <li>• Boundary surveys and plats</li> <li>• Hydraulic evaluation</li> <li>• Prepared drawings, technical specifications, contractor's bid forms, engineer's construction cost estimate, and calculations brief</li> </ul>



# Expression of Interest

## SIMILAR EXPERIENCE



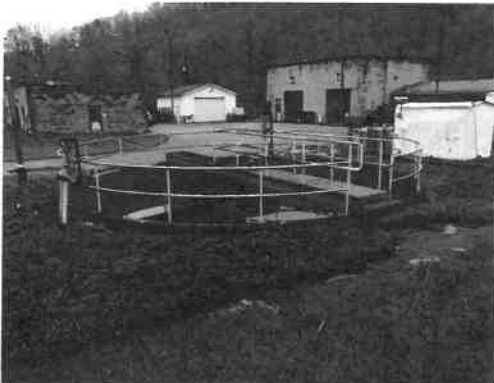
### WASTEWATER PROJECTS

POTESTA's team has extensive experience in design of wastewater systems, sewer lines, and major rehabilitation projects. In addition, we have successfully reviewed developer plans for municipalities and public service districts.



### **SALT ROCK SEWER PSD** Salt Rock, WV

- Odor control study
- Conceptual engineering for on-site sewage system at Holiday Park
- Preparation of estimates of construction cost and total project cost for Holiday Park new system consisting of 12 single-home septic tank/leach bed systems and eight larger septic tank/leach beds serving three homes each
- Evaluation of overflows for at Culloden pump station
- Preliminary engineering for sanitary sewer extension on Henry White Road



### **SISSONVILLE PUBLIC SERVICE DISTRICT** Sissonville, WV

Proposed improvements include:

- Replace existing clarifier equipment
- Drain/clean and epoxy coat clarifier
- Install new chlorine feed/storage building
- Replace existing generator, roof on control building, and transfer switch
- Install vortex grit removal system
- Modifications to the headworks
- Oxidation ditch improvements
- Replace metal grating and screen building
- Miscellaneous painting



### **ELK VALLEY PUBLIC SERVICE DISTRICT** Elkview, WV

As result of 2016 Flood:

- Relocated force main
- Installed temporary pumping
- Installed 2,000 8" HDPE force main and two tie ins
- Plan to stabilize the river bank
- Reinstalled force main and gravity sewer and removed temporary force main
- Repaired slips

# Expression of Interest

## SIMILAR EXPERIENCE

### WASTEWATER PROJECTS



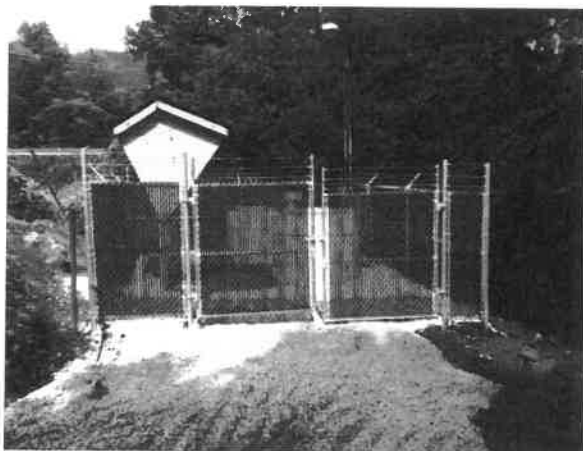
### **PNGI CHARLES TOWN GAMING, LLC** Jefferson County, WV

- Evaluation of existing WWTP to serve development
- Preparation of permit applications
- Conducted a wetland delineation
- Site design of WWTP
- Specifying and selecting treatment and other associated equipment
- Design, detailed construction drawings and technical specifications for the WWTP
- Assistance during construction



### **TOWN OF CEREDO** Wayne County, WV

- Replacement of 8-inch gravity line with 12-inch gravity line
- Replacement of 2-inch force main line with 4-inch force main line
- Upgrade of a pump station via replacement of 35 GPM submersible pumps with a new 100 GPM vacuum primed pump station
- Asset Management Plan
- Project completed within budgeted amounts using funding from the Clean Water State Revolving Fund



### **TOWN OF HANDLEY** Handley, WV

- Assisted in obtaining funds for field work and preliminary engineering report
- Assisted in the Town of Handley and the Regional Development Council in obtaining a Small Cities Block Grant (SCBG)
- Worked continuously to keep system operating by bidding smaller projects while waiting for funding
- Designed rehabilitation of three pump stations
- Designed pipe and valve replacement
- Assisted in obtaining an SCBG construction grant
- Able to obtain other necessary equipment with excess money from grant funding

# Expression of Interest

## SIMILAR EXPERIENCE



### WASTEWATER PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Salt Rock Sewer Public Service District <i>Cabell County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Engineering for sewage systems	<ul style="list-style-type: none"> <li>• Development of design standards</li> <li>• Assistance with development of ordinances</li> </ul>
Salt Rock Sewer Public Service District <i>Cabell County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Odor control study	<ul style="list-style-type: none"> <li>• Odor control study mandated by the West Virginia Public Service Commission</li> <li>• Complaints arose after a proposed lift station site was modified to include a "headworks" facility</li> </ul>
Salt Rock Sewer Public Service District <i>Cabell County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of overflows from Culloden sewage pump station	<ul style="list-style-type: none"> <li>• Reviewed project documentation, including design documents</li> <li>• Visited the project site to record observations, including electrical components</li> <li>• Coordinated obtaining flow/pressure data readings, and then compared results to design conditions</li> <li>• Prepared report summarizing the finding and providing recommendations</li> </ul>
Salt Rock Sewer Public Service District <i>Cabell County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Preliminary engineering	<ul style="list-style-type: none"> <li>• Preliminary engineering services pertaining to a potential extension of sanitary service to Henry White Road</li> <li>• Evaluated project area and determined that approximately 4,500 feet of 8-inch gravity collection line, 2,000 feet of 2-inch force main, and 18 manholes to extend sanitary service</li> <li>• Provided a Preliminary Estimate of Probable Construction Costs</li> <li>• Assessed power costs for the pump station</li> </ul>
Town of Marmet <i>Marmet, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of WWTP	<ul style="list-style-type: none"> <li>• Engineering evaluation of capacity of WWTP relative to accepting flows from a sewer system extension</li> </ul>
Huntington Sanitary Board <i>Cabell County, WV</i>	Pat Taylor, P.E. pataylor@potesta.com	Long-term improvement plan for sanitary board	<ul style="list-style-type: none"> <li>• General agreement to perform services related to their long-term improvement plan</li> <li>• Redesign of conversion of four ejector stations to submersible pump stations</li> <li>• Design, bidding, and construction management of combined sewer replacement involving 3,000 LF of 24"-36" pipe</li> <li>• Preparation of system asset management plan and cost study for \$63 million in capital improvements within WWTP and collection system</li> <li>• Design, bidding, and construction management of 54-inch HDPE force main replacement, new septage receiving station and a new HDPE effluent line, diffuser, and air chamber</li> <li>• Evaluation of the mixing zone for the wastewater treatment plant discharge</li> </ul>
CNX RCPC, LLC <i>Monongalia County, West Virginia</i>	Dave Sharp, P.E. dsharp@potesta.com	Evaluation of WWTP	Evaluation of Hunting Hills Residential Development Sanitary Sewer System.
Boone County Public Service District <i>Boone County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of Sewer Service Extension	<ul style="list-style-type: none"> <li>• Preliminary engineering report included evaluating existing situation, package WWTP, historical flow, and capacity for various components. Inventoried permits and certificates and prepared detailed preliminary estimate of contraction cost including 21,500 feet of gravity collection system, 4,200 feet of force main, 600-foot bore and jack crossing, and five pump stations</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE



### WASTEWATER PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Town of Handley <i>Kanawha County, WV</i>	Pat Taylor, P.E. pataylor@potesta.com	Design and construction of sewer system	<ul style="list-style-type: none"> <li>• Provide design and construction phase services for rehabilitation of their 1980's sewer system, including upgrade 3 pump stations</li> </ul>
Boone County Public Service District <i>Boone County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Design of WWTP upgrades	<ul style="list-style-type: none"> <li>• Design, permitting, bidding, and construction phase services for upgrade of the Danville Wastewater Treatment Plant</li> </ul>
West Virginia Division of Highways <i>Wood County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of WWTP	<ul style="list-style-type: none"> <li>• Evaluation of replacing the Mineral Wells Rest Area Wastewater Treatment Plant, including evaluating multiple options including using a lift station/force main to direct sewage to the Mineral Wells PSD</li> </ul>
Boone County Public Service District <i>Boone County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Rehabilitation of sanitary sewer collection line	<ul style="list-style-type: none"> <li>• Provide design, permitting, bidding, and construction phase services for 3,700 feet of gravity sewer line replacement, and rehabilitation of two pump stations</li> </ul>
North American River Runners <i>Fayette County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Rehabilitation of WWTP	<ul style="list-style-type: none"> <li>• Design and permitting services for upgrade to package WWTP</li> </ul>
American Electric Power (AEP) <i>Kanawha County, WV</i>	Pat Taylor, P.E. pataylor@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>• Evaluation of existing WWTP and design and permitting of a new peat moss WWTP facility for the London Locks Hydroelectric Plant</li> </ul>
Sissonville Public Service District <i>Kanawha County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Engineering design of sanitary sewer extension	<ul style="list-style-type: none"> <li>• Design an approximate 2300-foot sanitary sewer extension along Wolfpen Branch to provide service to 30 customers</li> <li>• Surveyed the path</li> <li>• Prepared topographic mapping</li> <li>• Created an engineering design for the sewer line extension</li> <li>• Developed drawings and technical specifications</li> <li>• Prepared clearance letters</li> </ul>
ECOLAB <i>Berkeley County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of pre-treatment WWTP	<ul style="list-style-type: none"> <li>• Evaluation and recommendations for the pretreatment of ECOLAB's effluent prior to discharge to the Berkeley County Public Service Sewer District's industrial wastewater treatment plant</li> <li>• The evaluation focused on bringing the effluent into compliance with permit limitations</li> </ul>
Berkeley Springs Development <i>Morgan County, WV</i>	Mark Kiser, P.E. dmkiser@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>• Design and permitting of a 440,000-gallon per day membrane bioreactor type WWTP for a large residential development in Berkeley County, West Virginia</li> <li>• Design included over 18,000 feet of gravity sewer line with sizes ranging from 8-inch to 15-inch and 5,800 feet of 8-inch force main and 85 feet of 2-inch force main</li> <li>• Design for a water treatment plant and water distribution system for the development</li> </ul>

# Expression of Interest

## SIMILAR EXPERIENCE



### WASTEWATER PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Town of Ceredo <i>Wayne County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Upgrade to sanitary sewer system	<ul style="list-style-type: none"> <li>• Design, permitting, and construction phase services for an upgrade to the sanitary sewer system, including pump station</li> <li>• Design phase included identifying the need to upgrade piping sizes and pumping rates</li> <li>• Project was CWSRF funded</li> </ul>
Berkeley Springs Development <i>Morgan County, WV</i>	Mark Kiser, P.E. dmkiser@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>• Design and permitting of a 440,000-gallon per day membrane bioreactor type WWTP for a large residential development</li> <li>• Design included over 18,000 feet of gravity sewer line with sizes ranging from 8-inch to 15-inch and 5,800 feet of 8-inch force main and 85 feet of 2-inch force main</li> <li>• Design for a water treatment plant and water distribution system for the development.</li> </ul>
West Virginia American Water <i>Fayette County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Rehabilitation of WWTP	<ul style="list-style-type: none"> <li>• Evaluation of existing sanitary wastewater system and providing recommendations for areas of rehabilitation and improvement in O&amp;M practices for the City of Oak Hill, West Virginia WWTP</li> </ul>
West Virginia American Water <i>Greenbrier County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Evaluation of WWTP	<ul style="list-style-type: none"> <li>• Evaluation of sanitary wastewater system and providing recommendations for areas of rehabilitation and improvement in O&amp;M practices for the Town of White Sulphur Springs, West Virginia WWTP</li> </ul>
Old Standard Development <i>Jefferson County, WV</i>	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>• Design and permitting of a 50,000-gallon per day Membrane Bioreactor (MBR) type WWTP (expandable to 250,000 gpd) for a large residential development</li> <li>• Design included nearly 10,000 linear feet of force main and gravity sanitary sewer collection line and two pump stations</li> </ul>
Tucker County Development Authority <i>Tucker County, WV</i>	Dave Sharp, P.E. dsharp@potesta.com	New sewer line	<ul style="list-style-type: none"> <li>• Design, permitting, and construction administration/ observation of approximately 8,000 linear feet of water line and 8,000 linear feet of sewer line to extend service from the Town of Davis to the new Tucker County Industrial Park</li> </ul>
Pocahontas County Public Service District/ Wastewater Management, Inc. <i>Pocahontas County, WV</i>	Dave Sharp, P.E. dsharp@potesta.com	Evaluation of sanitary sewer system	<ul style="list-style-type: none"> <li>• Evaluation of Hawthorn Loop Sanitary Sewer System, including observing pipe via CCTV, review previous engineering studies, identifying defects, and developing preliminary estimate of construction costs for rehabilitation</li> </ul>
Stephoe & Johnson PLLC/ Berkeley County Public Sewer Service District <i>Berkeley County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Disinfection System Improvements at WWTP	<ul style="list-style-type: none"> <li>• Provided an evaluation and subsequent affidavit regarding disinfection at Berkeley County Public Sewer Service District's Marlowe Town Center package wastewater treatment plant</li> </ul>
Boy Scouts of America <i>Pocahontas County, WV</i>	Chris Grose cagrose@potesta.com	Replacement of sanitary sewer collection system/WWTP	<ul style="list-style-type: none"> <li>• Design of replacement sanitary sewer collection system and design of new sewage stabilization lagoon at Dilley's Mill Boy Scout Camp</li> </ul>
Town of Ceredo <i>Wayne County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Asset management plan	<ul style="list-style-type: none"> <li>• Preparation of an Asset Management Plan that was required as part of a sanitary sewer system upgrade funded by the Clean Water State Revolving Fund.</li> </ul>



# Expression of Interest

## SIMILAR EXPERIENCE



### WASTEWATER PROJECTS

PROJECT/LOCATION	PROJECT MANAGER/ CONTACT INFORMATION	TYPE OF PROJECT	PROJECT GOALS AND OBJECTIVES
Carmeuse Lime & Stone <i>Frederick County, VA</i>	Joe Knechtel, P.E. kjknachtel@potesta.com	WWTP	<ul style="list-style-type: none"> <li>Permitting, design, and construction oversight services for a wastewater treatment plant and a water treatment plant</li> </ul>
ZMM, Inc. <i>McDowell County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Collection system and upgrade to the existing vacuum collection system	<ul style="list-style-type: none"> <li>Design, permitting, bidding, and certain construction phase services associated with a collection system associated with two new schools of the same site, and the associated upgrade of the Town of Bradshaw's existing vacuum collection system</li> </ul>
Timberwolf Development Corporation <i>Kanawha County, WV</i>	Mark Kiser, P.E. dmkiser@potesta.com	Design and construction of sanitary sewer systems	<ul style="list-style-type: none"> <li>Design and construction observation of water supply and sanitary sewer systems for Yorketown Subdivision</li> </ul>
City of Buckhannon <i>Upshur County, WV</i>	Mark Sankoff, P.E. masankoff@potesta.com	Engineering design of sanitary sewer extension	<ul style="list-style-type: none"> <li>Line 1: Approximately 4,600 feet of gravity sanitary sewer line</li> <li>Line 2: Approximately 5,200 feet of gravity sanitary sewer line</li> <li>Line 3: A lift station, approximately 4,100 feet of gravity sanitary sewer line, and approximately 2,500 feet of force main</li> </ul>
WV Development Office <i>Boone County, WV</i>	Terence Moran, P.E. tcmoran@potesta.com	Concept for water supply and sanitary wastewater service	<ul style="list-style-type: none"> <li>Extending water supply and sanitary sewer service to the proposed Rock Creek Development Park</li> <li>Preliminary engineering of concepts</li> <li>Developed estimated project cost</li> <li>Prepared a memorandum summarizing findings, presenting details of the estimate and a supporting figure on alignment</li> </ul>

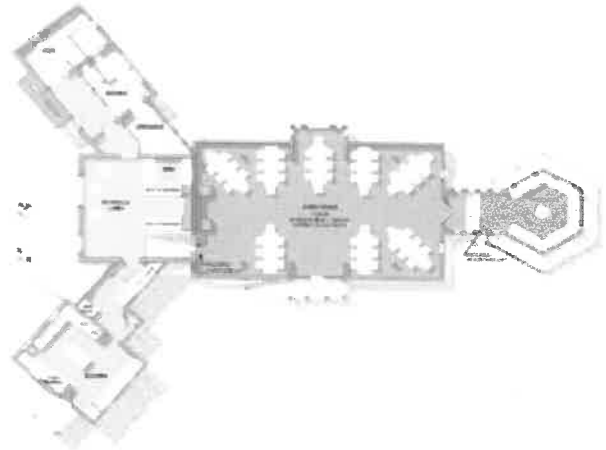


# Expression of Interest

## SIMILAR EXPERIENCE



## MILLS GROUP REPRESENTATIVE PROJECTS



## Hawks Nest Event Center

**LOCATION :** Ansted, WV  
**CLIENT/PROJECT MANAGER :**  
WV DNR - Parks and Recreation  
**SERVICES :** Conceptual through  
Construction Observation  
**CONSTRUCTION VALUE :**  
\$800,000

Mills group was hired by the WV DNR to provide consulting services for the CCC Museum and Picnic Pavilion at Hawk's Nest State Park starting with concept design through construction observation. The scope of work for the Museum building is to adaptively reuse the structure that currently serves as a residence and moth balled museum space into an event and wedding venue while preserving the historic qualities. The event space shall have a catering kitchen, pre-function space, restrooms/dressing room, and event space for just over 50 guests within the grand hall of the historic Museum.

The scope of the work requires complete upgrades of the heating and cooling systems, upgraded electrical systems, fire detection and alarm, ADA lifts, and site work to include parking and accessible route to the venue. The scope of work related to the Picnic Pavilion is limited to restoration of the roof, minor log restoration, and electrical upgrades.



# Expression of Interest

## SIMILAR EXPERIENCE



## MILLS GROUP REPRESENTATIVE PROJECTS



## Hawks Nest / Twin Falls State Parks

**LOCATION :** Ansted, WV and  
Twin Falls, WV  
**CLIENT/PROJECT MANAGER :**  
WV DNR - Parks and Recreation  
Brad Leslie  
304-558-2764  
**SERVICES :** Section 106 Monitoring  
**CONSTRUCTION VALUE :**  
N/A

Both Twin Falls and Hawks Nest State Park Lodges were designed by a team of architects called The Architecture Collaborative (TAC) which was led by world renowned modern architect Walter Gropius. While the buildings are significant for their modern architecture, the HVAC system needed to be improved for energy efficiency. An American Recovery and Reinvestment Grant allowed the two state parks to install efficient equipment and upgrade the heating and air conditioning in the lodges. Because of the historic and architectural significance of the two lodges, Mills Group was asked to serve as a monitor to ensure that the project met the Secretary of the Interior's Standards as well as complied with the Federal law, Section 106 of the National Historic Preservation Act of 1966.

Mills Group served as the liaison between the project manager and the State Historic Preservation Office, documented the efforts of the team as they installed the units, and compiled data to comply with Federal and state regulations.

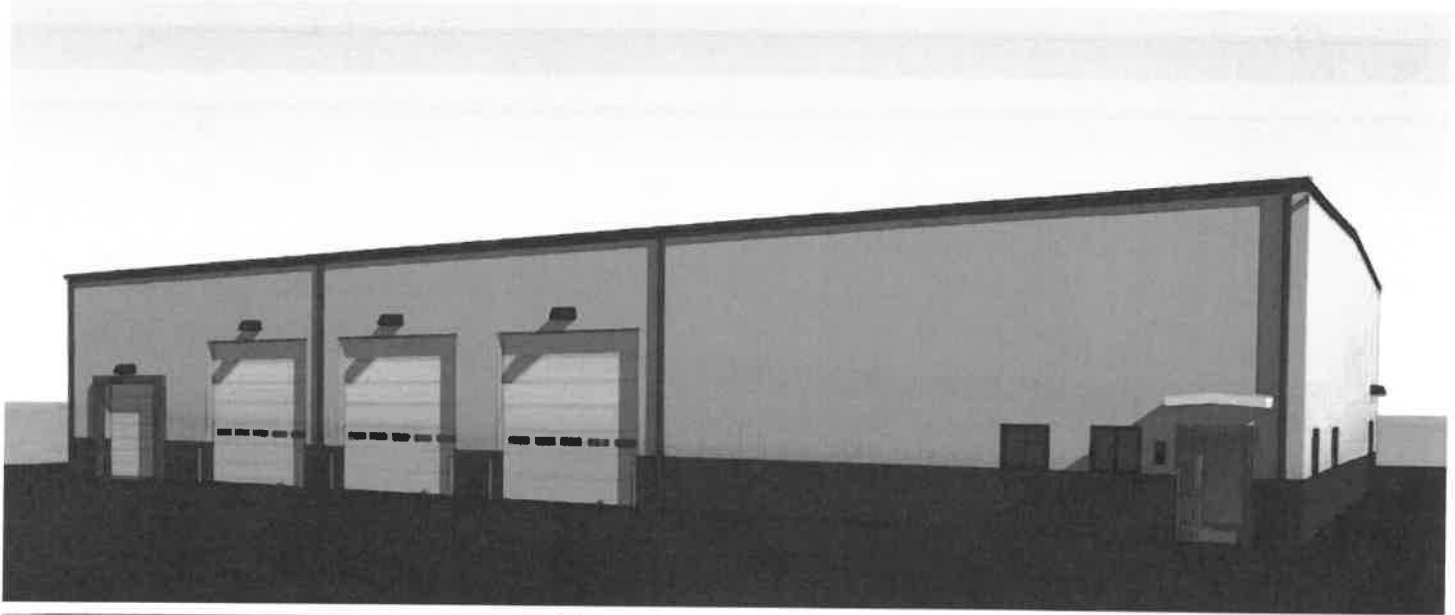


# Expression of Interest

## SIMILAR EXPERIENCE



## MILLS GROUP REPRESENTATIVE PROJECTS



## 1200 Bottleworks

**LOCATION :** Fairmont, WV  
**CLIENT:** Merit Development  
**SERVICES :** Construction Documents  
**CONSTRUCTION VALUE :**  
\$884,000

The project at 1200 Bottleworks includes interior renovations and tenant build-out of an existing 64' X 120' pre-engineered metal building and a new 40' x 60' warehouse building in the industrial park. The interior renovations will provide 4,700 sq. ft. of warehouse space and 2,980 sq. ft. of office areas, conference room, large training space as well as restrooms and locker rooms to service the warehouse areas. The design of the interior build-out was carefully coordinated with the existing structure to minimize modification to existing exterior envelope, windows, and doors.

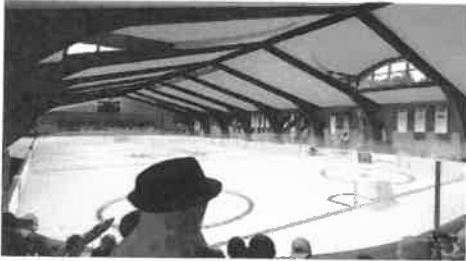


# Expression of Interest

## SIMILAR EXPERIENCE



## MILLS GROUP REPRESENTATIVE PROJECTS



## Morgantown Ice Arena

**LOCATION :** Morgantown, WV  
**CLIENT :** BOPARC  
**SERVICES :** Existing Building & Site Documentation, Due-Diligence & Analysis, Master Plan, Conceptual Design, Stakeholder Engagement, Accessibility  
**CONSTRUCTION VALUE :**  
N/A

The proposed improvements to the year-round Morgantown Ice Arena include mechanical, electrical, and plumbing systems, chiller system, existing landscaping as it relates to external building maintenance and expansion, ADA compliance and accessibility, and the consideration of sustainable features regarding water and energy efficiency.

The site design includes greenspace, landscaping, building entry, parking and location of an additional (studio) ice sheet. The existing building and site are within the R1-A Zoning District of the City of Morgantown. Site specific items include expanding the existing parking lot to the northwest and developing a new parking area across Mississippi Street adjacent to the existing softball fields. A new curbed entrance and pedestrian walkway will be necessary for the enhanced site entrance for vehicles and pedestrians. Additionally, service access surrounding the building and a Zamboni dump area are critical to the site layout. Items particular to MEP scope include, but aren't limited to a new chiller, dehumidification system and HVAC for both ice surfaces, HVAC, electric, and plumbing for locker rooms, private and public area, etc., electrical components, new lighting in existing arena, and tie-in to new sanitary lateral.

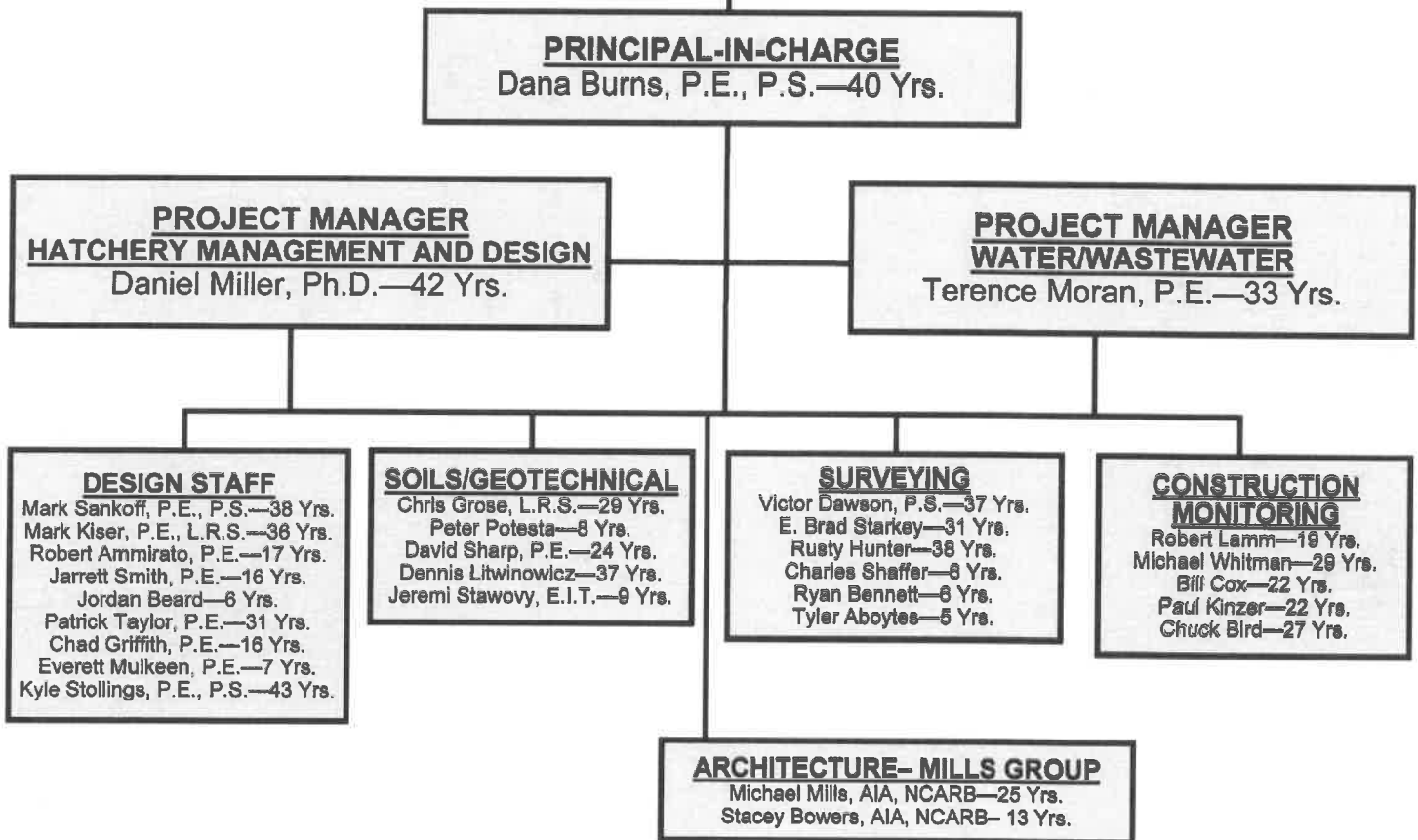
The design team has addressed concerns with moisture intrusion on the exterior envelope of the existing building as it relates to planned renovations, planning for integration of structural elements specific to balconies and other spectator seating areas, new openings consisting of skylights, windows and doors and stair tower exteriors, etc.



# Expression of Interest

## STAFFING PLAN

Services will be performed at POTESTA's Charleston, West Virginia office. We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner. POTESTA's large staff size will allow us to work on this project on an accelerated schedule if necessary.



### Total Staff: 78

17	Civil Engineers	1	Mechanical Engineer	1	Toxicologist
10	Construction Technicians	2	Aquatic Ecologists	1	Economist
4	Geotechnical Engineers	6	Biologists	1	Aqua Culturist
2	Geologists	2	Fish & Wildlife Specialists	1	Information Technologist
6	CADD Operators/Draftsman	1	GIS Specialist	1	Chemist
6	Surveyors	3	Environmental Scientists	1	Chemical Engineer
1	Mining Engineer	1	Horticulturalist	10	Administrative Personnel

# Expression of Interest

## STAFF QUALIFICATIONS



### **WHY HIRE POTESTA?**

- Successful track record with state agencies
- West Virginia-owned and operated firm—located within five miles of state offices in Charleston
- Unparalleled West Virginia regulatory expertise—specializes in regulatory compliance issues
- Experience with various funding sources
- Services will be completed within schedule and budget

*Appendix B* includes resumes and certifications.

**Mr. Dana L. Burns, P.E.**, Vice President, will serve as principal-in-charge for this project. Mr. Burns has served as the principal-in-charge for all of POTESTA's contracts for engineering services with the State of West Virginia, including those with the West Virginia Department of Transportation, West Virginia Department of Environmental Protection, West Virginia Department of Health and Human Resources, and WVDNR. As such, he understands the resources it takes to complete a project for the State of West Virginia, as well as the requirements of not just the purchasing agency but also those of the West Virginia Department of Administration. Mr. Burns' experience includes over 40 years of civil and environmental engineering and related projects including completing 100+ water supply/wastewater projects, 50+ liner system projects, and numerous sampling/flow metering projects.

**Mr. Terence Moran, P.E.**, Senior Engineer, will serve as the water/wastewater project manager for the project. He has over 33 years of experience on civil engineering projects, with particular emphasis on water/wastewater projects. He has served as the project manager/project engineer for 100+ water/wastewater projects, including preliminary engineering, environmental assessments, funding applications, hydraulic analysis, booster and lift station design, storage tank design, line sizing, design of treatment systems, drawings, specifications, cost estimates, bid documents, "shop drawing" review, construction management and construction inspection. Mr. Moran is Project Manager for our ongoing sanitary sewer workload for Boone County Public Service District, Salt Rock Sewer Public Service District, and Sissonville PSD.

**Mr. Daniel Miller, Ph.D.**, Senior Scientist, is an aquatic biologist with 30+ years of experience in fish and shrimp hatchery management and design. He has successfully completed the design and training of personnel for a research hatchery for the University of Wisconsin; the design, testing, startup and training of personnel for a commercial yellow perch recirculating hatchery for the Chippewa Tribe in Red Lake, Minnesota; and a hydrological and biological survey for a property owned by Milwaukee County. He evaluated the water source and made recommendations for an alternative source of water for a fish hatchery he designed, which supplied fish for the Milwaukee County Park System. This project included the design of indoor tanks and outdoor ponds and had cost considerations. The facility was built with minor field changes and is actively producing fish for stocking today. Dr. Miller is familiar with and has managed biological filters and solid removal filters to improve production at fish hatcheries. He has consulted for trout farms in South Africa, a tilapia farm in Honduras, shrimp farms in Ecuador and the Chinese Central government.

**Mr. Chris Grose, LRS**, Senior Engineering Associate, has degrees in civil engineering and geological engineering and has over 30 years of experience. His areas of expertise include geological/geotechnical explorations, surface and subsurface hydrology and hydrogeology, and foundation design. Mr. Grose's experience includes the design and evaluation of geotechnical explorations related to earth retention structures, slope stability and engineered fill construction. Mr. Grose has participated in the geotechnical explorations/evaluations for many projects for POTESTA.

**Mr. Pat Taylor, P.E.**, Senior Engineer, has over 31 years of experience in water and wastewater including funding coordination, hydrologic and hydraulic analysis, chemical and municipal solid waste disposal and site development. Mr. Taylor has served as Huntington Sanitary Board's engineer since 2008.

## Expression of Interest

### STAFF QUALIFICATIONS



**Mr. Mark Sankoff, P.E.**, Chief Engineer, has over 38 years of engineering experience, including over 20 years at West Virginia American Water (WVAW) in the engineering and distribution department. This experience in operations provides clients with a unique blend of engineering and operational knowledge to apply to projects. Mr. Sankoff has experience with intakes and raw water lift stations similar to BOWDEN, has experience in flow measurement devices in water and wastewater treatment plants, both open channel and full pipe metering, along with SCADA controls and automated chemical flow pacing. Mr. Sankoff also has experience in wastewater treatment plants and understands the importance of meeting the discharge requirements in a cost-effective and an operational sustainable manner for the three rivers that are under increasingly difficult wasteload allocations. Mr. Sankoff brings nine years of distribution operational experience in distribution piping and valve repair and replacement for water lines from 2-inch to 48-inch in diameter.

**Mr. Everett Mulkeen, P.E.**, Staff Engineer, will serve as design engineer for this project. Mr. Mulkeen has over 10 years of civil engineering experience, with a focus on water and wastewater infrastructure. Mr. Mulkeen's experience includes a variety of water resource engineering, geotechnical engineering, and construction field monitoring projects. He has been involved in structural rehabilitation projects that focused on the repair/rehabilitation of walls, foundations, roads, and buildings due to a variety of geotechnical and hydraulic impacts (such as erosive failure, soil settlement, mine subsidence, global stability, and expansive pyritic soil damage). He prepared engineering plans and cost estimates for various improvements at the Buller Fish Hatchery in Virginia. He has completed projects that require both complex technical design and multi-faceted permit applications. Mr. Mulkeen has a Bachelor of Science degree in civil engineering from West Virginia University and a Master of Science degree civil/environmental engineering from Carnegie Mellon University. For this project, he will provide technical design on aspects such as trout raceway investigation/repair, water line testing/repair, and civil site design, as well as development of cost estimates and construction details.

**Mr. Mark Kiser, P.E.**, Chief Engineer, has over 36 years of experience on civil, geotechnical and environmental projects and will serve as senior engineer. His experience includes conceptual site development plans, engineering construction cost estimates, roadway design, site grading plans, pavement designs, stormwater management plan development, utility design (water, sewer, storm sewer), constructability reviews, preparation of contract documents, pre-bid meetings, bid evaluations, and construction management/administration. These projects included various residential and commercial site developments, roadway construction projects, and utility expansion projects for public and private clients.

**Ms. Mindy Armstead, Ph.D.**, is an aquatic toxicologist with over 30 years of experience in water quality issues. She has identified and assessed golden algae outbreaks in the Dunkard Creek watershed in Northern West Virginia. She has conducted toxicity assessments and developed programs to minimize or eliminate instances of aquatic toxicity. Her understanding of the interactions of various chemicals in aqueous environments has resolved numerous toxicity issues for our clients. She is currently on the staff of Marshall University, Huntington, West Virginia, but remains an employee of POTESTA.

**Ms. Lisa Burgess**, Senior Scientist, has 32 years of environmental consulting experience. While she is well versed in air, waste, and water issues, her preferred area of specialization is regulatory issues addressing water. She routinely completes NPDES permit applications for facilities that range from car washes with a few hundred gallons per day discharge to major chemical manufacturing facilities with millions of gallons per day discharge. She has worked throughout West Virginia and in surrounding states. Her understanding of environmental audits and permit compliance issues is likely unmatched in the state. She has an excellent working relationship with the permitting staff in the WVDEP, Division of Water and Waste Management (DWWM). Her background gives her the experience to manage a facility's compliance during major improvement projects.



# Expression of Interest

## STAFF QUALIFICATIONS



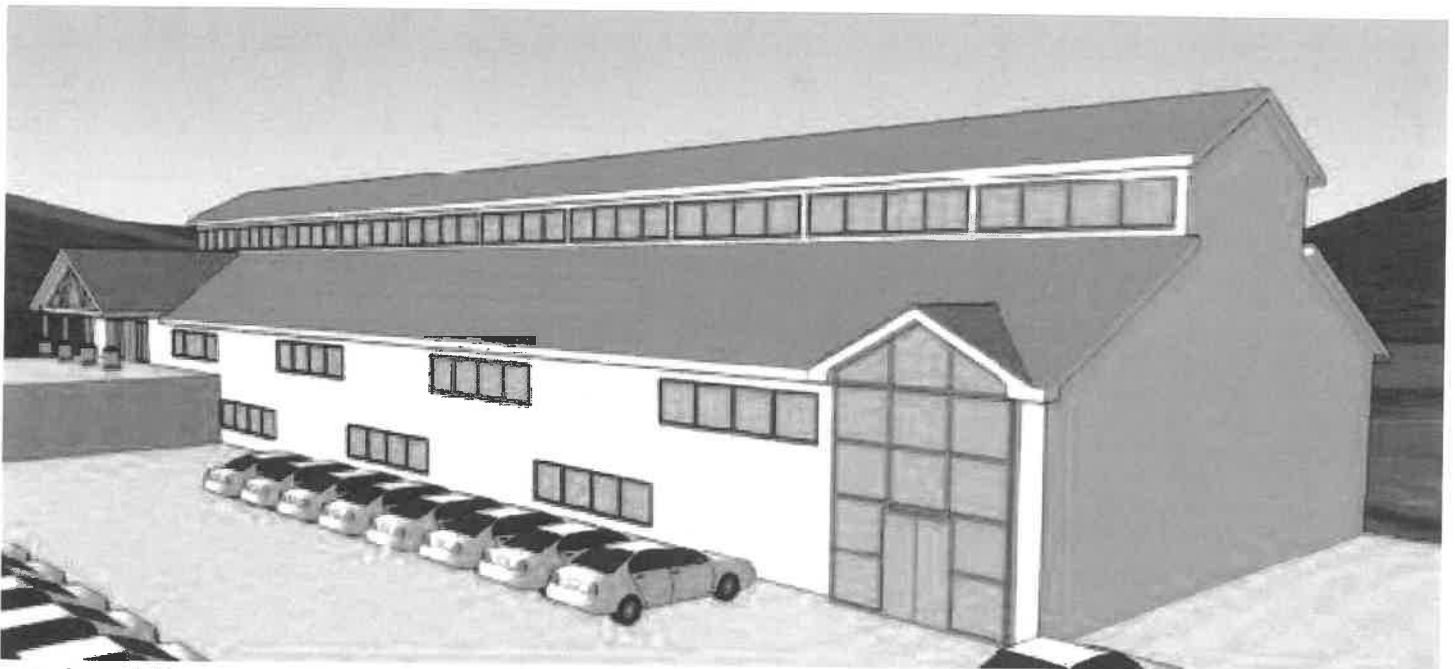
Mills Group welcomes the opportunity to transform humanity through architecture. Designing structures for clients improve not only their lives but also the community with which they are involved. We have a broad focus in architecture, assisting clients with residential, commercial, public, and interior designs, while emphasizing traditional design principles, vernacular design influences, long-term sustainability, and the design of new structures.

Our planning and design approach relies on carefully considering the complex interaction of functional, economic, and social needs of our clients while also providing needs of the site's users.

We approach the planning process of greenfield and infill sites with the responsibility of being a "Place Maker". Clients entrust us with creating the overarching plan that will foster a rich and engaging environment for people to live, work, and play.

**Mr. Michael Mills, AIA, NCARB**, Managing Partner at Mills Group, is the founding principal of the Mills Group. With over twenty years of proven experience in historic preservation, architectural design, and planning, Mr. Mills inspires each Mills Group team member to excellence and diligently collaborates with clients to ensure their full understanding and implementation of every project. Through Mr. Mill's leadership and vision, the Mills Group approaches architecture without arrogance but rather with a collaborative approach, building upon the talents of the staff and the vision of the clients.

**Mr. Stacey Bowers, AIA, NCARB**, Project Architect, earned a Bachelor of Science in Architecture from Fairmont State University and a Master of Architecture from the University of Illinois at Chicago. During that time, she studied abroad for a semester in Barcelona, where she traveled to the Netherlands, Italy, Ireland and other parts of Europe. During her undergraduate studies, she interned at Vandalla Heritage Foundation where she first met and worked with Michael Mills. Throughout her professional career, her background and interests have remained grounded in historic preservation and architecture that demonstrates a sensitivity to existing and historic resources. She takes great pride in her projects and the way they continue to provide the owner success and happiness long after the construction is complete.



# Expression of Interest

## MANAGEMENT PLAN

### **PROCEDURE FOR COMMUNICATION WITH OWNER**

Mr. Dana Burns, P.E., as POTEESTA's principal-in-charge will be responsible for contract management (administration) and shall coordinate and direct all aspects of the project. Day-to-day project activities for this project will be performed under the direction of our project manager, Mr. Terence Moran, P.E. **Mr. Moran, P.E., will be the point of contact to allow clear communication with the WVDNR.** Mr. Daniel Miller, Ph.D., will serve as a "backup" project manager. A written proposal, including a detailed scope of services and an associated manhour and cost estimate, will then be prepared and submitted to WVDNR for review. The project manager will review the proposal with the WVDNR, including a task-by-task discussion of work items and the related costs. Upon the WVDNR's approval of the proposal, the project manager will arrange for the start of project activities. The principal-in-charge will provide the project manager the required staff necessary to complete the project activities, will review the project budget and schedule during performance of the project, and will provide a final QA/QC review of the documents prior to submittal to the WVDNR. The project manager will develop a detailed step-by-step project work plan so that the project activities are completed in a correct manner, within budget, and on time. POTEESTA will be available to conduct weekly status reports which may include weekly meetings, memos, or telephone calls with the WVDNR's project manager as required.

### **REQUIRED DOCUMENTS**

*Appendix C* contains the executed Disclosure of Interested Parties to Contracts, DNR 200000006 Solicitation Form, Certification and Signature Page, Purchasing Affidavit, Addendum Acknowledgement Form.

### **PROJECT BUDGET CONTROL**

The project manager will be responsible for monitoring the project budget and keeping the principal-in-charge informed of its status. The project manager will develop a work plan based on hourly rates and tasks to complete the project. POTEESTA's staff enters time into POTEESTA's InFocus accounting system on a daily and/or weekly basis. POTEESTA's project manager can access InFocus at any time, thus allowing a real-time control of project costs.

### **PROJECT SCHEDULE CONTROL**

Direct responsibility for schedule control lies with the project manager. Initially, the project manager will review schedule requirements to see how they can be achieved given the anticipated scope of work and develop a work plan. As the project progresses, the project manager will monitor progress and compare it with the established schedule on a weekly basis keeping the principal-in-charge aware of the schedule's status. In this manner, the principal-in-charge can make staff adjustments to allow the project manager to maintain the project schedule. If circumstances develop that could impact the project schedule, the project manager will contact the WVDNR's project manager to develop a mutually acceptable adjustment to the schedule and/or work plan.

## **REFERENCES**

### **VIRGINIA DGIF**

Mr. Uwe E. Weindel  
1724 Buller Hatchery Road  
Marion, Virginia 24354  
Phone: (276) 783-4172

### **HUNTINGTON SANITARY BOARD**

Mr. Wesley Leek  
555 7th Avenue  
Huntington, West Virginia 25701  
Phone: (304) 781-1912  
Fax: (304) 696-5596

### **WEST VIRGINIA AMERICAN WATER COMPANY**

Mr. Brett Morgan, Engineering Manager  
1600 Pennsylvania Avenue  
Charleston, West Virginia 25302  
Phone: (304) 340-2011  
Fax: (304) 340-2061

### **BOONE COUNTY PUBLIC SERVICE DISTRICT**

Mr. Toby Waller  
109 Town Square  
Danville, West Virginia 25053  
Phone: (304) 369-2622  
Fax: (304) 369-6276



# POTESTA & ASSOCIATES, INC.

## *Water and Wastewater Engineering*

Our professional staff is dedicated to providing quality engineering services for various types of water treatment and distribution systems, as well as wastewater management, collection and treatment systems. The following is a list of some of the services Potesta & Associates, Inc. is capable of providing:



- Remediation Systems
- Landfill Leachate Treatment
- Storage Tank Design
- Flow Measurement
- Surveying/GPS and Mapping
- Permitting and Regulatory Liaison
- Combined Sewer Overflow (CSO)
- Management, Sampling and Modeling

### STORMWATER MANAGEMENT

- Hydraulic Conveyance Structure Design (Culverts, Channels, Drop Inlets, Etc.)
- Stormwater Retention/Detention Pond Design
- Stormwater Pond Modeling
- Floodplain Identification and Management Strategies
- Hydrologic and Hydraulic Analysis and Evaluations and Modeling
- Construction Monitoring
- Surveying
- Permitting and Regulatory Liaison

### WATER AND WASTEWATER DESIGN

- Feasibility Studies
- Conceptual Design
- Final Design
- Bidding and Construction
- Construction Monitoring
- Wastewater Audits
- Wastewater Minimization Studies
- Engineer's Cost Estimates
- Small Flows Design (Traditional and Innovative Treatment Systems for Low Volume Flows)
- Sewage Collection and Treatment
- Water Treatment and Distribution
- Industrial Wastewater Treatment
- Wastewater Treatment Plant Design
- Water Treatment Plant Design
- Water and Sewer Line Extensions



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Civil Engineering and Design*

Potesta & Associates, Inc. (POTESTA) helps clients evaluate and plan projects by completing the following types of preliminary evaluations and analyses.

- Phase I Environmental Site Assessments
- Floodplain Determination
- Geotechnical Explorations Including Soil, Bedrock, and Groundwater Characterization
- Foundation Recommendations
- Monitoring Well Systems and Site Characterization Plans
- Boundary, Topographical and Photogrammetric Surveys
- Utility Planning
- Earthwork Evaluations Including Volume Analysis
- Opinion of Probable Costs/Engineer's Construction Cost Estimates

Once the project has been determined feasible, POTESTA's design professionals complete preliminary and final designs. Frequent communication is made with the client and any other design professionals to review completed activities and obtain input for the design process. Our goal is to provide our services to achieve or exceed our clients' expectations.

Our design services include:

- Erosion and Sediment Control Plans
- Earth Retaining Structures Design
- Geometric Site Layout
- Grading and Drainage Plans, Including Excavation and Fill Optimization
- Access Road Design
- Hydraulic Structure Design
- Water and Sewer Design
- Slope Stability Analysis
- Subsurface Drainage System Design
- Construction Drawings, Specifications and Contract Document Preparation

POTESTA offers experienced environmental engineers and scientists to prepare applications for various environmental permits that may be required. These services include:

- Stormwater Management Permit/Erosion and Sediment Control Plans
- Office of Air Quality Permit to Construct
- Wetland Delineation and Permits
- National Pollutant Discharge Elimination System (NPDES) Permits
- Floodplain Management Permits
- Groundwater Protection Plans
- Spill Prevention, Control and Countermeasure Plans
- Environmental Site Assessments
- Environmental Impact Statements

POTESTA routinely provides professional services throughout construction of our projects. These services include survey layout, construction management, construction monitoring, record drawing preparation, and bid evaluation assistance.



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Computer-Aided Drafting and Design*

The Potesta & Associates, Inc. (POTESTA) computer-aided drafting and design (CADD) department provides state-of-the-art design and drafting services for in-house engineering and environmental consulting projects. We also provide personnel to clients who have a temporary need for additional drafting manpower. These services may be performed at your location or our office as required.

The CADD department utilizes the latest drafting/design software and computer hardware to maintain productivity at the high levels that clients demand and expect. We utilize the latest version in AutoCAD Civil 3D civil/survey design software to prepare, revise, and manipulate drawings and engineering data efficiently. Drawings and figures are produced using a Hewlett Packard 4500 and 7100 color ink jet plotters. POTESTA's experienced and trained professionals allow clients' projects and assignments to be completed rapidly and at reasonable cost.



Our CADD services include:

- Survey data manipulation including development of topographic mapping, cross sections, profiles, isopach drawings, etc.
- Site design including grading plans, drainage plans, utilities plans, right-of-way plans, etc.
- Roadway design.
- Water and sewer design.
- Permit drawings, maps, and exhibits.
- Earthwork and planimetric quantity development.
- Two and three dimensional graphics.



**POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Construction Monitoring*

Potesta & Associates, Inc. (POTESTA) provides construction monitoring and construction management services to assist clients in achieving regulatory and contractual compliance, to document that contractor activities are in compliance with design requirements, and to serve as an extension of clients' staff. POTESTA can provide full-time or part-time field services utilizing one or more engineers or technicians.

Regulatory compliance is often best documented by providing full-time construction monitoring services for a construction project. POTESTA can assist clients in observation of construction activities and documenting compliance. Our typical involvement in such projects includes:

- Conducting a pre-construction review of design and contract documents to identify potential problem areas, and consultation with the owner or client to develop strategies or procedures to avoid anticipated problems.
- Assistance in contractor selection. POTESTA can recommend construction contractors who specialize in the type of work associated with the project and can assist in bid evaluation by reviewing proposed quantities, unit costs, lump sum costs, and any proposed exceptions or qualifiers for the project. POTESTA can conduct pre-bid conferences to help contractors understand project requirements. We can also conduct pre-construction conferences prior to the start of the project to help establish lines of communication, review detailed plans, discuss testing requirements and establish proper reporting procedures.

- POTESTA can provide surveying for construction layout, measurement for payment quantities, and documentation of as-built conditions. Survey results are downloaded to form computer-aided drafting (CAD) drawings allowing the efficient preparation of record drawings and any subsequent evaluations required.
- Construction monitoring can include field testing to document compliance such as field density tests, concrete testing, sampling of materials for laboratory analysis, and documentation of site conditions and work performed on a daily basis or as required.
- Preparation of summary of construction reports, including photographs, videotape documentation, test results, daily construction logs, industrial hygiene monitoring, and other documentation as may be required by the client.
- Preparation of certifications as may be required.



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Stormwater Permitting*

The Clean Water Act regulates the discharge of pollutants into surface water through the National Pollutant Discharge Elimination System (NPDES). Potesta & Associates, Inc. (POTESTA) has extensive experience with NPDES permitting projects, including those involving stormwater discharges. Our professional staff is dedicated to providing quality engineering and environmental services for various types of stormwater permitting in West Virginia, Virginia, Ohio, Pennsylvania and other states including:

- Construction Stormwater General Permits
  - Notice of Intent
  - Site Registration
- Oil and Gas Construction Stormwater General Permits
  - Notice of Intent
  - Site Registration
- Individual Construction Stormwater Permits
- Multi-Sector Stormwater General Permits
  - Timber Products
  - Chemical and Allied Products
  - Asphalt Paving and Roofing Materials
  - Concrete and Clay Products
  - Scrap and Waste Recycling
  - Food and Kindred Products
  - Fabricated Metals Products
  - Miscellaneous Industries
- Municipal Separate Storm Sewer Systems (MS4) Permits



POTESTA offers its clients exceptional expertise and experience when it comes to stormwater permitting. One of the most important aspects of the permitting process is determining the approach most beneficial to the client. Our personnel are familiar with both state and federal permitting strategies and can provide capable guidance for appropriate and applicable permits for a project.

The following is a list of some of the services POTESTA is capable of providing, associated with stormwater permitting:

- Permit Application Preparation for New Facilities
- Modification Application Preparation for Existing Facilities
- Reissuance Application Preparation for Existing Facilities
- Stormwater Pollution Prevention Plan (SWPPP) Preparation and Modification
- Ground Water Protection Plan (GPP) Preparation and Modification
- Spill Prevention, Control, and Countermeasure (SPCC) Plan Preparation and Modification
- Erosion and Sediment Control Plan (ESCP) Preparation
- Stormwater Discharge Water Quality Sampling and Training
- Preparation of Discharge Monitoring Reports and Annual Certifications
- Agency Negotiation and Liaison Services
- Permit Compliance Services
- Construction and ESCP Related Inspection Services



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA



# POTESTA & ASSOCIATES, INC.

## *Geotechnical Engineering*

Potesta & Associates, Inc.'s (POTESTA) engineers and geologists have extensive experience related to the geotechnical engineering and geological disciplines. These areas include subsurface explorations, monitoring well and piezometer installations, foundation design recommendations, slope stability analysis, retaining walls, and remedial designs as they relate to construction, mining, waste disposal, environmental remediation, and other projects.

### **SUBSURFACE EXPLORATIONS**

POTESTA's diverse staff of engineers and geologists is experienced in the many different facets of subsurface explorations. Our usual procedure is to attend an initial meeting with the client to establish requirements and expectations, conduct a preliminary site reconnaissance, and develop a recommended exploration program for your review and approval. Supplemental information from the local area is then obtained from readily available sources to assist the engineer or geologist in making final recommendations.



POTESTA can provide field engineers and geologists who are knowledgeable using the latest technologies to assist in collecting and analyzing samples. Our knowledge of the proper procedures and familiarity with local conditions allows office

and field personnel to adjust the exploration plan if unanticipated field conditions are found.

Our staff is familiar with the following items which can be associated with subsurface exploration:

- Drilling and Rock Coring Techniques (augers, rotary bits, Geoprobe™, etc.)
- Sample Collection Methods (split spoons, shelly tubes, Geoprobe™ sleeves, etc.)
- Classification and Logging of Soil and Rock Samples
- Monitoring Well and Piezometer Installation

### **SLOPE STABILITY ANALYSIS AND REMEDIAL DESIGN**

Slope stability is often a major concern during the design and construction phases of many projects, especially those located in the Appalachian terrain. POTESTA's engineers are familiar with the various methods utilized to predict slope stability and are capable of performing the related analyses. Slope stability is critical for many projects such as analysis of existing or proposed soil embankments, rock fills, dam analysis and design, landfill design and operation, assessing the causation of slope failure, and designing remedial measures. Analyses can involve circular or sliding block methods, interface friction angles, and estimation of the strength parameters of the soil or rock. Slope stability analyses are performed on one of the most technologically advanced computer programs available and can be modified using site specific data.

POTESTA's engineers can also develop preventive measures during initial project design or recommendations to repair slope failures. Based upon the project circumstances, our engineers will consider various remedial measures such as regrading the site to obtain more suitable conditions, management of groundwater, and design of retaining structures. Our staff is familiar with a wide variety



### **POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

of retaining structures, including gabion baskets, soldier beam and lagging walls, sheet piles, reinforced concrete and reinforced earth slopes.



### **FOUNDATION DESIGN RECOMMENDATIONS**

POTESTA's staff has experience with various types of foundations and will recommend the appropriate type of foundation given the anticipated application and site conditions. The different types of foundations with which our staff is familiar are spread and strip footings, steel piles, auger-cast concrete piles, drilled piers, and reinforced mats.

Preliminary foundation design recommendations and cost analyses are commonly performed during the initial phases of a project to assist in determining project feasibility. As project planning progresses, the preliminary alternatives will be revised into a final recommendation which can then be incorporated into the project's construction documents or developed as an independent package for presentation to the contractor.

The final recommendation can include construction drawings, technical specifications, recommendations for allowable bearing capacity, engineer's construction cost estimate, and contractor's bid sheet.



#### **POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

Groundwater quality is a primary concern of each and every one of us. Likewise, the prevention of environmental impact to groundwater is becoming the responsibility of us all. Currently, regulatory actions place much of the responsibility on industry to prevent groundwater impact, remediate groundwater problems, and develop methods to prevent negative impacts to the groundwater regime. Potesta & Associates, Inc.'s (POTESTA) geologists, engineers, and environmental specialists are knowledgeable of existing legislation and regulatory requirements for groundwater activities to meet the needs of both the general public and industry.



### SITE EVALUATIONS

A thorough understanding of the groundwater system associated with a site is required to effectively and efficiently complete a site evaluation. POTESTA will complete a background evaluation prior to on-site activities. Such research allows a more efficient and detailed evaluation to result. A site evaluation may include methods such as:

- Borehole drilling.
- Geoprobe™ push soils sampling.
- Test pit excavation.
- Geophysical testing of surface and subsurface materials.

- Monitoring well installation.
- Groundwater sampling and chemical analysis.
- Soil geotechnical exploration.

### GROUNDWATER EVALUATIONS

An understanding of the physical and chemical character of groundwater is required to properly evaluate and correct existing groundwater problems. Impacts to groundwater can occur in both the industrial and residential environment. Geologists and hydrogeologists at POTESTA can effectively evaluate and offer remedial actions to mitigate groundwater problems. These specialists also maintain appropriate knowledge of regulatory requirements needed to aid in prevention of impacts to groundwater, as well as aid with maintaining appropriate industrial groundwater plans and reports. POTESTA can complete groundwater evaluations and characterizations for:

- Residential water supply impacts.
- Mine facilities.
- Industrial groundwater impact sites.
- Waste disposal sites.
- Hazardous waste sites.
- Leaking underground storage tank sites.
- Contaminant source investigations.

### GROUNDWATER MONITORING ACTIVITIES

The primary method to define and evaluate the degree of groundwater impact at a site is through proper groundwater monitoring. The appropriate design and determination of proper sample protocol of a groundwater monitoring system is a must to effectively meet the requirements established by most regulatory actions. POTESTA's hydrogeologists and engineers have accumulated many years of design experience in varying environmental conditions that will meet



**POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

both industry and public monitoring requirements. Our staff's extensive experience includes:

- Knowledge of proper monitoring well design.
- Appropriate well installation and completion methods.
- Innovative approaches to monitoring problem conditions.
- Consistent monitoring results with specialized sampling requirements.
- Strict adherence to quality control procedures.

POTESTA's professionals have extensive experience with groundwater monitoring at both industrial and municipal solid waste sites, leaking underground storage tank sites, surface impoundments, and mine sites.

### HYDROGEOLOGICAL SITE EVALUATIONS

The performance of a hydrogeological site assessment is required for most construction projects. Projects such as mine sites, solid waste landfills, and large manufacturing facilities are required to evaluate both the surface and subsurface conditions related to water flow and chemistry. Such evaluations often dictate the design and location of surface facilities, stormwater flow, and surface impoundments. Various study methods include the installation of temporary piezometers or permanent groundwater monitoring points, use of surface and subsurface geophysical evaluation tools, soil evaluation pits and boreholes, core borings for bedrock evaluation, and geological background evaluation. Our staff members have conducted such assessments for:

- Major manufacturing facilities construction and expansions.
- Mine sites.
- Municipal solid waste landfill development.
- Industrial landfill expansions.
- Underground storage tank sites.
- Hazardous waste disposal sites.
- Hazardous material leakage sites.

### REMEDIAL ACTION DESIGN AND IMPLEMENTATION

POTESTA's hydrogeologists, engineers, and technicians have the experience and expertise to design and implement remedial plans and actions to correct environmental impacts to soil and groundwater. Our technical expertise includes:

- Aquifer restoration.
- Leachate control and treatment.
- Remediation design and installation.
- Groundwater modeling.
- Waste evaluation and disposal.



POTESTA also has the expertise to effectively interface with both state and federal regulatory agencies for our clients. We can also aid with groundwater related and regulatory required completion of groundwater pollution prevention plans, stormwater pollution prevention plans, groundwater protection plans, and spill prevention, control and countermeasure plans.



#### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Hydrology and Hydraulics Design*

Our engineers have extensive experience in the application of hydrology and hydraulic principles to the design of real world systems. These applications include:

- Drainage Structure Sizing
  - Stream Relocations
  - Culverts
  - Channels
- Pond and Dam Design
  - Sediment Ponds and Basins
  - Spillways
  - Design/Rehabilitation
  - Slurry Impoundments
  - Lagoons
  - Dams
- Detention and Retention Systems
  - Ponds
  - Pipes
  - Underground Bladders
- Stormwater Management System Design
- Floodplain Management Permits/Approval
- Floodway Studies
  - FEMA (Federal Emergency Management Agency)
  - NFIP (National Flood Insurance Program)
  - Flood Elevation Surveys/Certifications
  - Flood Routing
- Dam Break Analysis
- Hydrology Surveys
- Stream Gauging
- Rainfall and Flow Data Collection
- Stormwater Drainage System Design
- Pressure Pipe Systems
- Stream Restoration Plans
- Natural Stream Channel Design/Restoration
- Expert Witness Testimony

To complete these types of applications, our engineers, scientists, and surveyors work jointly to develop an effective and economical solution to your situation. Their analyses use widely accepted computer models.



Potesta & Associates, Inc. typically uses the following computer modeling programs:

- HEC-RAS
- HEC-HMS
- TR-20/TR-55
- StormCAD
- CulvertMaster
- FlowMaster
- PondPack
- CORMIX

We have provided these services to a wide variety of public and private sector clients. Our staff not only understands the technical details, but is very experienced in working with the various state, federal, and local regulatory agencies. We know the level of detail they require and can obtain the necessary approvals in a timely manner.



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Permitting Services*

Potesta & Associates, Inc. (POTESTA) offers its clients exceptional expertise and experience when it comes to the permitting process, including all phases of application preparation, negotiations, modifications, compliance and renewal at all levels of government. Our permit services cover air, mining (coal and quarries), water and waste disposal permits.

### AIR

Our firm offers complete air permitting and consulting services to assist industry in complying with today's complex air quality regulations. Our staff has experience in identifying, characterizing and permitting air pollution sources for a variety of industries, including:

- Coating Operations
- Petroleum and Petrochemical Operations
- Chemical Manufacturing
- Manufacturing Facilities
- Mining
- Quarries
- Natural Gas Compressor Stations
- Electric Utilities

Our air quality experts have comprehensive knowledge of federal, state and local regulations, as well as experience in complex Title V applications. Our services include identification of potential air pollution sources, development of control strategies, preparation of permit applications, emissions inventories, compliance audits and regulatory liaison.

At both the state and federal levels, we help clients interpret and comply with air regulations, including the New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAPS). We can suggest emissions control strategies to meet both current and anticipated regulations, including BACT, MACT and LAER.

### MINING

In recent years, mining permits have become increasingly complex, requiring diverse expertise in mining techniques, engineering, environmental regulations, benthic studies, hydrogeology and hydrology. Our staff has broad experience in providing innovative solutions to various mining problems.



Although the objective of a permit application is to receive agency approval in a timely manner, the client does not benefit if the application does not allow for effective operations. We work with our clients to ensure that your operational needs are met while allowing for essential flexibility. Several members of our staff have mining industry experience, and they understand the requirements vital to an effective operation.

From the beginning of the permit process, POTESTA involves the reviewing agency to allow its concerns to be addressed prior to submittal of the application. Often, this reduces the amount of review comments and revisions which could slow the approval process. Our thorough knowledge of the various phases and requirements of the permitting process, coupled with our technical



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

expertise, may facilitate the approval of permits that are operation based and thus more acceptable to you.

Our staff members have the knowledge and expertise to develop modification submittals that are timely and cost effective. We can also expedite permit renewal applications with minimal input from our busy clients.

## **WATER**

The Clean Water Act regulates the discharge of pollutants into surface water through the National Pollutant Discharge Elimination System (NPDES). POTESTA has extensive experience in water permitting projects, including industrial and municipal wastewater and storm water discharges.

Perhaps the most important aspect of the permitting process is determining the approach most beneficial to the client. Our personnel are familiar with both state and federal permitting strategies and can provide capable guidance for appropriate and applicable permits for a project.

Our staff specializes in reviewing facility wastewater flows and recommending methods of minimizing or eliminating these discharges. Our knowledge of alternatives for wastewater management can save clients money and potential liability.

We can help the client decide which type of permit coverage is required for a given project. Also, with our thorough understanding of state and federal wastewater permitting, we have been able to renegotiate numerous draft permits to achieve more acceptable requirements.

POTESTA can prepare a draft NPDES permit for submission to the appropriate agency. This gives the client more input regarding the permit requirements. Our personnel are experienced in permit writing and will work closely with agency staff to ensure that the permit meets both regulatory requirements and the needs of our clients.

## **WASTE**

POTESTA is highly knowledgeable of the challenges faced in receiving a permit to allow proper disposal and/or use of your waste products. Our staff has experience with municipal and industrial solid waste and construction demolition waste and hazardous waste. They have designed landfills, transfer stations, recycling facilities, closure plans and corrective action plans.

We have experience in:

- Bioremediation
- Resource Recovery
- Sludge Handling/Stabilization
- Utilization of Coal Combustion By-products
- Construction Monitoring/Management

Our staff of civil, geotechnical, environmental and mining engineers; geologists; hydrogeologists; biologists and surveyors strives to obtain the maximum flexibility for your facility, whether it is a new operation, the modification of an existing facility, or a permit renewal. Regulatory liaison assistance is a key component in our efforts.



### **POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Roadway Engineering and Design Services*

Roadway engineering and design to develop construction and right-of-way plans requires a wide range of expertise and a complete and thorough knowledge of the West Virginia Division of Highways' (WVDOH) standards, specifications and approval process. Potesta & Associates, Inc. (POTESTA) offers extensive expertise in civil, environmental and geotechnical engineering; hydrology; and hydraulic design. POTESTA has provided numerous roadway designs for WVDOH projects, access roadways for industrial parks, educational institutions, commercial businesses and residential developments, as well as new roadways, relocation and modifications of existing roadways to widen or incorporate turning lanes and other improvements. POTESTA's geotechnical engineers have provided subsurface explorations and recommendations required for highway design for in-house projects, as subconsultant to other engineering firms and directly to the WVDOH.

POTESTA's in-house engineering, environmental and surveying staff is capable of providing a full range of services required for highway and roadway engineering and design. These services include:

- Project Conception
- Environmental Assessment and NEPA Compliance
- Permitting
- Geotechnical Explorations and Recommendations
- Surveying
- Geometric Layout
- Relocation of Utilities
- Preparation of Construction and Right-of-Way Plans and Specifications
- Construction Stakeout
- Construction Monitoring

### REPRESENTATIVE PROJECTS

**WV 279 North Bridgeport Bypass** – Geotechnical and environmental services for approximately 1.25-miles of the North Bridgeport Bypass, West Virginia Route 279, in Harrison County. This work included documentation of environmental conditions along three alternative routes to assess potential impacts prior to design. POTESTA also completed geotechnical evaluation of the planned cut slopes, as well as foundation design for a proposed single span bridge. POTESTA prepared the roadway design plans for the WVDOH.



**Mineral Wells Industrial Park** – Construction and right-of-way plans were prepared for 0.65 mile of West Virginia Route 14/25 for access into the industrial park. Project also included determination of wetland impacts and development of a mitigation plan to account for wetlands lost as a result of construction.

**Bradshaw Elementary and Riverview High Schools** – Construction of these new schools required that 0.44 mile of West Virginia Route 80 be relocated. POTESTA prepared construction and right-of-way plans for the relocation which included relocation of a cemetery, relocation of a stream and extensive excavation with the excess material being used to raise the school site out of the floodplain.



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA



**Interstate 64, Cabell County, West Virginia** – West Virginia Paving, Inc. retained POTESTA to be part of a design/build team for a widening project on Interstate 64. POTESTA prepared topographic mapping of the roadway from aerial mapping services, as well as ground topographic mapping around the bridge to be replaced. The project included geotechnical services including exploration of subsurface borings for laboratory testing and providing the design team with geotechnical recommendations. Other services included a Construction Stormwater NPDES permit and construction monitoring of both the bridge construction and widening of the roadway from four to six lanes.

**Marshall University Graduate College** – Marshall University retained POTESTA to conduct a feasibility study for an entrance route and a new access roadway to the college. As a result, POTESTA prepared construction drawings to WVDOH standards for additional lanes, necessary islands and signage at the college's entry. This plan was approved by the University, City of South Charleston and the WVDOH.



**Baker Business Park Industrial Access Road** – Hardy County Rural Development Authority retained POTESTA to provide engineering services for the study, design, and preparation of construction contract plans, related documents, and construction oversight services for the planned industrial access road for the Baker Business Park District, as well as deceleration lanes on Corridor H. POTESTA completed surveying/mapping, right-of-way plans, roadway design and preparation of contract plans, roadway surveying, and construction observation.



**POTESTA & ASSOCIATES, INC.**

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## Site Design



Potesta & Associates, Inc. has a significant body of work in site design for residential, commercial and industrial clients. Projects range from power plant siting to subdivision design. We have assisted numerous developers and development agencies with the creation of business industrial parks throughout West Virginia, and have been part of design teams for elementary, secondary and collegiate projects primarily associated with new building construction.

Our staff of civil, environmental, and geotechnical engineers; surveyors and environmental scientists can provide the following site planning and design services.

- Surveying – Topo and Boundary
- Base Mapping from Aerial Photography
- Geotechnical Engineering
- Land Planning
- Environmental Issues Evaluation and Mitigation
- Site Grading
- Vehicular and Pedestrian Circulation
- Utility Design
- Site Features
- Stormwater Management Plans

Some clients who have used our site design services include:

- West Virginia Development Office
- Development Authorities: Tucker, Wood, Roane and Hardy Counties
- Bright Enterprises
- Charleston Area Alliance
- University of Charleston
- Timberwolf Development Corporation
- West Virginia Department of Environmental Protection
- West Virginia Division of Natural Resources
- Marshall University
- Architects: Associated Architects; Bastian & Harris, Architects; SEM Partners; ZMM



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# POTESTA & ASSOCIATES, INC.

## *Surveying and Mapping*

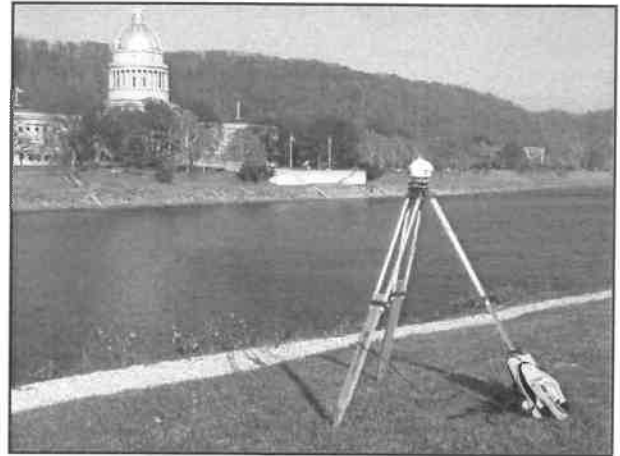
Our surveyors are experienced in many aspects of surveying such as topographic mapping, boundary surveys (rural/farms, city lots, and subdivisions), ALTA surveys, control surveys, flood certificate surveys, well location surveys, construction surveys for layout of work, record drawings, and quantity measurements. Related areas include courthouse research, preparation of right-of-way plans, and verification of property owners. Potesta & Associates, Inc. (POTESTA) has licensed professional surveyors registered in West Virginia, North Carolina, South Carolina, Ohio, Virginia, and Pennsylvania. Their total combined surveying experience comes to well over 50 years.

POTESTA's surveyors use state-of-the-art equipment such as Topcon total stations, Trimble R-8 GNSS, and SMI data collectors with SMI software. Autodesk Civil 3D reduction and design software is used.

POTESTA is equipped with modern surveying instruments, allowing efficient data processing and accurate gathering of field information. Total station instruments equipped with data collectors are utilized for complete field-to-office automation allowing for high levels of productivity in the field. The latest versions of software are then used to process survey data and create drawings or required end products. These products can be supplied to our clients in AutoCAD and/or Microstation format.

Small topographic mapping projects can be completed in-house using the aforementioned process. Larger projects are better suited for mapping using aerial photography.

POTESTA can provide the necessary surveying required for establishing ground control for aerial mapping. As a quality control measure, aerial mapping is field checked for accuracy by surveying cross sections or random points.



Surveys completed by POTESTA are performed by or under the direction of a professional licensed surveyor. Surveys and mapping are completed to the standards outlined by the National Map Standards, as well as other applicable quality standards.

Our staff is experienced in global positioning surveys (GPS). GPS equipment, Trimble R-8 GNSS, and existing base stations are among POTESTA's surveying tools. Based upon the site location and ultimate use of the survey information, a recommendation is made to the client as to whether or not traditional survey or GPS is most applicable to their project.



### POTESTA & ASSOCIATES, INC.

7012 MacCorkle Avenue, SE, Charleston, West Virginia 25304  
Phone: (304) 342-1400 • Fax: (304) 343-9031 • [www.potesta.com](http://www.potesta.com)  
Regional Offices: Morgantown, WV and Winchester, VA

# DANA L. BURNS, P.E., P.S.

*Vice President*



## EDUCATION

- M.S. Civil Engineering, 1979  
West Virginia University
- B.S. Civil Engineering, 1978  
West Virginia University

## EMPLOYMENT HISTORY

- 1997-Present Potesta & Associates, Inc.  
1994-1997 Terradon  
1979-1994 GAI Consultants, Inc.  
1978-1979 West Virginia University  
1976-1977 West Virginia Department of Highways  
(summers)

## PROFESSIONAL REGISTRATIONS

- Professional Engineer – West Virginia, Illinois
- Professional Surveyor – West Virginia

## PROFESSIONAL CERTIFICATIONS

40-Hour Health and Safety Training

## SERVICE ON BOARDS AND COMMISSIONS

- Environmental/Technical Committee member – West Virginia Coal Association
- Environmental Committee member – Kentucky Coal Association

- Past Board of Directors member and current Waste Team Chairman on the Environmental Safety and Health Committee – West Virginia Manufacturers Association
- Environmental and Safety Committee member – Independent Oil and Gas Association of West Virginia
- Environmental Committee member – West Virginia Oil and Natural Gas Association
- Past President – West Virginia Society of Professional Engineers, Professional Engineers in Private Practice
- Past President and past Board of Directors member – American Council of Engineering Companies West Virginia Chapter
- Past Chairman of Transportation Committee – American Council of Engineering Companies West Virginia Chapter
- Past Board of Directors member – Society of American Military Engineers Huntington Post
- Member Committee D-18 on Soil and Rock – American Society for Testing and Materials (ASTM)

## PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- National Society of Professional Engineers
- WV Society of Professional Surveyors

## AREAS OF SPECIALIZATION

Management of design and permitting of civil, environmental, geotechnical, and mining engineering projects. Siting, design, and permitting of industrial and municipal waste disposal sites; reclamation of abandoned mine lands; and development of stormwater management plans and groundwater sampling programs. Environmental/reclamation liability assessments. Development of site plans for commercial and industrial facilities including hydrologic and hydraulic analyses. Expert witness testimony. Directs engineering division including day-to-day operation of headquarters and three branch offices concerning staffing, coordination, training, business development; and overall management of technical and support staff.

## PROFESSIONAL EXPERIENCE

### Civil/Site Design

Utility extension, site grading plans, stormwater management, roadway design, and permitting for site development:

- Residential subdivisions
- Commercial developments

University of Charleston – Principal-in-Charge for the following projects:

- Development of topographic mapping of campus
- Evaluation of storm sewer system
- Civil site services – UC Pharmacy School, New Hall, Middle Hall, and Brotherton Hall
- Design of new campus entrance roadway

Marshall University – Principal-in-Charge for the following projects:

- 400 bed housing project
- Biotechnology Center
- Fifth Avenue parking and 6<sup>th</sup> Avenue parking facility
- Jomie Jazz Center
- Childcare Center
- Mid-Ohio Valley Center
- Campus landscape master use plan
- Campus improvements project
- MU Graduate College South Charleston campus
- Student Center and Henderson Center
- Bookstore addition
- University Heights

Glenville State University – Principal-in-Charge for the following projects:

- Student Residence Hall
- Athletic Convocation Center and Forestry/Survey Class Center

West Virginia University – Principal-in-Charge for a sidewalk repair project located near Allen Hall on the Evansdale Campus in Morgantown, West Virginia.

The Villages at Coolfont – Principal-in-Charge to provide environmental and engineering consulting services for the redevelopment of the Coolfont Recreation property in

Morgan County, West Virginia to create a second home community with high-end amenities:

- Phase I Environmental Site Assessment
- American Land Title Association (ALTA) boundary and property survey of 997 acres
- Completed an assessment of the facility's sanitary sewer wastewater treatment plant to facilitate acquisition of the property.
- Participated in week long planning charette with client, land planners, and other design consultants to assess characteristics of property, identify opportunities and constraints, obtain input from local residents and businesses, and develop design guidelines.
- Land use plan including 1,300 homes, a village center, spa, expansion of an existing lake, a proposed second lake, walking/hiking/biking trails, and the necessary infrastructure.
- Civil engineering design for potable water and wastewater treatment facilities.
- Selected source well locations, drilled 3 source test wells, and completed field testing and permitting.
- Designed 300 gallon per minute potable water treatment plant.
- Designed 2- 316,000-gallon water storage tanks and 75,000 LF of distribution system.
- Completed the design and permitting for a 448,000-gallon per day membrane bioreactor wastewater treatment plant, including the design of a 70,000 LF collection system.
- Assisted with permitting required for the development of the new lake and upgrades/expansion of the existing lake (included were Section 404 individual permit and Section 401 water quality certification).
- Prepared roadway and stormwater management plans, including typical pavement sections, road profiles, geometric layout plan, culvert and drop inlet sizing, drainage conveyance pipe and channel profiles, and miscellaneous stormwater management details.

City of Charleston – Inspection and preparation of rehabilitation design for Parking Garage No. 1.

Tucker County Industrial Park – Principal-in-Charge for the design which included water and sewer lines, stormwater management design, roadway design, pavement design, site grading plan, master plan, and geotechnical exploration/foundation recommendations.

Principal-in-Charge for site grading plans, stormwater management system, site surveying, roadway/parking lot design, wetland delineation/mitigation, and construction monitoring for the 400,000-square foot Coldwater Creek distribution center in Parkersburg, West Virginia.

Principal-in-Charge for the civil/site design for the new Sissonville Middle School in Kanawha County, West Virginia. Project included site grading plan with more than 230,000 cubic yards of earthwork to obtain 20 acres of level ground for a 74,000-square foot school, football field, soccer field, baseball field, access roadways, and parking areas. Project included utility designs for water service and sanitary and sewer. Stormwater collection systems and erosion and sediment control plan/permit completed.

Principal-in-Charge for civil/site design for new Riverview High School and Bradshaw Elementary School in McDowell County, West Virginia. Project included 2,500 linear feet of relocated WV Route 80, relocation of 1,200 feet of Oozley Branch, and site work (grading, stormwater drainage, geotechnical recommendations, sanitary sewer, water, and electrical services) to serve the two schools. Project design included site survey, geotechnical exploration, foundation recommendations, design of excavation slopes, layout of schools, parking areas and athletic fields, utility design, roadway relocations plans, and stream relocations plans. Responsible for the design and preparation of contract bid documents (specifications and drawings) for civil/site work. POTE STA served as a subconsultant to ZMM on this project.

Principal-in-Charge for civil/site design and permitting associated with the construction of three synthetic fuel pellet plants in McDowell County, Nicholas County, and Kanawha County, West Virginia. Project included developing synthetic fuel manufacturing facilities on inactive surface mining sites. Services included subsurface exploration, foundation recommendations, grading plans, stormwater management plans, preparation of permit applications, and construction monitoring for site grading and foundation construction. The McDowell County site included a water source study to identify and select water sources for the manufacturing process. The three plants had a construction cost of \$25 million. Project was a design/build arrangement with POTE STA working directly for the owner.

Carneuse Lime & Stone – Principal-in-Charge of engineering and environmental services for the expansion of current quarry operations at Winchester quarry in Winchester, Virginia. The expansion includes the addition of two new vertical lime kilns and associated equipment, increasing their current aggregate crushing operation, and expanding their rail system to allow for increased shipping of product.

- Design included grading, stormwater management, and an access road crossing for a rail loop encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers.
- The total project track length consists of approximately 29,000 linear feet of rail.
- The design of the rail expansion includes trackside ditches, culverts, stormwater management systems, gas line relocations and crossings, rail crossings, and internal plant roadways, as well as grading for the expanded aggregate plant and lime kilns.
- Additional designs included civil/site services for a new office building and design of the sanitary water treatment system for this building.
- Acquired the necessary approvals to construct this project, such as approvals from local planning and zoning, inspections, health departments, and state governments such as Virginia Department of Transportation, Department of Environmental Quality (DEQ) and Department of Mining and Mineral Extraction (DMME).
- Conducted wetland delineations, developed reports, and completed applications to the Norfolk District (Northern Virginia field office) of the United States Army Corps of Engineers (USACE).

Development of specifications for a sand mound treatment system in the U.S. Air Training Center near Pittsburgh, Pennsylvania.

#### Water Lines, Water Storage Tanks, and Water Treatment Plants

New extensions and replacement of existing lines:

- Cassity Fork Water Supply Extension Project – Randolph County, WV (Project Manager)
- Godby Branch Water Supply Extension Project – Logan County, WV (Project Manager)
- Beaver Creek Water Supply Extension – Upshur County, WV (Project Manager)

- Buff Creek/Trace Fork – Putnam County, WV (Principal-in-Charge)
- Route 60 – Putnam County, WV (Principal-in-Charge)
- Boone County PSD numerous extensions – Boone County, WV (Principal-in-Charge)

West Virginia American Water Company – Principal-in-Charge for construction administration/monitoring for Poca River Water Line Extension Project, Cabell County Water Line Extension Project, Contract No. 7, Spite Road Water Line Extension Project, and Fisher Ridge Water Line Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of records drawings for 100,000+ linear feet of water line extensions.

City of Philippi – Principal-in-Charge for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot water line extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water Company – Principal-in-Charge for Residuals Handling Facility project at the 32 MGD Kanawha Valley Water Treatment Plant, including coordination design consultant. Design included sludge pumping station, 950,000-gallon reinforced concrete gravity thickener, two belt filter presses, chemical feed systems, plate settler, and associated control and piping. Work included preparing design concept, surveying, subsurface exploration, preparation of drawings, specifications, cost estimate and permit applications, conductance of pre-bid public relations meeting, evaluation of bids, construction observation, review of contractor submittals, review of change order requests, and review of contractor invoices.

West Virginia American Water Company – Principal-in-Charge for evaluation of Town of Pineville water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report.

Tucker County Development Authority – Principal-in-Charge for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate

were prepared. Also performed construction administration services.

West Virginia Bureau for Public Health – Principal-in-Charge for services associated with Source Water Assessment Protection Plans (SWAPP) for 38 public water systems throughout West Virginia. Services provided included windshield surveys to identify and locate (via GPS) potential contaminant sources (PCS's), review of regulatory databases, entering data into Access database, and preparation of summary reports.

City of Philippi – Principal-in-Charge for relocation of water lines due to proposed roadway. Relocation included approximately 4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

West Virginia American Water Company – Principal-in-Charge for hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

Management of design, permitting, and construction monitoring of more than 40 miles of new waterline serving rural communities in southern West Virginia.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Project included 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

West Virginia Department of Abandoned Mine Lands – Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Sewer Lines and WWTPs

Washington County Industrial Development Agency – Design of a holding tank and ventilation system vault near Houston, Pennsylvania.

West Virginia American Water Company – Principal-in-Charge for evaluation of wastewater collections systems and treatment plants for two municipalities (Oak Hill and White Sulphur Springs) in West Virginia. Included were site visits to observe system, discussions with system operators and regulatory officials, records review, compilation of DMR data and issuance of findings in reports.

Geotechnical

Subsurface exploration, evaluation, and design of remedial measure for landslides:

- Soldier beam and lagging retaining walls
- Gabion walls
- Grade/drain/compact in-place
- Geo-grid reinforcement with grade/drain/compact in-place

Plasma Processing Corporation – Management of subsurface exploration and preparation of soils report near Ravenswood, West Virginia.

West Virginia University – Principal-in-Charge for the following projects:

- WVU Intermodal Parking Garage on the Medical Center Campus – geotechnical and civil engineering
- WVU Engineering Building – geotechnical evaluation

Principal-in-Charge for Williamson Landslide Project involving an abandoned mine land site. Geotechnical exploration and design of 480-foot long soldier beam and lagging retaining wall with tiebacks to support loose mine spoil backfill along the edge of a previously mined area with steep terrain. Project was required to protect an existing 125-bed nursing home facility.

Landfills/Solid Waste/Waste Disposal

Design and permitting of new landfills and development of cell closure plans:

Municipal Landfills –

- West Virginia Solid Waste Management Board/Monongalia County Sanitary Landfill – Morgantown, WV
- North Folk Landfill – Wheeling, West Virginia
- Disposal Service, Inc. Landfill – Hurricane, WV
- Sycamore Landfill, Inc. – Hurricane, WV
- City of Charleston Landfill – Charleston, WV
- Mingo County Landfill – Mingo County, WV
- Omar Landfill – Omar, WV
- Pocahontas County Landfill – Marlinton, WV
- HAM Sanitary Landfill – Peterstown, WV
- Kanawha- Western Landfill – Cross Lanes, WV
- S&S Landfill – West Milford, WV
- Brooke County Landfill – Brooke County, WV
- Wetzel County Landfill – Wetzel County, WV
- WVDEP’s Landfill Closure Assistance Program
  - Montgomery Sanitary Landfill – Montgomery, WV
  - Wyoming County Sanitary Landfill – Pineville, WV
  - Jackson County Sanitary Landfill – Ripley, WV
  - City of Moundsville Landfill – Charleston, WV

Industrial Solid Waste (Fly Ash, Bottom Ash, Scrubber Sludge) –

- Mobay Hazardous Waste Landfill – Natrium, WV
- American Cyanamid (4 projects) – Willow Island, WV
- Client confidential – Parkersburg, WV
- Monsanto Company (multiple projects) – Nitro, WV
- Harrison Power Station – Haywood, WV
- Fort Martin Power Station – Morgantown, WV
- Mount Storm Power Station – Mount Storm, WV
- Keystone Power Station – Elderton, PA
- New Castle Power Station – New Castle, PA
- Conemaugh Power Station – New Florence, PA
- Alcoa Corporation – Newsburg, IN
- Portsmouth Power Station – Portsmouth, VA
- F.B. Culley Power Station – Newburgh, IN
- Hatfield Power Station – Masontown, PA
- Armstrong Power Station – Armstrong County, PA
- Cheswick Power Station – Springdale, PA

Design, permitting, economic analyses, and preparation of construction bid documents for coal ash/refuse sites including HDPE and PVC liner systems:

- Virginia Electric and Power Company
  - Portsmouth Power Station ash pond to dry fill conversion project
  - Mount Storm Interim Ash Site
- Pennsylvania Electric Company



- Keystone Coal Ash/Coal Refuse Site
- Allegheny Power Station
  - Hatfield Ash Site

WVDEP Office of Waste Management – Development construction drawings, technical specifications, contractor’s bid sheet and engineer’s cost estimate for closure of Montgomery Sanitary Landfill. Work included leachate collection system, cap and double walled leachate tank.

WVDEP Office of Waste Management – Development of construction drawings, technical specifications, contractor’s bid sheet, and engineer’s cost estimate for final closure of the Wyoming County Landfill. Work included site assessment, double walled leachate tank, pump station, and connection of leachate line to Center Public Service District sanitary sewer.

WVDEP Office of Waste Management – Development of interim closure plans including leachate collection system, adequacy of groundwater monitoring wells and soil cover for the Jackson County Landfill and the City of Moundsville Landfill.

WV Solid Waste Management Board’s Monongalia County Sanitary Landfill – Management of three liner expansions, borrow area determination, minor permit modifications, 1.6 MG double-lined leachate pond design, construction monitoring, and investigation of future alternatives.

Disposal Services, Inc. – Evaluation of landfill expansion and leachate minimization. Preparation of permit application for Phase I Cell 3 and Phase II including drawings, specifications, and CQA manual. Preparation of construction drawings for Phase I Cell 3 Stage I and management of construction monitoring. Preparation of erosion and sedimentation control plan, soldier beam and lagging retaining wall, gabion basket retaining wall, and assistance on FERC permit to relocate gas line in Hurricane, West Virginia.

S&S Landfill – Preparation of Landfill Expansion Revisions, permit revisions, and permit negotiation. Detailed review of hydrogeology and groundwater flow regime. Management of QA/QC for landfill expansion including clay/synthetic liner system, double walled leachate tank, sedimentation pond, drainage channels, and associated facilities in Harrison County, West Virginia.

Pocahontas County Solid Waste Authority – Management of miscellaneous services including preliminary closure plan, evaluation of leachate treatment alternatives, repair of tear in synthetic liner, preparation of annual reports, and surveying for Pocahontas County Landfill in Marlinton, West Virginia.

Kanawha County Solid Waste Authority – Investigation of potential landfill fire at Kanawha Western Landfill. Detailed geologic and hydrologic studies, monitoring well installation, and preparation of associated sections of landfill permits.

- North Fork Landfill – Wheeling, WV
- Sycamore Landfill – Hurricane, WV

Rhone-Poulenc Ag Company – Management of non-hazardous industrial landfill design project involving design report, technical specifications, construction drawings, QA/QC manual, operation manual, permit application, and environmental assessment. Included meetings with EPA Region 3 and WV Division of Natural Resources. Also, three site selection studies. Complete geologic and hydrogeologic investigations including installation of monitoring wells.

Tennessee Valley Authority – Economic analyses of wet versus dry disposal processes, including conveyor belts, trucks, and sluicing by pipe for fly ash and bottom ash.

Pennsylvania Electric Company – Evaluation of natural and synthetic liner systems for coal ash/coal refuse sites. Preparation of permit applications for the New Castle ash site and Mitchell scrubber sludge disposal site:

- Pennsylvania Power Company
- Allegheny Power System

Coordinator of the compilation of data for a RCRA Part B permit application for a hazardous waste transfer facility in Parkersburg, West Virginia including SPCC plan.

Sludge sampling programs at the Institute, West Virginia plant of Union Carbide Corporation and the Tri-State Terminal of Ashland Petroleum Company.

Siting studies, including environmental impacts and economic analyses, for industrial waste and coal ash/refuse sites:

- Peabody Coal Company – slurry impoundment

- Rhone Poulenc Ag Company – 3 sites for industrial landfill
- Virginia Electric and Power Company – Mt. Storm Power Station
- Southern Indiana Gas and Electric Company – 4 sites at F.B. Culley Station
- Aloca Generating Corporation – 7 sites at Warrick Station

American Cyanamid Company – Management of QA/QC monitoring program for the first RCRA industrial waste impoundment in EPA Region 3. Composite liner system consisted of 3-foot soil-bentonite liner and two 60-mil HDPE synthetic liners separated by HDPE drainage net. Provided on-site testing laboratory. Daily and weekly project reports were provided. Prepared summary report and necessary “certifications” for submittal to WV Division of Natural Resources and EPA in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring program for a stormwater retention basin consisting of 3’ soil bentonite liner with concrete overlay. Daily, weekly, and project summary reports were prepared in Willow Island, West Virginia.

American Cyanamid Company – Preparation of plans, specifications, and permit application for the closure of an industrial waste disposal site. The capping system included geogrid to assist in supporting the overlying HDPE liner and soil cap in Willow Island, West Virginia. Electric Power Research Institute – Preparation of the Coal Ash Disposal Manual and various manuals for the High Volume/Low Technology Fly Ash Utilization Program.

Electric Power Research Institute – Development of a computer program that provides a detailed cost estimate for a coal ash disposal area.

Rhone Poulenc Ag Company – Evaluation of settling characteristics for an emergency fly ash disposal pond and design of associated modifications at a plant in Institute, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for a closure of a 3-acre hazardous waste disposal area with sludge stabilization and an HDPE cap. Provided an on-site testing laboratory, daily and weekly project reports, a summary report, and agency required certifications in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for the stabilization and capping of 10-acre hazardous waste equalization basin in Willow Island, West Virginia.

Rhone Poulenc Ag Company – Sampling/sounding of two basins containing sludge from secondary biological treatment of industrial wastewater and subsequent determination of sludge quantities.

Development of alternative truck transportation cost schemes:

- Industrial and Hazardous Waste Management Study – Allegheny County, PA
- Holcomb, KA Power Station – Sunflower Electric Cooperative
- Portsmouth Station remote ash structural fill – Virginia Electric and Power Company

#### Roadway Design

Principal-in-Charge for design of new entrance roadway to the University of Charleston and the utility extension, surveying, and general civil engineering for a 440-bed dormitory. Project was a design/build.

West Virginia Divisions of Highways – Inspection of bridge and highway construction.

Managed numerous industrial access roads. Roadways were designed for the private sector. Design was coordinated with and approved by the West Virginia Division of Highways and roadways were accepted into the state transportation system.

- ZMM Architects – Relocation of State Route 80 for construction of new elementary and high schools at Bradshaw in McDowell County, WV
- Jackson County Development Authority and Double C Enterprises – Industrial park access road and County Route upgrade in Kenna, WV
- Roane County Economic Development Authority – National Industrial Lumber access road in Amma, WV
- Tucker County Development Authority – Tucker County Industrial Park access road in Davis, WV
- Wood County Development Authority – Luigino’s access road in Parkersburg, WV
- University of Charleston – Design of new entrance road to University of Charleston and redesign of

MacCorkle Avenue (State Route 61) intersection/turn lanes in Charleston, WV

- N-Visions Architects – Entrance road, bus loop, and emergency exit roadway for new Sissonville Middle School in Sissonville, WV
- Entrance road and bus loop for Trap Hill Middle School in Raleigh County, WV

WV Division of Highways – Managed environmental permitting, surveying, and design of four-lane 1.25-mile North Bridgeport Connector Road from Interstate 79 Jerry Dove Interchange to Benedum Airport in Bridgeport, West Virginia.

WV Division of Highways under open-end agreements for:

- Landslides and slope stability projects
- Surveying
- Asbestos services

WV Division of Highways – Managed geotechnical, environmental, right-of-way, and survey work performed as a subconsultant for various projects:

- King Coal Highway (section near Pineville, WV)
- Sharon Heights Connector
- Eldora and Enterprise Connector
- Dundon Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge
- Upgrade of three bridges on Interstate 81
- Corridor H (section near Kerns, WV)
- Corridor D (section near Washington, WV)

#### Oil and Gas

Columbia Gas Transmission Corporation – Management of consulting services for environmental report preparation and FERC permit applications for various natural gas pipeline projects.

Principal-in-Charge of well pad design, access road layout, landslide remediation design, evaluation of water supply sources and distribution systems, design of water treatment systems, impoundment design, stormwater management plans, permitting, AST inspections, surveying, and SPCC Plans for various major gas clients in the Marcellus and Utica formations.

- Stone Energy

- EQT
- Chesapeake
- Gastar
- NiSource

#### Storage Tanks

Principal-in-Charge of the registration, preparation of spill prevention response plans, and inspection of aboveground storage tanks (ASTs) for over 500 ASTs for numerous clients, including:

- NiSource
- Rubberlite
- CI Thornburg
- Tetra Technologies
- CAMC
- Interstate Hardwood
- Central Supply

Closure of aboveground storage tanks, including preparation of documentation for regulatory agency and sample acquisition and analyses:

- Rhone-Poulenc Ag Company – Institute, WV
- American Cyanamid Company – Willow Island, WV

Investigation of contamination from underground storage tanks and hydrocarbon spills. Included preparation of necessary regulatory forms, sample acquisition and analyses, and meeting with regulatory agency.

- West Virginia Division of Natural Resources – various projects under Master Agreement
- Goldman Associates
- Vandalia Mining Company
- Marshall University

#### Mining

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Principal-in-Charge on numerous Independent Third-Party Audits at sites for various coal producers. Independent Third-Party Reviews of mines/complexes were undertaken with a thorough review to assess compliance of the operation to various federal statutes and equivalent to state laws. Specific areas of review included are generally determined by the needs of the client or the requirements of governmental agencies and have included an assessment of the client's compliance with the following:

- Clean Air Act
- Clean Water Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substance Control Act
- Comprehensive Environmental Response, Compensation and Liability Act
- Emergency Planning and Community Right to Know Act
- Federal Insecticide, Fungicide and Rodenticide Act
- Oil Pollution Act
- Mine Safety and Health Administration
- Surface Mining and Reclamation Act
- National Pollution Discharge Elimination System
- Others as required

Development of reclamation plans for over 70 projects including landslides, mine fires, acid mine drainage, mine subsidence, refuse piles, water supply systems, and asbestos abatement. Projects were completed for West Virginia Division of Energy, West Virginia Division of Environmental Protection, Virginia Abandoned Mine Lands, and Ohio Department of Natural Resources and include the following:

- Duncan Hill Subsidence
- Beckley Subsidence
- Jonben (Haga) Subsidence
- Holden (Padgett) Subsidence
- Gray and Iaquina Subsidence
- St. John's Road Subsidence
- Route 19/28 Subsidence
- Mt. Hope Subsidence
- Huffman Street Subsidence
- Morgantown Airport Drainage/Subsidence
- Fairmont East Subsidence
- Fairmont IV Subsidence
- Cheyenne Sales Company Reclamation
- Little Whitestick Refuse
- Crany Mine Dump

- Morgan Mine Fire
- MacArthur Phase 2 Subsidence
- Lake Lynn Complex
- MacArthur Mine Subsidence
- East Lynn II
- Flipping Hollow Complex
- Sundial (Hatfield) Refuse Piles
- Mill Creek Refuse Pile
- John's Branch Coal Refuse Dam
- Jessop Highway #10
- Lando (Edwards) Drainage
- Taylorville (Cantrell) Drainage
- Borderland (Matney) Portals
- Peach Ridge Complex
- Measle Fork Refuse
- Georges Creek Portals
- Putney Impoundment
- Kopperston (John's Branch) Refuse Emergency
- Marmet (Wells Drive) Landslide Emergency
- Marmet (Clark) Drainage
- Pringle Run #2
- Mountain Run Refuse and Portals
- Fairmont East Mine Drainage
- May Portal (Virginia Abandoned Mine Lands)
- Williamson (Hatfield) Landslide
- Georges Creek (Lucas) Rockslide
- Rachel Refuse
- Grass Run Refuse
- Allen Sheridan Hazardous Facility (asbestos)
- Elk City- Century- Volga Phase I/II Water Study
- Camp Mohonegan Regrade
- Comfort Run Coal Company (asbestos)
- Allen AMD
- Cora Mine Drainage No. II
- Covey Creek Mine Fire
- Vivian Refuse Pile
- Summerlee Refuse Pile (won 1996 southern reclamation award)
- Kimball Refuse Pile (won 1995 southern reclamation award)
- Hampden (Smith) Landslide
- Bear Run Refuse (won 1994 Ducks Unlimited award)
- Charleston (Ratcliffe) Landslide
- Garrison Complex
- Mulberry Fork (Stover) Landslide
- Courtright Highwall
- Belle Landslide
- Minden Drilling
- Kitchen/Gibson Landslide
- High Coal Tipple

- Omar Refuse Pile (won reclamation of the year award)
  - Logan Drainage
  - Switzer Adams/Robinson Drainage
  - Follansbee Drainage
  - Hawkins AMD
  - Vargo Drainage
  - Duck Creek Landslide
  - Kistler Mine Fire
  - Turner Douglas Complex
  - Buffalo Creek No. 5 Refuse
  - Dawmont Mine Facility
  - Helen (Lewis) Refuse
  - Upshur 10/15 Drainage
  - Webster County Water Studies
  - Jaeger Water Feasibility Study
  - Burnwell, Standard, and Collinsdale Water Line Extension
  - Clay-Roane PSD Water Feasibility Study
  - Burnsville PSD Water Feasibility Study
  - Brandonville/Pisgah Water Feasibility Study
  - Cuzzart/4-H Water Feasibility Study
  - Hudson/Mt. Nebo Water Feasibility Study
  - Phase I Water Studies Brooke and Fayette Counties
    - Gauley River PSD – Belva
    - Hammond PSD – Wellsburg
    - New Haven Chamber of Commerce – Hico
  - Mill Creek Regional Water Project Phase II Water Study (Boone, Lincoln, and Logan Counties)
  - Godby Branch Phase II Water Study
  - Madison Street Portals/Fairview Route 218 Portals
  - Putnam County Phase I Water Studies
    - Heizer Creek
    - Manila Creek
  - Boone County Phase I Water Studies
    - Jeffrey Area – Jeffery, Hewett Creek, Seacoal
    - Ottawa Area – Ottawa, Greenview, Missouri Fork, Meadow Fork, Aleshire Branch, Dent Fork, Mike’s Fork
  - Phase II Water Feasibility Studies
    - Logan County – Cow Creek, Crooked Creek, Upper Rum Creek
  - Phase I Water Studies for Logan County
    - Pecks Mill – Godby Heights Communities
    - Cow Creek – Sarah Ann – Crystal Blocks Communities
    - Upper Rum Creek Community
    - Clothier Community
    - Crooked Creek Community
    - Godby Branch
    - Whitman Creek – Holden Project
  - Beaver Creek Waterline Extension: Phase II Water Project
  - Cassity Fork Water Supply Extension: Phase II Water Project
- Subsurface explorations, subsidence monitoring, review of a coal reserve analysis, site plans, preblast/presubsidence surveys, hydrologic analyses, preparation of mining permits, and design and permitting of coal slurry impoundments for coal mining companies in West Virginia, Virginia, Kentucky, Ohio, and Maryland.
- Peabody Coal Company
  - Eastern Associated Coal Company
  - Southern Ohio Coal Company
  - Island Creek Corporation
  - Massey Coal Services
  - Appalachian Mining, Inc.
  - Oneida Coal Company
  - Old Ben Coal Company
  - Mettiki Coal Company
  - Shafer Brothers Coal Co.
  - LP Minerals
- Management of fly ash utilization permits for various coal companies:
- Rawl Sales, Inc.
  - Elk Run Coal Company
  - Appalachian Mining, Inc.
  - Peerless Eagle Coal Company
- Managed subsurface investigation, foundation design, and development of mine stabilization program for NASA’s Independent Verification and Validation Center in Fairmont, West Virginia.
- Monongahela Power Company – Development of fly ash flowable fill specification for submittal to WV Division of Highways in Fairmont, West Virginia.
- Computer modeling of groundwater movement of contaminants resulting from underground coal gasification.
- NPDES Industrial/Municipal Permitting**
- Completed National Pollutant Discharge Elimination System (NPDES) renewal permitting and associated agency negotiations for several facilities.

Plasma Processing Corporation – Management of numerous projects in Ravenswood, West Virginia including:

- Subsurface exploration and preparation of soils report
- NPDES Permit
- Development of sampling program for Plasma to follow in obtaining samples for NPDES Stormwater Analyses
- Development of hazardous waste operations manual
- Acquisition of WV Air Pollution Commission permits
- Environmental audit of facility operations

#### Hydrology and Hydraulics

City of Charleston – Hydrologic and hydraulic analyses of South Ruffner Watershed. Project analyzed various storm events and presented conceptual recommendations to reduce effects of these storms.

U.S. Army Corps of Engineers, Jacksonville District – Determination of watershed areas along the Suwannee River Basin.

#### Groundwater

Dilley's Mill – Principal-in-Charge for review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards. Design of sewage collection system and synthetic lined sewage treatment lagoon including permitting.

Groundwater sampling programs:

- Herr's Island – Urban Redevelopment Authority of Pittsburgh
- Robertshaw Controls in New Stanton, PA
- New Castle Power Station
- Pennsylvania Power Company
- Portsmouth Power Station
- Virginia Electric and Power Company
- Rhone Poulenc Ag Company – Institute, WV

Management of pump tests:

- Peabody Coal Company – Bim, WV
- Southern Ohio Coal Company – Meigs County, OH
- Rhone-Poulenc Ag Company – Institute, WV

Rhone Poulenc Ag Company – Development of specification manual for conducting soil and groundwater sampling programs. Manual detailed decontamination methods and proper handling/disposal methods in Institute, West Virginia.

#### Air Pollution/Air Services

Principal-in-Charge for internal and external methane gas monitoring at nursing home facility in Boone County, West Virginia.

Urban Redevelopment Authority of Pittsburgh – Preliminary and detailed air pollution modeling for Pittsburgh's convention center complex and for the Washington Heights development.

Eastern Associated Coal Corporation – Management of certified emission statements for 11 coal preparation plants and air emission inventories for 8 coal preparation plants for submittal to the West Virginia Office of Air Quality.

Nicholson Construction Company – Operation permit from West Virginia Air Pollution Control Commission for cement/grout portable batch plant for mine subsidence control project in Follansbee, West Virginia.

#### Stream/Wetland Delineation, Permitting and Mitigation

Columbia Gas Transmission Corporation – Management of stream stabilization and restoration plan for segment of East Fork of Queer Creek in Hocking County, Ohio.

#### Environmental Assessments/Impact Statements

Management of numerous environmental assessments for property transactions:

- Arch Coal – Multiple WV Tracts ESA (60,500 acres)
- Massey Coal Services – Red Cedar Surface Mine (850 acres)
- Duke Energy – Chicopee Environmental Audit (6,000 acres)

- Pittston Coal Management Group – Phase I ESA (6,000 acres)
- Massey Coal Co. – Hampton Site, Spruce Laurel (130 acres)
- Eastern Associated/Peabody Coal – Phase I ESA (1,035 acres)
- Eastern Associated Coal – Environmental Due Diligence for Active and Closed Operations in KY and WV (100,000 acres)
- Peabody Coal – Multi-state Environmental Audit in WY, CO, NM, AZ, Western KY, IN, IL (250,000+ acres)
- Peabody Coal – Environmental Due Diligence for Properties in IL and IN (150,000+ acres)
- AMVEST Mineral Services – Phase I ESA (8,000 acres)
- Peabody Energy Corp. – Phase I ESA on Putnam Property (1,036 acres)
- Arch Coal – Environmental Compliance Audit in KY, WV, and VA (150,000+ acres)
- Massey – Consolidated Coal Co. Holden Complex (5,500 acres)
- Massey – Environmental/Reclamation Liability Assessment for Northland Resources (150 acres)
- Peabody Coal – Phase I ESA for Imperial Coal and Turner Properties (5,400 acres)
- Peabody Group – Environmental/Reclamation Liabilities for Kanawha Eagle, LLC Permits in Boone and Kanawha Counties, WV (350 acres)

Principal-in-charge for the Coalfields Industrial Site Survey performed for the West Virginia Development Office. Study identified and evaluated more than 1,000 former and current mining sites for use as industrial sites. McDowell County was one of six included in the study. The study considered accessibility, utility status and distance of required extensions, topography, site size, etc.

West Virginia Division of Highways – Coordination of Environmental Impact Statement for Route 19 upgrade from Summersville to Interstate 79 in Braxton County and New River Parkway from Sandstone Falls on I-64 to near Athens on I-77.



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come, Greeting

Know Ye That The State Board of Registration for Professional Engineers, of the State of West Virginia, reposing special confidence in the Intelligence, Integrity, and Discretion of

Dana L. Burns

DOES, IN PURSUANCE OF AUTHORITY VESTED IN IT

by law, hereby certify that he, having submitted satisfactory evidence of his ability and experience, is a

**REGISTERED PROFESSIONAL ENGINEER**

Registration Number [REDACTED]

To Hold, and use, such title, in the practice of his profession, subject to the conditions prescribed by law.



Given under the hand and the Seal of the Board at the Capitol in the City of Charleston this 17th day of Sept. in the year of our Lord One Thousand Nine Hundred and Eighty Five and of the State the One Hundred Twenty-Second

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

*[Signature]*  
Secretary

Frank Gaddy

By

Robert O. Scott President

*[Signature]*  
Member

Kenneth H. Means



# TERENCE C. MORAN, P.E.

Senior Engineer



## EDUCATION

- M.S. Civil Engineering, 1989  
West Virginia University
- B.S. Civil Engineering, 1987  
West Virginia University

## EMPLOYMENT HISTORY

- 1999-Present Potesta & Associates, Inc.  
1989-1999 GAI Consultants  
1987-1989 West Virginia University  
1985-1987 West Virginia Division of Highways  
(summers)

## PROFESSIONAL REGISTRATION

Professional Engineer – West Virginia, Virginia

## PROFESSIONAL CERTIFICATION

- Troxler Moisture-Density Gauge
- American Red Cross Standard First Aid and CPR
- OSHA 40-Hour Hazardous Waste Worker Training

## AREAS OF SPECIALIZATION

Water and wastewater engineering and permitting; preparation of studies, design calculations, drawings, technical specifications, and cost estimates; bidding phase services; and construction phase services, including construction administration.

## PROFESSIONAL EXPERIENCE

### Water Lines, Water Storage Tanks, and Water Treatment Plants

Project Manager/Project Engineer for more than 70 water supply projects involving design and, permitting of water treatment facilities, water line extensions, water storage tanks, booster stations, chlorine boosters, pressure reducing valve stations, service connections and providing fire flow demands. Tasks include client/contract management; mapping development; hydraulic design; geotechnical investigations; preparation of drawings, specifications, and cost estimates; and preparation of Bureau of Public Health, Public Lands Corporation, United States Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

- Projects funded by federal, state and private funding including small cities block grant, United States Department of Agriculture, Rural Economic Development Agency, Drinking Water Treatment Revolving Fund (DWTRF), West Virginia Infrastructure and Job Development Council, Congressional Supplemental Appropriations (SAP), Abandoned Mine lands, United States Army Corps of Engineers, Governor's office funding, county commissions and private funding.

West Virginia Bureau for Public Health (Region III and Region VI Planning and Redevelopment Councils) – Project Manager for 5 contracts for source water protection:

- Source water reports for 133 public water systems
- Preparation and presentation of state-wide source water awareness symposiums
- Source water assessment and protection plan reports for 68 public water systems
- Engineering study for contingency planning for public water systems

Town of Ceredo – Project Manager for 20,000 feet of water line replacement, water tanks, telemetry, and booster stations.

Boone County Public Service District – Project Manager for 15+ water supply extension projects in Boone County District from 2004 to present. Included were Preliminary

Engineering Reports (PER), and design bidding and construction phase tasks.

Project Manager for Mill Creek Regional Water Supply Extension Project. Design included 34 miles of waterline, booster stations, tanks, and a water treatment plant. Included design of storm water ditches and culverts, and crossings of a railroad. Approval was obtained from CSX Transportation, WVDOH, PLC, USCOE, and West Virginia Bureau for Public Health. Deliverables included drawings, specifications, and cost estimates.

- West Virginia Division of Environmental Protection
- Logan County Public Service District

West Virginia American Water – Project Manager for construction administration/monitoring for the Poca River Road Waterline Extension Project; Cabell County Waterline Extension Project, Contract No. 7; Spite Road Waterline Extension Project; and Fisher Ridge Waterline Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of record drawings for 100,000+ linear feet of waterline extensions.

City of Philippi – Project Manager for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot waterline extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water – Design of main line pressure reducing valve and vault for the Glenwood Avenue Extension of the Cabell County Waterline Extension Project, Contract No. 6. Work included hydraulic sizing and preparation of drawing.

West Virginia American Water – Design, permitting, bidding and contract documents, and construction phase services for residuals handling facility at largest water treatment plant in West Virginia, including 1,000,000-gallon gravity thickener, sludge pumping stations, two belt filter presses, and a plate settler.

West Virginia Department of Environmental Protection – Project Manager/Project Engineer for design of multiple waterline extension in West Virginia. Included was design of six water storage tanks, five booster stations,

pressure reducing valves, master meters, and telemetry systems. Work included surveying, subsurface explorations, hydraulic design, preparation of drawings, specifications, cost estimates, and permit applications, and assistance with bidding. Representative projects included:

- 10-Mile-South Putnam Water Supply Extension Project in Lincoln and Putnam Counties;
- 5-Mile-Cline Hollow, Younger Drive, Left Hand Fork of Lens Creek, and Emmons-Grippe Water Supply Extension project in Kanawha County;
- 2.5-Mile Godby Branch Water Supply Extension Project in Logan County;
- 20-Mile Cow Creek-Sarah Ann Water Supply Extension project in Logan County;
- 8-Mile Cassity Fork Water Supply Extension project in Randolph County; and
- 10-Mile Olive/Marshville/Catfish Hollow Water Supply Extension project in Harrison County

Tucker County Development Authority – Project Engineer for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate were prepared. Also performed construction administration services.

West Virginia Division of Environmental Protection - Project Engineer for preparation of conceptual design and cost estimate for the Mill Creek – Isom Community (Logan County Public Service District) Water Supply Extension Project.

West Virginia American Water – Evaluation of water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report for the Town of Pineville.

West Virginia Division of Environmental Protection – Project Manager for technical review of the Gauley River Area Waterline Extension proposed by the Gauley River Public Service District and the Heizer/Manilla Creek Waterline Extension proposed by West Virginia American Water. Included hydraulic analysis, evaluation of line size, review of drawings and specifications, and reporting on the evaluation in letter format.

City of Philippi – Relocation of waterlines due to proposed roadway. Relocation included approximately

4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

Short Line Public Service District/Harrison County Planning Commission – Project Manager for feasibility/rates analysis study for the proposed Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project. Included evaluation of six options at multiple loan/grant funding scenarios.

West Virginia American Water – Hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

West Virginia Division of Environmental Protection – Project Manager/Project Engineer for numerous conceptual waterline designs for 20 unserved areas (between 1991 and 2007) in coal mining areas in West Virginia. Included hydraulic evaluation, booster station, and water storage tanks sizing, waterline sizing, and estimation of construction cost. Work completed in Barbour, Boone, Brooke, Fayette, Harrison, Lincoln, Logan, McDowell, Putnam, and Randolph Counties.

West Virginia Division of Environmental Protection – Project Manager for design of booster station upgrade for the Clinton Water Association's Ringgold pump station, including preparation of drawings, specifications, and cost estimate.

West Virginia Department of Energy – Groundwater contamination study for drinking water wells near Cassity, Randolph County, West Virginia, including water supply inventory of over 50 residents, collecting and analyzing well and surface water samples, and researching records to determine the percentage of homes whose water supply had been degraded by acid mine drainage.

Public Utility General – Project Manager for construction administration including preconstruction meetings, shop drawing review, coordination with construction technician team(s), contractor pay application review, public record drawings, and public interface for 15+ water and wastewater utility and/or infrastructure projects including utility line extension and upgrades, construction and modifications of treatment facilities. Clients include municipalities, public service districts, industry, county development authorities and private utilities.

Construction included water and sewer lines, booster stations, tanks, lift stations, vacuum sewer stations, treatment basins, dewatering equipment, clarifiers, chemical fee systems, buildings associated with treatment systems, outfall modifications, and diffusers.

Mingo Logan Coal Company – Project Manager for design, building, and permitting services for potable water system at the new Mountain Laurel Mine in Logan County, West Virginia. Project includes booster station, water storage tank, and 10,000 feet of HDPE pipe.

#### Sewer Lines and WWTPs

Project Manager for more than 30 wastewater projects, including municipal sanitary sewer treatment systems, industrial pretreatment systems, modification of sewer treatment plants, outfall modifications including diffuser installation, and upgrades to municipal collection systems. Also included were completions of studies mandated by the West Virginia Public Service Commission.

- Projects funded by State Revolving Fund (SRF), West Virginia Infrastructure and Jobs Development Council, United States Economic Development Agency and Private Funding sources.

Boone County Public Service District – Preliminary engineering, funding application, and final design for WWTP upgrade. Funding proposed through the Clean Water State Revolving Fund (SRF).

- Mechanical bar screen replacement
- Grit removal system replacement
- Mechanical aerator replacement
- Addition of third clarifier
- RAS pump addition
- UV unit replacement
- Belt filter press replacement
- Wash water system upgrade
- Other upgrades

Town of Ceredo – Perform design, bidding, and construction phase services for upgrade of existing sanitary sewer collection system, including upgrades to gravity and force main lines, and a lift station. Funding was thru the Clean Water State Revolving Fund (SRF).

Town of Ceredo – Evaluation of remaining capacity of grinder pump system.

Salt Rock Sewer Public Service District Master Service Agreement:

- Specification for WWTP wash line
- Preparation of NPDES modification for sludge disposal from a publicly owned treatment works
- Preparation of odor control study mandated by the West Virginia Public Service Commission (WVPSC)
- Preparation of cost estimates for requests for service
- Evaluation of lift station overflows

Town of Moorefield – Study on costs of \$30,000,000 sanitary sewer system (plant and collection system).

South Putnam Public Service District – Project Engineer for review of sewage disposal options for large county-wide sanitary sewer provider. Work included interviews with various publicly-owned treatment works (POTWs), interviews with regulatory agencies, review of regulatory agency files, development of costs, and preparation of a report summarizing findings, including recommendations for future treatment of sewage in West Virginia.

West Virginia American Water – Assessment of City of Oak Hill and City of White Sulphur Springs publicly owned treatment works (POTW) to recommend improvements in operation and maintenance.

Town of Bradshaw – Design of collection system for two new schools, and design, permitting, bidding, and certain construction phase services for equalization basin/lift station, and upgrades to vacuum station and buffer tanks.

Tucker County Development Authority – Design, permitting, bidding, and construction phase services for gravity collection system, force main, and lift station for industrial park.

Boone County Public Service District – Preliminary engineering report for collection system and sequencing bench reactor (SBR) wastewater treatment plant for the Town of Nellus.

MDG Homes – Preparation of hydraulic calculations and record drawings for variable grade effluent sewer system at large development in eastern panhandle.

Client Confidential – Coordination of treatability study for industrial treatment plant.

Design of numerous sanitary sewer extensions associated with private developers, including design of gravity and force main lines and lift stations, including approvals by local public utilities such as Jefferson Utilities, and approvals by West Virginia Department of Environmental Protection.

Pocahontas County Public Service District/Wastewater Management – Study on replacement of Hawthorn Loop Sanitary Sewer System.

Stephoe & Johnson/York Bronze Company – Design of batch chemical pretreatment system for bronze facility in northern West Virginia. Included were sizing of units and building to house treatment system, and preparation of drawings, specifications, and cost estimate.

Columbia Gas Transmission Corporation:

- Design of sump/pump and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Files Creek Compressor Station.
- Design of an oil/water separator, sump/pump, and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Cleveland Compressor Station.
- Design of a waste water treatment plant for compliance with a compressor station's NPDES permit. Included was preparation of facilities preliminary and final engineering plans, selection of treatment (chemical precipitation, activated carbon and filtration), and detailed drawings and specifications.
- Evaluation of effectiveness of existing ozonator/activated carbon wastewater treatment system at a natural gas compressor station. Evaluation included 30-day composite sampling plan of wastewater, compilation of results, comparison with treatment system capacity, and issuance of findings in a report. Also included was issuance of a report summarizing technical feasibility and costs for alternate treatment options.
- Project Manager for conceptual design of oil/water separator at the Crawford Compressor Station in Ohio.

Tetra Technology – Preparation of operation and maintenance manual for a waste water treatment plant at the Yak Tunnel Superfund site in Leadville, Colorado.

Project Engineer for design and permitting of sanitary waste water treatment system for coal mines in Logan and Raleigh Counties, West Virginia. Included was preparation of drawings and specifications.

- Eastern Associated Coal Corp.
- Rum Creek Coal Sales

West Virginia Department of Environmental Protection, LCAP – Design of 1.2 miles of pressure and gravity sewer line at the Jackson County Landfill to convey landfill leachate to an existing sanitary collection system. Included were provisions for servicing residences along the pathway, hydraulic sizing, and preparation of drawings, specifications and a cost estimate.

West Virginia University – Research assistant for developing an interactive optimal sewer design program SODES.

Evaluation of options for future treatment of wastewater at a chemical industrial facility along the Ohio River in West Virginia. Included were evaluation of options, estimation of capital and O&M costs, and preparation of a report to a law firm in West Virginia.

### Mining

Estimation of AMD treatability and treatment costs at multiple mining sites in West Virginia as part of preacquisition site assessments, including records review of 303(d) TMDL list.

Eastern Associated Coal Corporation – Project Manager for oversight of water supply inventory of structures over a 3200-acre SMCRA permit expansion (during 1994-1995) of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia. Included were negotiations with the West Virginia Division of Environmental Protection (WVDEP) of the locations of permanent surface and groundwater monitoring points.

Eastern Associated Coal Corporation – Project Manager for design of Guyses Run AMD facility. Design included a 3,000,000-gallon pond, 180 feet of relocated stream, and stream crossings. Included was regulatory approval from USCOE, PLC, and WVDEP. Deliverables included drawings, specifications, and a cost estimate.

Old Ben Coal Company – Project Engineer for preparation of PHC statement for SMCRA permit

application for the Nile Stone Slurry Impoundment in Mingo County, West Virginia.

Pre-mining, pre-blast surveys, including field investigations and report preparation, for various coal companies in Ohio, Virginia and West Virginia.

- Elk Run Coal Company
- Island Creek Coal Corporation
- Oneida Coal Company
- Southern Ohio Coal Company

Eastern Associated Coal Corporation – Project Manager for preparation for SMCRA Incidental Boundary Revision and NPDES permit modification applications for addition of 3.7-million-gallon mine drainage treatment pond at Martinka Coal Company's Guyses Run AMD facility.

Southern Ohio Coal Company – Project Manager for water supply interviews with occupants of 70 structures in Gallia, Meigs, and Vinton Counties, Ohio.

Project Engineer for grouting project to abate acid mine drainage at the Omega Mine Complex project in Monongalia County, West Virginia. Project involved collaboration of private/public agencies to provide resources for approximate \$2,500,000 project.

Meadow River Coal Company – Project Manager for water supply inventory of 37 structures over a deep mine in Fayette County, West Virginia, and preparation of subsequent SMCRA permit revision to incorporate water supply inventory to existing permit.

Eastern Associated Coal Corporation – Project Engineer for identification of permanent groundwater and surface water monitoring points including negotiation of locations with the West Virginia Division of Environmental Protection (WVDEP) for 1,750-acre and 3,200-acre SMCRA permit expansions of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia.

Rum Creek Coal Sales, Inc. – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for below drainage deep mine in Logan County, West Virginia.

Eastern Associated Coal Corporation – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for 5000+ acre Montcoal Eagle longwall deep mine,

including establishment of permanent surface and ground water monitoring points.

Ranger Fuel Corporation – Project Manager for SMCRA Incidental Boundary Revision (IBR) for new face-up and portal at the Clinton No. 4 mine in Boone County, West Virginia.

Southern Ohio Coal Company – Completion of drawdown field tests and estimation of well yields for over 12 wells.

West Virginia Division of Environmental Protection – Project Manager for evaluation and design of passive AMD treatment system at the Owings Mine Complex site in Harrison County, West Virginia. Included were detailed sampling plan, issuance of pre-construction water quality report, and preparation of construction drawings, specifications, and cost estimate.

West Virginia Division of Environmental Protection – Project Manager for Harris AMD reclamation project. Design included 400 feet of ditch, one culvert, manholes, 500 feet of subsurface drains, and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate.

Southern Ohio Coal Company – Project Manager for preparation of SMCRA permit application for the remaining life of the Meigs No. 2 and No. 31 mines in Ohio, including inventory of water supplies of over 200 residents.

#### Abandoned Mine Lands

Project Manager/Project Engineer for the design and development of reclamation plans and feasibility studies for more than 60 abandoned mine land projects for the WVDEP, Office of Abandoned Mine Lands and Reclamation, and the Commonwealth of Virginia, Abandoned Mine Lands Program. Tasks included:

- Client/contract management
- Mapping development
- Hydrologic evaluations
- Reclamation design
- Subsidence evaluation and abatement
- AMD evaluation and abatement
- Hydraulic design
- Geotechnical investigations

- Preparation of drawings, specifications, and cost estimates
- Preparation of Public Lands Corporation, U.S. Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

West Virginia Division of Environmental Protection – Project Manager for Left Hand Fork reclamation project. Design included 1,600 feet of storm water ditch, 1,900 feet of riprap toe protection, culverts, relocation of a road, and regrading of refuse. Regulatory approval was obtained. Deliverables included drawings, specifications, and a cost estimate

West Virginia Division of Environmental Protection – Project Manager for reclamation design for the Owings Mine Complex site in Harrison County, West Virginia. Design included 8,300 feet of storm water ditch (including relocation of stream), 1,000 feet of culvert/subsurface drains, manholes, and a box culvert in addition to reclamation of refuse piles and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate. Included was interaction with the WVDOH, and obtainment of USCOE approval for relocation of a stream.

West Virginia Division of Environmental Protection – Project Manager for the Majesty Mine Complex project. Design included storm water ditches, stream relocations, culverts, and regrading of refuse piles and sealing of mine portals. Regulatory approval from the WVDOH and USCOE were obtained. Deliverables included drawings, specifications, and a cost estimate.

West Virginia Department of Energy, Abandoned Mine Lands – Stabilization program for mine subsidence at the Doug Gray Site in Fairmont, West Virginia, including a subsurface investigation, development of an injection plan, preparation of construction quantities, and a pre-bid meeting.

West Virginia Division of Environmental Protection – Project Manager for stabilization program for mine subsidence at the Glen Morgan (Lilly) site in Raleigh County, West Virginia, and the Mainella Site in Marion County, West Virginia. Included were development of injection plan, construction drawings and specifications, and cost estimate.

Assisted on St. John's Road Subsidence Project, Brooke County, West Virginia. Subsurface investigation and

development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Project Engineer for Holden (Padgett) Subsidence Project, Whitman Junction, West Virginia. The project included subsurface investigation to determine extent of mine workings, development of stabilization plan, including drainage channels/pipes and mine seals. Construction documents were prepared, and participation in pre-bid and pre-construction meetings was completed.

Assisted on Jonben (Haga) Subsidence Project, Jonben, West Virginia. Subsidence control on an emergency basis including sinkhole backfilling and drainage control. Project included drilling to determine the extent of mining and subsidence, field surveying to develop topographic mapping and development of a backfilling and drainage plan.

West Virginia Division of Environmental Protection – Project Manager for 380 residence water supply inventory (including sampling) as part of the Phase II Water feasibility study for the New Haven Study Area in Fayette County, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 600 resident water supply inventory (including sampling) as part of the Phase II Water feasibility study for the Mill Creek Study Area in Boone, Lincoln, and Logan Counties, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 200+ residence water supply inventory as part of the Phase II water feasibility study for the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia.

West Virginia Department of Energy – Abandoned Mine Lands – Project Manager for Phase II groundwater contamination study for drinking water wells in the Crooked Creek, Cow Creek, and Upper Rum Creek communities in Logan County, West Virginia. Work included water supply inventories of 250+ residences, collection and analyzing surface and well water samples, researching water quality records, designing and costing remedial measures, and calculating the percent of wells that had been degraded by mining activity.

### Environmental Assessments/Impact Statements

Environmental site assessments, including record searches and field investigations, for numerous sites in West Virginia, Virginia, Ohio, and North Carolina. Specialization in large acre tracts, typically ranging from 1,000 acres to 65,000 acres, including coal properties:

- Dominion Resources
- Goldman Associates
- DiMucci Development
- FDIC
- Rhone-Poulenc Ag Company
- GSA
- General Electric
- West Virginia University
- Peabody Coal Company
- Massey Coal Services
- Kanawha County Solid Waste Authority
- Capel, Incorporated
- Plasma Processing Corporation
- Sun Bank South Florida
- Vaughan Railroad Company
- Foodland
- Jackson & Kelly
- Spilman, Thomas and Battle

University of North Carolina – Preparation of an Environmental Assessment showing no significant environmental impact for a proposed 1,400-foot television tower near Chapel Hill, North Carolina.

West Virginia Division of Highways – Project Engineer for completion of hazardous waste portion of environmental assessment for 22 miles of proposed upgrade to US 19, north of Summersville, West Virginia. Included site reconnaissance, interviews, and records search to identify potential hazardous waste sites along path of proposed upgrade.

### Storage Tanks

Marshall University – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a new football stadium.

Project Engineer for sampling associated with an underground storage tank removal at a site in Harrison County, West Virginia.

West Virginia Division of Environmental Protection – Project Engineer for sampling associated with two abandoned underground storage tanks at a former mine site in Harrison County, West Virginia.

Goldman Associates – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a commercial establishment.

Contamination assessment for a national coal company for leaking UST at a coal facility in southern West Virginia, including multiple aquifer well installations, preparation of corrective action plan, and subsequent installation of air sparging system and oil/water separator.

West Virginia Department of Natural Resources – Contamination assessment for leaking underground storage tanks at the Rite Way Packette site in Jesse, West Virginia.

Project Engineer for excavation and off-site disposal of contaminated soil associated with a UST gasoline leak at a coal preparation facility in Kentucky.

Plasma Processing Corporation – Preparation of an underground injection control (UIC) permit application for a secondary aluminum facility.

#### **Hazardous Waste/RCRA/Corrective Action**

Project Engineer for PCB sampling at numerous mine sites in McDowell, Nicholas, Raleigh, and Wyoming Counties, West Virginia.

Project Engineer for excavation and off-site disposal of a diesel fuel spill on a slurry impoundment in Kentucky.

Regional Solid Waste Disposal Company – Project Engineer for guidance of contamination assessment and remediation activities with a fuel spill at a waste transfer facility in South Carolina.

Island Creek Corporation – Contamination assessment for petroleum products, battery acid, and PCBs at a coal preparation plant in Kentucky.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

#### **Remediation**

Project Engineer for remediation activities for a diesel fuel spill at a tank farm at a coal preparation plant in Kentucky.

Project Engineer for three PCB site remediations for a national coal company by excavation and off-site disposal at a coal preparation plant in Kentucky.

Vandalia Mining Corporation – Project Engineer for a contamination assessment and remedial activities a hydraulic fuel spill in Clay County, West Virginia.

#### **Landfills/Solid Waste/Waste Disposal**

Project Manager/Engineer for more than 60 private and public solid waste disposal facility projects involving evaluation, design, permitting and construction of disposal cells, closures, and leachate management facilities. Tasks included:

- Client/contract management
- Mapping and development
- Hydrology evaluation and hydraulic design of stormwater structures
- Geotechnical investigations
- Preparation of drawings, specifications, and cost estimates
- Preparation of solid waste and NPDES permit applications
- Construction observation/administration tasks such as full-time observation of construction, review of contractor submittals, review of contractor pay requests, and preparation of record drawings

Project Manager/Project Engineer for study, design, bidding, and construction phase services for 10+ solid waste disposal projects, including lined cell development and closures.

S&S Grading, Inc.:

- Renegotiation of a municipal waste water treatment plant NPDES permit at Grant Union Public Service District, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project Engineer for preparation of revised Part 2 permit application for S&S Landfill in Harrison County, West Virginia. Work included design of



landfill facilities including storm water structures, drawings, permit application text, NPDES permit application, and negotiations with the WVDEP until permit issuance.

- Project Manager for preparation of construction documents for Phase 1, 2, 2B and 3 expansions of the S&S Landfill in Harrison County, West Virginia. Work included design of liner system and storm water drainage structures, drawings, specifications, quantities, assistance in bidding and contractor selection.
- Project Manager for construction monitoring of the Phase 1, 2, 2B and 3 expansions of S&S Landfill in Harrison County, West Virginia. Work included regular meetings with contractor, preparation of weekly progress reports, preparation of liner system certifications, and submittal to the WVDEP of final certification. Included was construction monitoring of storm water drainage structures.
- Project Manager for preparation of drawings and specification for closure of the old S&S Landfill in Harrison County, West Virginia. Work also included designing proposed grade, storm water structures, landfill cap features, and preparation of quantities.
- Design of a landfill leachate pump station, force main, and primary and secondary containment tanks, including preparation of drawings, technical specifications, quantities, and a cost estimate.
- Renegotiation of a municipal waste water treatment plant NPDES permit, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project manager for design of valve vault for leachate handling facilities at the S&S Landfill in Harrison County, West Virginia.
- Project manager for construction of additional sedimentation pond at the S&S Landfill in Harrison County, West Virginia.
- Project engineer for permit modifications to allow alternate landfill liner systems at the S&S Landfill in Harrison County, West Virginia.

West Virginia Solid Waste Management Board – Technical review of proposed batch treatment plant/sludge handling equipment for treating landfill leachate.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

West Virginia Division of Environmental Protection, LCAP – Assistance with QA/QC review for construction drawings and specifications for the Central Landfill project in Braxton County, West Virginia and the Mingo County Landfill project in Mingo County, West Virginia.

West Virginia Division of Environmental Protection, LCAP – Preparation of construction drawings and specifications for the leachate collection and storage facilities for the closure of the Fleming Landfill in Kanawha County, West Virginia.

West Virginia Solid Waste Management Board – Preparation of an NPDES permit application for a municipal solid waste landfill near Morgantown, West Virginia.

Project manager for preparation of annual cross sections depicting liner elevations, existing elevations, and cap elevations for S&S Landfill in Harrison County, West Virginia and the Carolina Grading, Inc. landfill in South Carolina from 1995 to 1999. Work also included estimating volume of waste disposed, and volume of air space remaining.

- S&S Grading, Inc.
- Carolina Grading, Inc.

Carolina Grading, Inc. – Project manager for redesign of landfill subbase elevations to allow increased airspace at Carolina Grading landfill in South Carolina.

Eastern Environmental Services, Inc. – Project manager for estimation of remaining airspace volume at the Bayside of Marion Landfill in Florida and at a landfill in Maryland.

West Virginia Solid Waste Management Board – Project engineer for study evaluating seven alternatives for future operation of the Monongalia County Landfill.

#### *Air Pollution/Air Services*

Plasma Processing Corporation – Preparation of air pollution control permit applications, permit modifications, and compliance testing for secondary aluminum facilities in West Virginia and Tennessee.

Preparation of an air pollution control permit (construction and operating) applications for loadouts, coal preparation plants, and associated areas of coal

preparation plants including coal handling equipment, refuse conveyor, stockpiles, rotary breaker and silos.

- Peabody Coal Company
- Meadow River Coal Company

**NPDES Industrial/Municipal Permitting**

Project Manager for the acquisition of NPDES permits for construction activities for multiple civil engineering projects, including sanitary sewer collection systems and water supply extensions.

Project Manager for compilation of storm water sampling plans/kits for NPDES permit applications:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparation of Stormwater Pollution Prevention Plans (SWPPs) required by NPDES permits for natural gas compressor stations and secondary aluminum facilities:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparations of NPDES permit applications for industrial sites, and regulatory liaison associated with the applications:

- Municipal and industrial waste landfills – West Virginia Solid Waste Management Board, S & S Grading, Inc., and Rhone Poulenc, AG
- Water treatment plant – West Virginia Department of Environmental Protection/Logan County Public Service District, and West Virginia-American Water Company
- Secondary aluminum facility – Plasma Processing Corporation

Design of outfall modifications, including diffuser systems on outfalls. Included were hydraulic sizing and preparation of drawings, specifications and cost estimates. Some projects included bidding and construction phase services.

- City of South Charleston WWTP
- Allegheny Energy Services
- Cytec Industries Inc.
- Consol Energy, Inc.
- Akzo Nobel Chemicals

- Kureha, Inc.
- CNX Gas
- Patriot Coal
- Bayer Crop Science
- Momentive, LLC
- First Energy, Inc.

Served on West Virginia Manufacturer's Association Committee to prepare guidance document for preparing Groundwater Protection Plans (GPP's) for facilities regulated by NPDES permits.

Columbia Gas Transmission Corporation:

- Project Manager for preparation of template Groundwater Protection Plan to cover 50+ natural gas industry facilities in West Virginia. Included was preparation of hard copy and digital format version for use by facility personnel.
- Preparation of comments on draft NPDES permits including negotiations on revising permit conditions for multiple natural gas compressor stations in West Virginia.
- Preparation of report evaluating and recommending disposal options for water at Crawford Compressor Station in Ohio, including subsequent negotiations for direct discharge of water without NPDES permit.
- Project Manager for preparation of State of New York SPDES permit application for the Greenwood Storage Field.
- Preparation of default mixing zone model to allow for proposed increase in iron NPDES limits at the Cobb Compressor Station in Kanawha County, West Virginia.

**Roadway Design**

WVDEP and Logan County Public Service District – Project Manager for the design and layout of the relocated West Virginia County Route 12 (including approval from WVDOH) as part of the water treatment plant site of the Mill Creek Regional Water Supply Extension in Logan County, West Virginia. The design included roadway alignment (including vertical and horizontal curvature, right-of-way, and horizontal clearance with respect to structures), surface and subsurface drainage (including hydraulic calculations and channel and culvert sizing), fill embankment design, cut slope layout, and specifications for pavement, gravel, guardrail, drop inlets, and drainage structures. In addition, the project included compiling

technical specifications including WVDOH standard specifications.

Martinka Coal Company – Project Manager for design of an access road associated with a new 3,700,000-gallon pond at a deep mine in northern West Virginia. Project included subsurface investigation, hydrology calculations, channel and culvert design, cut/fill balance, low water crossing design, embankment design, and selection of road surfacing material. Deliverables included specifications, including references to WVDOH specifications. USCOE and Public Lands Corporation permits were obtained.

S&S Grading, Inc. – Project Manager for design of an access road associated with a closure cap on an old landfill in Harrison County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, design of subsurface drains under the road, cut/fill balance, embankment design, and selection of road surfacing material. Deliverables included drawings and technical specifications, including references to WVDOH specifications. Roadway quantities were estimated.

Ranger Fuel Corporation – Design of an access road for a new deep mine portal at the Clinton No. 4 Mine in Boone County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, cut/fill balance, and selection of road surfacing material. Deliverables included drawings and specifications. Regulatory approval was obtained.

West Virginia Division of Environmental Protection – Project Manager for the design of site drainage along WV Route 16/2 (including channels and culverts), reclamation of two landslide areas along WV Route 16/2, and a soldier (pile and lagging) wall to support a slip in WV Route 16/2. In addition, responsibilities including compiling technical specifications, including WVDOH standard specifications and communications with WVDOH for design approval.

The State of West Virginia

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come Greeting.

Know Ye that The State Board of Registration for Professional Engineers, of the State of West Virginia, having special confidence in the Intelligence Integrity and Discretion of

Terence C. Moran

Does, in PURSUANCE OF AUTHORITY VESTED IN IT by law, hereby certify that he having submitted satisfactory evidence of his ability and experience, is a

REGISTERED PROFESSIONAL ENGINEER

Registration Number [REDACTED]

to hold and use such title in the practice of his profession, subject to the conditions prescribed by law.



Given under the hand and the seal of the Board at the Capitol in the City of Charleston this 15th day of Jan on the year of our Lord One Thousand Nine Hundred and twenty Six and of the State the One Hundred Thirty Second

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

Handwritten signatures and names: W. B. ... Secretary, ... President, ...

# DANIEL J. MILLER, PH.D.

Senior Scientist



## EDUCATION

- Ph.D. Resource Management, 2008  
West Virginia University
- M.A. Aquaculture, 1987  
Auburn University
- B.S. Zoology/Fisheries, 1981  
University of Wisconsin

## EMPLOYMENT HISTORY

- 2011-Present Potesta & Associates, Inc.  
1999-2011 West Virginia University  
1994-Present Miller Consulting Associates, Inc.  
1987-1993 Shrimp Farm Manager, Ecuador  
1986 Researcher, US Virgin Islands  
1982 Israeli Oceanographic & Limnological  
Research Company  
1978-1981 Great Lakes Research Facility

## LANGUAGES (FLUENT)

English, Spanish

## PROFESSIONAL AFFILIATIONS

- Northeast Regional Aquaculture Center: Chair of the Technical Advisory Committee
- Rotary International

## ABSTRACTS, PRESENTATIONS, AND MANUSCRIPTS

Miller, D. and D'Souza, G. (2009) Plastic Tanks Compare Well to Concrete Tanks in Trout Trial. *Global Aquaculture Advocate*, Vol. 12, Issue 1: 53-54

Miller, D., and D'Souza, G. (2008) Economic Analysis of an Alternative Raceway System. Northeast Regional Aquaculture Center Website: <http://nrac.umd.edu/ProjectReports.cfm> Page 17

Miller, D. (2008) Using Aquaculture as a Post-Mining Land Use in West Virginia. *Journal of International Mine Water Association*. 27(2): 122-126

Borisova, T., G. D'Souza, D. Miller, & W. Labys. (2007) Remaining Competitive at the Regional level: Developing a Local Aquaculture Industry. *J. Aquaculture Econ & Mgmt* 11: 73-98.

2012: Sino-American Technology and Engineering Conference, Anhui Province, China

2010: Workshop Presenter on Recirculating Aquaculture Systems, Stellenbosch, South Africa

2009: Invited Speaker: China University of Mining and Technology - Post-Mining Land Uses, Beijing Campus

2008: American Fisheries Society; World Aquaculture Society; U.S. Trout Farmers Association

2007: VA/WV Water Research Symposium; WV Aquaculture Forum

2006: World Aquaculture Society

## PATENTS AND GRANTS

- Patent awarded to WVU for Dissertation Research (D. Miller-Inventor) 2010
- Provisional Patent (Inventor) Granted to WVU Followed by Non-Provisional Patent Application in 2008
- Grants: U.S.D.A.: \$74,000 - Mine Site Aquaculture Development
- U.S. Department of Commerce: Water Treatment Demonstration Project at Mine Discharge Site
- McDowell County Economic Development Authority: Mine Site Demonstration Project

- Eastern Associated – Tygart River Mine: Recreational Use of the Guyses Run Site
- Eastern Associated – Robin Hood #9: Flow Study and Fish Demonstration Project
- WV Division of Tourism: Fee Fishing Brochure Development and Distribution (2003, 2004, 2006)

## **AREAS OF SPECIALIZATION**

Business and project development; water resource management and evaluation; recirculating Aquaculture System (RAS) design, training, and management; aquatic biosecurity procedures; pond management and design; and project management.

Environmental services, including discharge monitoring reports; water quality analysis; stream bioassessment surveys and reports; stream characterization; system design and management; groundwater inventory; and NPDES permit compliance support for industry. Aquaponic research producing tilapia, tomatoes, and lettuce.

Development of alternative post-mining land uses utilizing aquaculture. Identification of fish production sites.

## **PROFESSIONAL EXPERIENCE**

### **Mining**

Development of alternative post-mining land uses utilizing aquaculture.

Conducted a ground water inventory for a 6,000-acre underground mine in southern PA.

Eastern Associated Coal Corp – Envisioned and supervised the transformation and development of acid mine treatment plant into Marion County's Guyses Run Fishing Park.

Design and development of a Boone County trout production facility, saving the mining company over \$450,000 in reclamation costs.

Peoples Republic of China: Sino-American Technology and Engineering Conference (SATEC) – Invited expert to advise the Central Government on post-mining land uses in Anhui Province. Speaker in Anhui Province presenting research on mine reclamation.

### **Biological Studies and Sampling**

Identification of fish production sites.

Conducted monitoring and sampling for a 3,500 gpm reverse osmosis water treatment plant during a 72-hour quality performance test.

Set-up and oversight of recirculating fish/hydroponic system for class demonstrations.

US Agency for International Development – Consultant in South Africa for evaluating recirculating aquaculture potential in the Cape Region. Presented research and conducted training at recirculating aquaculture conference at Stellenbosch University.

Atlantic Sapphire – Researched 12 sites in three states for site selection for a recirculating Atlantic salmon production farm.

Red Lake Tribal Hatchery – Planning, design, set-up, and training of personnel for a yellow perch recirculating grow-out facility at the Red Lake Tribal Hatchery in Red Lake, Minnesota. Responsibilities included assembly, training of personnel and stocking the system with yellow perch.

As Shrimp Farm Manager at Deli Shrimp Company in Guayaquil, Ecuador:

- Managed a group of companies which employed 200 people that exported shrimp and redfish to the U.S. and Europe.
- Directed operations for 1,500 acres of marine shrimp pond production and 500 cubic meters of larval production.
- Approved expenses and directed research studies on shrimp and redfish at laboratory and farm levels.
- Research was continuous yet secondary to production goals.
- Disease diagnosis was implemented and used as an integral part of management as the quality of the water in the Guayas estuary deteriorated.
- Programmed stocking, transfer, harvest, and exportation of shrimp.
- Exceeded 2 million pounds of production in final year.

ICASUR S.A., *Aquacultura Fonseca S.A.*, and CODISUR S.A. Annual Visits – Providing technical assistance to three marine shrimp farms and a tilapia farm in Honduras.

Great Lakes Water Institute (University of WI) – Design, set-up and training of personnel for a 10,000-gallon recirculating research unit for the University of Wisconsin-Milwaukee.

University of Wisconsin – Provided a report on hatchery design and expansion at House of Correction in Franklin, Wisconsin. Included hydrological survey, water reuse options, and pond and tank design. Biological survey of existing pond with recommendations for improving water quality. The hatchery was constructed with minor changes from the initial report.

High Tech Fisheries:

- Directed the management and marketing of a 95 percent recirculating freshwater ornamental fish hatchery.
- Spawning research on the Neon Tetra (*Paracheirodo innesi*).
- Determined the reason for poor spawning results, allowing for domestic production to commence.

As Mariculture Laboratory Assistant for Israeli Oceanographic and Limnological Research Co. in Elat, Israel:

- Assisted in the construction of sea rafts, cages, and larval tanks.
- Bioassayed sea bream and mullet gonads for hormone/reproduction experiments.
- Feeding and harvesting of sea bream in sea cages and mullet in experimental ponds.
- Conducted a biological survey of an underwater reef area.

**Research**

Instructor of undergraduate and graduate level courses at West Virginia University.

Development of distance education course work.

Supervised research and trained West Virginia University students at the Dogwood Lake Aquaculture Research facility.

Conducting demonstration projects and research to improve sustainability for fish farmers and disseminating the information to producers.

**GIS**

Creating and managing GIS databases and maps for presenting and analyzing information.

# WEST VIRGINIA UNIVERSITY



## DAVIS COLLEGE OF AGRICULTURE, FORESTRY AND CONSUMER SCIENCES

*Know all persons by these presents  
that the West Virginia University Board of Governors  
upon the recommendation of the faculty  
has conferred upon*

**DANIEL JOSEPH MILLER**

*The Degree of*

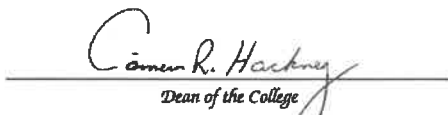
**DOCTOR OF PHILOSOPHY**


*Agricultural and Extension Education*

*With all the rights, honors, and privileges thereunto  
appertaining. Witness the seal of the university and  
the signatures of its duly authorized officers hereunto  
affixed this eighteenth day of May,  
two thousand eight.*

  
President of the University

  
Chair, West Virginia University  
Board of Governors

  
Dean of the College

  
Provost and Vice President  
for Academic Affairs and Research



# CHRISTOPHER A. GROSE, L.R.S.

Senior Engineering Associate



## EDUCATION

- M.S. Geological Engineering, 1990  
University of Missouri-Rolla
- B.S. Civil Engineering, 1988  
West Virginia Institute of Technology

## EMPLOYMENT HISTORY

- 1997-Present Potesta & Associates, Inc.  
1994-1997 Terradon Corporation  
1990-1994 GAI Consultants, Inc.  
1989-1990 University of Missouri-Rolla  
1989 Triad Engineering Consultants  
(summer)  
1988 West Virginia Institute of Technology  
1983-1988 Clint Bryan & Associates Architects  
(summers)

## PROFESSIONAL REGISTRATIONS

Licensed Remediation Specialist – West Virginia

## PROFESSIONAL CERTIFICATIONS

- Hazardous Waste Site Operations and Superfund Worker Protection Training
- American Red Cross Standard First Aid and CPR
- Troxler Moisture-Density Gauge

## PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Association of Engineering Geologists
- Society of America Military Engineers

## AREAS OF SPECIALIZATION

Geological/Geotechnical engineering related to subsurface exploration studies, soil and rock slope design, landslide causation studies, foundation system design, surface/subsurface hydrogeology, ground subsidence, contaminant transport and groundwater flow modeling. Planning, design, and permitting of natural gas production well pads and access roads. Geological study of hazardous waste remediation sites, CERCLA/SARA, RI, and FS report compilation, geological and geotechnical aspects of siting and design of municipal and industrial waste landfills.

## PROFESSIONAL EXPERIENCE

### Civil/Site Design

Civil/Site design included slope stability of both cut and fill slopes in soil and rock for various well production pads in northeastern West Virginia associated with natural gas production in the Marcellus well field. Work consisted of the management of a design engineering team including ground survey crews to development site topographic base mapping, coordination with client regarding land ownership, access roadway alignments, site drainage control, and number/location of production wells. Additional work also included gathering and midstream transmission pipeline locations. The scope of services for these projects also included the preparation of permit documents and attachments for submittal to the WV Department of Environmental Protection-Office of Oil and Gas.

- Stone Energy Corporation
  - Higgins East pad and road
  - Higgins West pad and road
  - Conley Well pad, road, and access bridge
  - Mills-Wetzel No. 3 pad and road
  - Hunter/Pethel well pad
  - Talkington-nice pad and road
  - Bowyers well pad and road
- Viking Oil & Gas
  - United Disciples of Christ well pad

**Geotechnical**

Completion of numerous subsurface exploration studies for active soil slope landslide failures associated with the development of natural gas production well pads and access roads. Work included the layout, surveying, and logging of subsurface borings to determine the depth and extent of the slope failures. Following collection of soil/rock samples, materials were tested for characteristic and strength properties. Following testing efforts, the failed slopes were modeled using computer-based slope stability design models to determine a stable configuration including the addition of rock buttresses, toe keys, underdrains, mid-slope keys, etc. Final stabilization plans were then prepared for the client allowing bidding and selection of a repair and stabilization contractor to perform the work.

- Stone Energy Corporation
  - Mills-Wetzel No. 2 well pad landslide repair
  - Potoczny well pad landslide repair
  - Mills-Wetzel access road landslide repair
  - Pribble Tank landslide repair
  - Haines Branch pipeline landslide repair
- Columbia Pipeline Group (TransCanada Pipeline)
  - SM8 pipeline landslide repair
  - SM80 Loop pipeline landslide repair
- Chesapeake Energy Corporation – R. Baker well pad landslide causation study
- TransEnergy Corporation – Dewhurst well pad landslide repair
- Reserve Oil & Gas – Reed No. 1 well pad access road landslide repair

West Virginia Division of Highways – Geotechnical engineer on geotechnical/landslide master services agreement for on-call services for a three-year period.

Forensic study, expert testimony, and legal support related to the failure of numerous soil/rock slopes throughout West Virginia. This work included extensive review of relevant project case documents, site reconnaissance visits, interviews with project personnel, and deposition testimony.

Lynn Elementary School – Technical insight and recommendations to attorneys representing an adjacent property owner related to the contributing factors related to the formation and continued failure of an excavated soil slope. The toe of the slope was excavated during the site development of the proposed elementary school site in Lynn, West Virginia.

Crichton & Crichton – Landslide formed along a wooded hillside below a residential driveway on Pleasant Lane in Wood County, West Virginia. The slope failure was noted during a substantial leak in an existing water main. The work included a review of case documents, interviews with various residents (plaintiffs in the case) and the development of supporting causation theory for the formation of the landslide. The work also includes the development of repair alternatives and associated construction estimates to be considered during the dispute hearing between the plaintiff and defendants.

Chesapeake Appalachia/Law Office of Jeffrey Mahal (R. Baker Natural Gas Production) – Provided technical study and file review of case documents related to the grading contractor's construction work efforts to prepare a well pad for the installation of a series of horizontal gas production wells in Marshall County, West Virginia. The work included the removal of soil and rock from an existing hilltop. The resulting material was placed or wasted in series of three side hill fills along the edges of the resulting well pad. All three of these fills experienced progressive and ongoing failures following the construction effort. Reviewed design documents, construction records, and details related to several repair attempts to result in the development of a professional opinion related to the various factors contributing to the multiple slope failures.

Nationwide Trial Division/Khan & Wheeler (Ross v. WVAW Landslide Case) – Provided professional opinion related to the formation of a slope failure along the Elk River immediately behind several commercial and residential homes near the Town of Elkview, West Virginia. The initial landslide occurred immediately following a main waterline break along the front of the structures. The regressive and prolonged failure continued over several weeks and ultimately damaged a gravity sanitary line as well as several of the structures. Work included an extensive review of several years of case records provided for the case including a review of existing utility maintenance records, historic climatologic data, river stage information and depositional testimony from many of the affected parties. A summary of professional opinion report was prepared describing a number of factors including lack of maintenance storm culverts in the area as well as an increase of saturation along the slope from the failed water main as the cause of the slide. It was determined that several of the structures were supported on previously placed fill material which was placed along the river bank in the early 1900's in

conjunction with the initial roadway construction. This coupled with the lack of maintenance and presence of deteriorated drainage culverts likely contributed to the slope failure. The initial installation of this fill material was determined through an extensive study of the historic topographic mapping of the area.

Responsible for development of geotechnical and geological recommendations as well as development of stabilization designs for many failed soil/rock slopes in West Virginia. This work included initial site reconnaissance visits, development of a subsurface exploration study and materials testing program, evaluation of stabilization alternatives, and construction plan preparation.

Travelers Insurance/City of Charleston – Project included a subsurface exploration study, engineering design, and global stability evaluation of a failed soil slope in a residential neighborhood on Bona Vista Drive for the City of Charleston, West Virginia. The slide was caused by a water main break along an existing residential neighborhood paved roadway. The recommended slope stabilization method was to install a soldier beam and lagging retaining wall along an existing paved roadway (supporting the buried utilities) with the remainder of the failed slope below being removed and replaced with compacted soil backfill.

Stone Energy Pribble Tank – Work included the exploration and study of a failed soil/weathered rock slope which was loaded through the placement of fill near the top of the slope to provide adequate area for the construction of 2- 2,400,000-gallon water storage tanks in New Martinsville, West Virginia. Shortly following the installation of the tanks, a large section of the hillside failed leaving one of the tank foundation partially unsupported. Following the subsurface exploration and drilling work, a stabilization plan was developed which included the removal of the failed soil mass (>50,000 CY) followed by the replacement of compacted soil material behind a large toe key and buttress. The repair also included surface diversion drainage ditches and numerous bond benches along the underlying rock line which were fitted with under drains to collect subsurface seepage.

NiSource/Columbia Gas Pipeline Group SM-80 Loop Gas Transmission Line – Development of a subsurface exploration and drilling plan to determine the extent and depth of a soil and weathered rock slope failure which threatened the performance and stability of a 30-inch high

pressure natural gas transmission line in Kanawha County, West Virginia. The slide location was remote and situated along a steep hillside. The stabilization plan recommended the use of soil nail technology due to the remote location and rather inaccessible nature of the location. This repair and stabilization technique allowed for the in-situ repair of the failed slope without extensive excavation and backfill which was deemed difficult and would have required more land disturbance resulting in additional slope stability concerns.

EQT Rockport #7244 Natural Gas Storage Well Pad – Project involved the assessment and repair recommendations for a section of failed fill slope immediately below existing and active natural gas storage well near the community of Rockport in Jackson County, West Virginia. The failed slope was caused by improper surface drainage control along the pad and access road. The stabilization plan included the excavation and removal of the failed slope following “shut-in” of the storage well. The upper failure scarp was situated immediately adjacent the well head which was protected during the stabilization work. Following installation of a rock toe buttress and key way, the failed soil material was amended using lime to reduce the moisture content which was required to achieve the recommended in place density during placement and compaction. Following the regrading effort, the slope was trimmed and seeded followed by the grading a several diversion and collection ditched to control runoff from the upper portion of the hillside below the well pad.

City of Charleston – Geotechnical assessment and development of regrading construction plans for the repair of a failed soil slope below Grandview Drive for the City of Charleston, West Virginia. The slope failure occurred between two adjacent residential structures and encompassed a sanitary sewer main as well as a storm drainage pipe receiving storm drainage from Grandview Drive. The stabilization plan involved the removal of the failed mass beginning at the toe of the slope and then working progressively upslope to result in a stabilized and regraded slope surface. The work required the removal of all failed material to the underlying rock surface and included the installation of a shot rock toe buttress which was installed along a natural topographic bench near the toe. Following completion of the work the affected utilities were installed either below the fill material or outside the regraded slide area.

Greer Industries Cheat River Quarry Haulroad – Project included the development of stabilization and repair recommendations for a failed soil slope which impacted a critical haulroad utilized by the quarry operator to move raw shot rock material from the quarry to the crusher at the aggregate plant in Rowlesburg, West Virginia. The landslide occurred because of the failure of a cross drainage culvert in the haulroad. The failed soil mass was removed to the underlying bedrock and following installation of a stone toe buttress and toe key, the material was blended with aggregate material from the plant and placed in compacted lifts. The underlying rock surface was excavated to result in a series of “bond benches” allowing for the installation of underdrains below the compacted fill to collect groundwater and seepage from the underlying rock. This prevented saturation of the fill material.

Responsible for the design, management, and inspection of a geotechnical investigation of a proposed five-mile rail extension located in Nicholas County, West Virginia. Investigation included study and design of planned rock cuts, and track foundation materials.

General Services Administration – Site evaluation, including continuous HNU scanning of collected soil samples and installation of piezometers for two proposed sites near Charleston, West Virginia.

West Virginia Department of Environmental Protection – Foundation design for a proposed 1,000,000-gallon potable water storage tank and valve pit near Cassidy, West Virginia.

Rhone Poulenc Ag Company – Subsurface sample collection, resistivity measurements, explosivity measurements, and decontamination procedures for an organic contamination study at Institute, West Virginia.

Preparation of foundation investigations for several large structures including a parking garage and student housing complex at Marshall University in Huntington, West Virginia. Tasks included development of subsurface exploration program, soils/rock sampling, testing program, and preparation of a final geotechnical report.

#### Roadway Design

Geotechnical engineer for various bridge and highway projects including:

- North Bridgeport Bypass
- McDowell County Schools
- Corridor H
- Dundon Bridge
- Sulphur Springs Bridge Replacement
- Smith Creek Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge Replacement
- Dry Run Interchange
- I-81 Upgrade
- Platinum Drive
- Kenna Ridge Business Industrial Park/Access Road

Hardy County Rural Development Authority – Engineering services for the study, design, and preparation of construction contract plans, related documents, and construction oversight services for an industrial access road for the Baker Business Park District.

Roane County Development Authority – Site development construction documents for National Industrial Wholesale Lumber located in Roane County’s industrial park.

ZMM – Site design and engineering for a new elementary school and new high school in Bradshaw, West Virginia on the site of an existing elementary school.

West Virginia Department of Highways – Evaluation of subsurface conditions including both soil and rock to provide geotechnical recommendations related to potential bridge abutment foundation systems near Martinsburg, West Virginia. Alternatives included both shallow and deep foundations. Deep foundations were required at several abutments due to voids encountered in limestone bedrock.

#### Abandoned Mine Lands

WVDEP Abandoned Mine Lands and Reclamation – Preparation of Phase I and II water studies throughout the state of West Virginia. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity (which could potentially affect groundwater quality), collection of groundwater samples, and design of water distribution facilities.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation to determine the extent of a landslide for Courtright Highwall AML Project in Bridgeport, West Virginia. Field surveying was completed to establish topographic mapping and control, and subsequent design of landslide repair alternatives. Design ultimately selected included a reinforced slope using stabilizing grid. Landslide contained 400,000 cubic yards of material.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of a large coal refuse pile and two mine entries for Vivian Refuse Pile AML Project in Vivian, West Virginia. Plans, specifications, cost estimate, coal refuse reprocessing evaluation, and supporting documents for regrading over 150,000 cubic yards of refuse, surface water control, mine seals, and riprap toe protection were completed.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of three coal refuse piles and six mine entries for Kimball Refuse Pile AML Project in Kimball, West Virginia. Design included replacement of a water well and related supply piping for the Town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse reprocessing report, permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for the Mulberry (Stover) AML Landslide Project in Fayette County, West Virginia. Work included a difficult subsurface investigation, design of a remediation of landslide associated with abandoned mines, and preparation of plans and specifications for a reclamation project.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for assessment of the Covey Creek Mine Fire AML Project Boone County, West Virginia. Work included subsurface investigation and temperature assessments inside an abandoned burning deep mine.

#### Oil and Gas

Columbia Gas Transmission Corporation – Design of stream relocation plans including preparation and coordination of applicable environmental permits. The

relocation was required due to an adjacent gas pipeline near the stream.

Columbia Gas Transmission Corporation – Preparation of several spill prevention control and countermeasure plans for gas storage well sites in Pennsylvania and West Virginia.

#### Mining

West Virginia Division of Environmental Protection – Engineering evaluations, including collection and analysis of core samples, for possible subsidence-related fracturing of several areas potentially affected by mining subsidence.

Peabody Coal Company – Subsidence evaluation and slope monitoring, using extensometers and tilt plates located on the slope face, of a 60-foot road cut experiencing subsidence-induced fracturing near Kopperston, West Virginia.

Mingo Logan Coal Company – Completion of formal subsidence control plan for a proposed 14,000-acre long-wall mining operation at the Mountaineer Mine in Wharncliff, West Virginia.

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Evaluation of numerous failed soil fill slopes to determine probable failure mechanisms in order to develop remediation alternatives. Responsible for the development of regrading plans which included subsurface drains, benching schemes, and toe buttresses.

Completion of several environmental assessments for coal properties. Work included emphasis on both environmental and reclamation liabilities associated with pre-and post SMCRA sites on the properties.

- Massey Coal Services, Inc.
- Eastern Associated Coal Corporation

West Virginia Department of Environmental Protection – Engineering design of several wetland habitat areas relating to the effective remediation of a coal refuse disposal site in Glenville, West Virginia.

Preparation of several Article 3 surface mining permit applications for various West Virginia coal companies:

- Eastern Associated Coal Corporation – Proposed deep mine using longwall mining techniques in Boone County, WV, located in the Eagle coal seam.
- Hobet Mining, Inc. – Deep mine using conventional mining techniques near Madison in Boone County, WV. Located in the No. 2 Gas (Campbell’s Creek) coal seam.
- Rum Creek Coal Sales – Deep mine using conventional mining techniques near Logan in Logan County, WV. Located in the Alma coal seam.
- Eastern Associated Coal Corporation – Surface mine mountain top removal techniques near Twilight in Boone County, WV. Located in the Coalburg and Lower Kittanning seams.

**Landfills/Solid Waste/Waste Disposal**

WVDEP Closure Assistance Program – Design of final landfill closure for abandoned solid waste facility. Design included diversion and collection channels, cap design, leachate collection system, and 150,000-gallon leachate storage tank in Montgomery, West Virginia.

American Cyanamid – Engineering design for the closure of a chemical waste landfill in Parkersburg, West Virginia. Completion of a settlement analysis to determine the expected consolidation of waste during dewatering. Cover design incorporated a composite liner system with synthetic drains. The cap utilized synthetic reinforcement to minimize consolidation-induced stresses on the synthetic liner.

West Virginia Department of Environmental Protection – Responsible for the development and design of several interim or maintenance related items associated with drainage at the Monongalia County Landfill in Morgantown, West Virginia. Included the design and upgrade of both new and existing channels, diversions to berms to minimize surface water infiltration and minimizing the amount of leachate generation.

American Cyanamid – Permit completion for closure of a chemical sludge impoundment near Parkersburg, West

Virginia. Analysis of existing monitoring well configuration.

Design, management, and project oversight during construction for the closure of a 7-acre biological sludge pond in Nitro, West Virginia. Preliminary design studies included the completion of batch tests to evaluate stabilization materials. Also handled the development and submittal of several permits associated with the project including erosion and sediment control plan, Army Corps of Engineers permit, and a wetlands investigation and nationwide 404 permit.

Development of closure design for a 14-acre inactive waste water treatment pond in Nitro, West Virginia. Responsibilities included evaluation of sludge stabilization technologies, types of reagent and mixing ratios to achieve the required in-place strengths. Conducted contractor interviews with the owner, as well as providing assistance to the owner during preparation of the construction contract. During construction, conducted weekly safety meetings on-site with the contractor. This project was also expanded to provide stabilization of a 1.5-acre digester basin adjacent to 14-acre pond. The original contract was extended to cover stabilization of this pond. Stabilization efforts included submittal of an Army Corps of Engineers’ nationwide permit to stabilize the bank of the Kanawha River and application of a West Virginia NPDES General Stormwater Construction Permit.

North Fork Landfill – Permit completion for a new municipal landfill, including design and construction of monitoring wells to monitor several aquifers in Wheeling, West Virginia.

Sycamore Landfill – Part I permit completion, design, and implementation of a drilling program, including evaluation of an existing monitoring well configuration. Testing of existing site soils for sources of suitable liner material.

Rhone Poulenc Ag Company – Completion of several Part I Solid Waste Facility permits including the design and implementation of drilling programs, formal geological studies, hydrogeological analysis of proposed sites, and locations and development of upgradient and downgradient groundwater monitoring wells. Design, construction, and development of seven monitoring wells for a proposed 13-acre industrial waste disposal facility near Institute, West Virginia.

Storage Tanks

West Virginia Division of Natural Resources – Underground storage tank contamination study in Jesse, West Virginia. Delineation of a subsurface hydrocarbon contamination plume as well as possible flow direction to determine potential receptors.

Groundwater

Operation and maintenance of several groundwater remediation systems including pump and treat and sparge systems for a large chemical manufacturer in Nitro, West Virginia. The pump and treat technology is designed to recover kerosene in one instance and TCE in another. Both systems are safety oriented and are fully automatic. The sparge system is a study/field test to determine the impact that oxygen injection will have on the degradation of phenolic compounds existing in the groundwater.

Columbia Gas Transmission Corporation – Evaluation of numerous groundwater monitoring wells to determine the direction of migration and the feasibility of utilizing them in a planned pump and treat recovery system. The site was an active compressor facility located in Eastern Kentucky.

Design and completion of several geological and hydrologic investigations to determine nature and direction of groundwater flow associated with proposed limestone quarry sites in Nitro, West Virginia. The sites were all associated with Karst terrain and dual permeability systems and primarily fractured flow regimes. Studies included the deployment of drilling equipment to install groundwater monitoring wells.

Measurement of stratified in-site permeability of rock strata in NX boreholes in Hurricane, West Virginia. The permeability measurements were reviewed and evaluated to develop groundwater monitoring systems associated with both existing and proposed municipal landfill disposal facilities.

Rhone Poulenc Ag Company – Analysis and study of elevated levels of organic constituents and elevated pH values in existing monitoring wells. Study to determine if well construction techniques or development procedures contributed to the presence of these constituents.

Dilley's Mill – Review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards.

Union Carbide Corporation – Design and completion of several monitoring wells to monitor an abandoned fly ash disposal area. Included hydrologic analysis of site geology to determine major aquifers present in the area.

Completion of several groundwater contamination studies in West Virginia. Contaminants included diesel fuel, gasoline, chlorobenzene and benzene. Studies included field exploration utilizing various methods including air and mud rotary drilling. Responsible for the setup, calibration, and analysis of groundwater computer models to lend insight into the flow regimes and dispersion characteristics of the potentially affected areas.

Preparation of Phase I, II, and III water studies throughout the state of West Virginia for the West Virginia Division of Environmental Protection, AML section. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity, which could potentially affect groundwater quality, collection of groundwater samples, and design of water distribution facilities.

ESAs (Phase I and II)

Responsible for the design and implementation of drilling and sampling programs for several Phase I and Phase II environmental assessments.

# PATRICK A. TAYLOR, P.E.

Senior Engineer



## EDUCATION

M.S. Engineering Management, 2006  
Marshall University

B.S. Civil Engineering, 1988  
University of Florida

Administration – United States Air Force Technical School

## EMPLOYMENT HISTORY

2007-Present	Potesta & Associates, Inc.
2000-2007	WV Dept. of Health and Human Resources
1997-2000	Summit Engineering, Inc.
1997	Pyramid Consultants, Inc.
1995-1997	Haworth, Meyer and Boleyn, Inc.
1989-1995	GAI Consultants, Inc.
1979-1983	United States Air Force

## PROFESSIONAL REGISTRATION

Professional Engineer – West Virginia

## AREAS OF SPECIALIZATION

Drinking water and wastewater including funding coordination; hydrologic and hydraulic analysis including dam break; chemical and municipal solid waste disposal; surface coal mining; limestone quarry mining; abandoned mine lands reclamation; and site development.

## PROFESSIONAL EXPERIENCE

### Sewer Lines and WWTPs

Huntington Sanitary Board – Client Manager for oversight of designed construction of the following:

- Design, bidding, and construction management of combined sewer replacement project on 13<sup>th</sup> Street West and 19<sup>th</sup> Street, which included a combination of full trench replacement and trench-less technology pipe lining (cured-in-place pipe) for approximately 3,000 feet of 24 through 36-inch pipe.
- Redesign, bidding, and construction management of conversion of four ejector stations to submersible pump stations to include altering design from a cast-in-place concrete cap to allow building to remain. Design included new hatches and hoisting, ventilation equipment, heating, bypass features, and oversight of electrical design.
- 13<sup>th</sup> Street Pump Station – design, bidding, and construction management of installation of 30-inch bypass on 48-inch prestressed concrete cylinder pipe and replacement of 2-24” failing 90 degree discharge pipe bends, including air release valves. Project included installations of water stops in existing 48” pipe and coordination with the WVDEP to discharge into river during construction work.
- Assistance regarding the CSO long-term control plan’s implementation schedule and lead participation development of asset management plan.
- Preparation of wastewater treatment plant incinerator failure analysis and replacement analysis.
- Environmental remediation of fly ash lagoon through West Virginia Voluntary Remediation Program and design of bioretention basin at WWTP for treatment of stormwater fitting “green” project criteria.
- Management of study and preparation of Preliminary Engineer Report for replacement of Huntington’s primary 33 MGD pump station facility (13<sup>th</sup> Street).
- Evaluation of the mixing zone for the Wastewater Treatment Plant discharge.
- Replacement of 54” of PCCP force main crossing flood level at WWTP entrance.
- Design, bidding, and construction management of replacement of 54-inch CMP effluent line with 48-inch HDPE line and diffuser at WWTP, including installation of connection vault, degassing manhole, two manholes, and overflow channel and



rehabilitation of existing pipe at entrance to effluent line with ecocast lining.

- Design, bidding, and construction management of installation of new septage receiving and vacuum truck discharge station to include truck operator control station to allow flow measurement and billing, new access road and pump station to tie-into force main.

Town of Handley – Design of complete rehabilitation of three existing pump stations to include raising elevation of one station above flood plain level.

University of Charleston – Design engineer on rehabilitation of sanitary and stormwater system to include the design and construction of precise bore and jack of two sections main truck line (approximately 500 feet) under the existing main entrance area so that existing old trees, entrance walkways, and vegetation were not disturbed. Due to flat slope lines and requirement of line to meet existing manhole elevations, lines were accurate to a 1/100<sup>th</sup> foot.

Developed 201 Facilities Plan for \$28 million wastewater collection and treatment project in Logan County, West Virginia.

Summit at Cheat Lake Residential Development – Design of package plant and gravity inflow sewer lines, 2,500 linear feet of 1.5-inch and 2-inch force main line from three pump stations for 120-acre, 95-lot residential development at Cheat Lake in Monongalia County, West Virginia.

American Electric Power Company:

- London Locks, West Virginia and Clayton Lake, Virginia – Peat Sanitary Sewer Treatment System, including sediment basin, peat treatment, and UV system

**Water Lines, Water Storage Tanks, and Water Treatment Plants**

West Virginia Bureau for Public Health:

- West Virginia Infrastructure and Jobs Development Council:
  - Oversight of water technical review committee for infrastructure water projects
  - Member of sewer committee and sitting member of the Funding and Infrastructure Council

- Oversight of technical assistance/review for infrastructure water projects and wastewater preliminary applications
- Represented Bureau of Public Health in committee and council meetings
- Sitting member of consolidation committee
- Permitting Program – Directed review and issuance of public water and wastewater, public swimming pool, agricultural waste construction permits and water vending machine permits.
- Drinking Water Treatment Revolving Fund and State Tribal Assistance Grant Programs:
  - Oversight of loan and grant administration, including technical and financial review
  - Project selection
  - Coordination with appropriate federal and state agencies (environmental and funding) and public water systems
  - Coordination of bid advertising, loan closing, construction administration (processing of invoices, change orders, etc.)
  - Water system adherence to loan conditions
  - Preparation of program grant applications and reports to EPA including: annual reports, disadvantaged business enterprise reports, and intended use plans
  - Oversight of 2 percent technical assistance grant with the West Virginia Rural Water Association, which provides continuing education to water treatment plant operators
  - Oversight of the 4 percent administrative set-aside to Water Development Authority in financial management of the Drinking Water Treatment Revolving Fund
  - Directed, assessed, reported on and provided assistance on the technical, financial and management capabilities of public waters systems
  - Responsible for the oversight of program adherence to capacity development strategy, Governor's report, and annual reports to the EPA.

Project engineer on multiple waterline extension projects, including WVDEP-AML projects in central and southern West Virginia. Projects contained waterline, tank and booster station design, preparation of contract bid documents, and construction management.

Villages of Coolfont – Project Engineer for design, including three raw water wells drilling and development, field testing and design of 300 gallon per minute potable ionization water treatment plant to serve 1300-home village center and spa, three deep wells and raw water transmission lines. Water treatment plan was designed to treat hard water.

Webster County Commission, Countywide Water Study – Secured grant from the West Virginia Bureau for Public Health to conduct county wide study to include consolidation of county service providers to provide better service to customers in Webster County, West Virginia. Prepared preliminary engineering reports to provide service to Erbacon and Route 82 areas of Webster County.

#### Oil and Gas

In-house consultant with major FERC regulated natural gas transmission company – Developed environmental management plans for natural gas pipeline and storage projects to accompany construction drawings which included environmental controls including stream and wetland crossings, sediment and erosion controls, road access. Prepared FERC application documents containing plans and specifications; conducted onsite monitoring and site visits to make sure contractor was in compliance with plans.

Classified Natural Gas Production Company – Conducted water studies of ground, deep mine, and surface water sources to determine most feasible source to provide water for impoundments within the Marcellus shall basin in West Virginia to conduct fracking operations to obtain natural gas. After the water source was selected by the company conducted design of the raw water pump system and transmission line to the impoundment.

#### Hydrology and Hydraulics

City of Charleston – Stormwater analysis on existing and future developments of residential watershed in Charleston, West Virginia. Preliminary design of channels, culverts, and flood detention structures. Preparation of design report in which various alternative hydraulic structures were compared with respect to cost and constructability.

Preliminary design of a stormwater management system and grading plans for a regional mall in Western Pennsylvania. Evaluation of several drainage alternatives and pond designs for a site containing numerous wetlands.

Analysis and design of stormwater management for six separate sites, two of them shopping centers, including storm channels, surface and subsurface stormwater detention facilities, culverts, and pipe sizing design.

Design, installation, monitoring and analysis of data from a stream gage for a water supply study of a power generating plant owned by an independent power company.

Pennsylvania Department of Transportation – Drainage structure designs for various projects to include hydrologic analysis, storm channel and detention pond design.

Private Dam Owners – Hydrologic and hydraulic analysis on various private dams within West Virginia to determine impacts from multiple storm events on dam principal and emergency spillways, overtopping and impacts to downstream structures, including dam break conditions using HEC-HMS and HEC-RAS computer programs.

#### Civil/Site Design

Vaughan Railroad – Preparation of construction specifications for railroad line construction, including erosion and sediment control, culvert installation and subgrade compaction.

U.S. Army Corps of Engineers – Participated in utility relocation planning for two local flood protection projects for Petersburg and Moorefield, West Virginia to include utility relocation design and quantity and cost estimation.

#### Abandoned Mine Lands

West Virginia Department of Environmental Protection – Analysis and design of stormwater channels, culverts, energy dissipation systems, and dewatering underdrain systems for two landslides and two coal refuse regrading projects.

West Virginia Department of Environmental Protection, Abandoned Mine Lands (WVDEP-AML) (Ducks Unlimited Award Winner) – Primary engineer for Bear Run project, consisting of regrading of three coarse coal refuse piles, and re-establishing eight fine coal refuse impoundments with breached embankments into wetland areas, each connected by a designed stream channel in Gilmer County, West Virginia. Project included preparation of conceptual report based on field reconnaissance for Bear Run abandoned mine reclamation project; and evaluation of several hydrologic reclamation alternatives to include wetland and channel locations and re-establishment of impoundments. Project also included

hydrology and final design of grading plans to include slope stability, and hydraulic structures to include channels, culverts, impoundments and spillways, dewatering underdrains, and energy dissipation systems, and quantity and cost analysis.

Virginia Department of Mines, Minerals, and Energy, Ely Creek and Davis Wetland Acid Mine Drainage projects – Design of passive treatment systems for highly acidic mine water with high iron laden water. One treatment systems contained a bentonite slurry wall, natural well system, anoxic limestone subsurface treatment, and treatment settling ponds with phylorremediation through the use of plants. Another treatment system used the existing limestone channel and a polishing pond with wood curtain.

Virginia Department of Mines, Minerals, and Energy, Bevins Landslide – Design of stabilization/removal of a slide using soil nailing and grout wall, removal and disposal of slide material, installation of temporary and permanent drainage control measures, and upgrade of the existing entrance roadway onto the mine bench where the Bevins residence is in Buchanan County, Virginia.

### Mining

Performed design analysis, permitting, and technical support/review in the preparation of surface and underground coal mine permits, including mine planning, incidental boundary revisions, hydraulic/hydrologic design, fill design, surface water runoff analysis, and geologic analysis. (Two permits were for 1,400 and 1,700-acre surface mines.)

Managed office/technical support staff on various coal-related projects, including the design, plan and permit preparation, cost estimates, hydrologic/hydraulic design, valley fill design/quantification and slope stability and belt-line layout.

Complete hydrologic/hydraulic design of two coal refuse slurry impoundments, including design/permit preparation for sedimentation ponds, collection/diversion channels, slurry pond decant systems, under drain systems, filter diaphragm systems and emergency spillways.

West Virginia Division of Highways – Performed mineral appraisals to determine potential financial impacts to coal reserves and mining due to construction of new roadways.

Classified Coal Company - Performed peer review on design of a deep coal mine dewatering project in which water flow ranging from 3,500 GPM to 8,500 GPM was being pumped downhill in Western Pennsylvania. Review considered water separation, water hammer, development of negative pressures due to water evaporation and water release/vacuum valves, and use of pigging stations. Analysis subsequently led to the design a pressure sustaining valve system to control the water in the pipeline and energy dissipater at the end of the pipeline, design of a retaining wall around dissipater, and design of outfall structure to discharge water into Monongahela River.

Classified Limestone Mining Company – Designed and permitted proposed limestone quarry including quarry layout, sequence of quarry operations, sediment controls (channels and ponds), and reclamation. Project was located in southwestern Pennsylvania.

Analysis and design of diesel-generated electric pump system for decant of slurry water for coal refuse impoundment.

### Landfills/Solid Waste/Waste Disposal

For municipal and industrial landfills, performed engineering for various proposed and existing landfills to include design for leachate impoundments, expansions and new permits comprising of plans and specifications and coordination of field activities associated with earth moving for construction.

Key participant in engineering management of solid waste landfill in Monongalia County, West Virginia, including analysis of technical and economic alternatives of the storage and expansion capacity of landfill and feasibility study of solid waste alternatives to include recycling, transfer station, composting facility and expansion to a composite liner system.

Design of leachate impoundment for landfill, including specifications and drawings. Coordinated field activities associated with earth moving for construction of HDPE composite liner system.

Analysis and design of capping system and appurtenant hydraulic structures for landfill, and preparation of grading plans, detail drawings, specifications, cost analysis, and application for closure. Alternative synthetic

liner systems were evaluated in the capping system design, including analysis of slope stability.

Design of two solid waste and one industrial waste landfills, including analysis of sedimentation controls and hydrologic analysis, design of liner system, sediment and leachate ponds, decant structures, sedimentation channels, grading and underdrain system. Also provided drawings and specifications for design and permitting package.

American Cyanamid – Analysis of infiltration characteristics of cover materials for closure of an industrial sludge basin using Hydrologic Evaluation of Landfill Performance model computer system.



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come, Greeting.

Know Ye That The State Board of Registration for Professional Engineers, of the State of West Virginia, reposing special confidence in the Intelligence, Integrity, and Discretion, of

Patrick A. Taylor

DOES, IN PURSUANCE OF AUTHORITY VESTED IN IT

by law, hereby certify that he, having submitted satisfactory evidence, of his ability and experience, is a

REGISTERED PROFESSIONAL ENGINEER

Registration Number [REDACTED]

To hold and use such title in the practice of his profession, subject to the conditions prescribed by law.

Given under the hand and the Seal of the Board at the Capitol in the City of Charleston this 2nd day of Aug. in the year of our Lord One Thousand Nine Hundred and Ninety Four and of the State the One Hundred Thirty-First



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

By H. Bar Fuller Secretary  
Kenneth H. Means Frank N. Kelly Paul R. Egan

President Robert B. Scott

# MARK A. SANKOFF, P.E., P.S.

*Chief Engineer*



## EDUCATION

B.S. Civil Engineering, 1982  
West Virginia University

## EMPLOYMENT HISTORY

2011-Present Potesta & Associates, Inc.  
1991-2011 West Virginia American Water  
1988-1991 Dunn Engineers, Inc.  
1982-1988 Kelley, Gidley, Blair & Wolfe, Inc.

## PROFESSIONAL REGISTRATIONS

- Professional Engineer – West Virginia
- Professional Surveyor – West Virginia

## PROFESSIONAL AFFILIATIONS

- American Water Works Association
- National Society of Professional Engineers

## AREAS OF SPECIALIZATION

Water including design of water mains, water storage tanks, booster stations, pressure reducing stations, advanced metering infrastructure – (AMI) and Automated Meter Reading – (AMR) systems. Extensive knowledge in water distribution systems operation and maintenance.

## PROFESSIONAL EXPERIENCE

### Water Lines, Water Storage Tanks, and Water Treatment Plants

Confidential Coal Company – Onsite water management, reuse and disposal project; services included construction of 8,500 gallon per minute combination high pressure pump/pressure reducing station, controlling a 14 mile 26” HDPE pipe, an 8,500 gallon per minute pressure sustaining valve station, energy dissipation structure, river outfall and SCADA system.

Responsible for engineering at West Virginia American Water (WVAW):

- Supervising an engineering staff of eight, working in conjunction with other departments at WVAW.
- Developing and prioritizing multiple capital projects while developing and managing the multi-million capital budget for West Virginia. Budgeting includes developing and creating large investment projects, multiple public private partnerships and several acquisitions.
- Involved in multiple operational issues/projects including non-revenue water reduction, comprehensive planning studies including interconnection studies to combine operations to increase efficiencies.
- Worked on the automation of Bluestone Water plant which is intended to be the first one shift automated and unattended surface water treatment plant in West Virginia.
- Design of multiple pressure reducing stations and booster stations.
- Overseeing a \$1.5+ million per year tank painting program.
- Managed tank painting program, which included evaluating, prioritizing, draining and refilling tanks, tank inspections, preparation of contract documents, bidding, bid evaluations, contract awards, scheduling, taking tanks out of service while maintaining uninterrupted service to customers.
- Responsible for over 300 tanks in the largest water system in West Virginia.

Responsible for the Fayette AMI project, a \$4.3 million-dollar meter replacement/automation project to automate almost 12,000 water meters in Fayette County, West Virginia. This project was part of an EPA Green Project and the project was successfully publically bid using a

performance specification using stimulus money. Methods were developed to economically work through terrain issues as it related to radio signals to develop a successful project. The project successfully incorporated acoustic listening devices to monitor the distribution system at night to reduce non-revenue water in the Fayette water system.

City of Glenville – Project Manager for the study, design, bidding, and construction phase services for project involving upgrades and construction monitoring to their existing potable treatment and water distribution system.

Town of Mills Creek – Project Manager for the design, permitting, preparation of construction plans, specs, and bidding documents, and construction administration/observation services for the construction of two backwash ponds behind the existing water treatment plant.

Responsible for the project management to complete the WVAW building complex at 1600 Pennsylvania Avenue, Charleston, West Virginia. Provided oversight of the building complex for all operation and maintenance items, as well as liaison with the leasees.

Project Manager of the Kanawha Valley to Montgomery Interconnection Project design which included over 20 miles of 20-inch to 12-inch water mains, two relay booster stations, one storage tank, Kanawha River Crossing, railroad crossings, two pressure reducing stations and radio telemetry.

Project Manager for the EPA IDSE disinfection project to develop the computer water models for the Charleston and Huntington water systems which calibrated the two largest water distribution systems in West Virginia.

Project Manager for the Kanawha County IDB Water Project 2000 which served 33 areas and brought water to over 1,740 families. The total project cost of over \$22 million included over 100 miles of water mains, five boosters and six water storage tanks of various sizes. Oversaw the design work of six consultants, including acquiring the rights-of-way, the bidding of 12 water main contracts, and the construction of those contracts with five consultants handling five contractors, while managing the bidding and construction of the above boosters and water storage tanks.

Prepared specifications and plans for numerous water main extensions, water storage tanks, boosters and hydro

pneumatic booster stations and pressure regulating stations including site work, other utilities, and property acquisition, including bidding, project and construction management.

Parcoal Project, Webster County, consisting of 8-inch water main extension and a 160,000-gallon water storage tank using an ARC Grant.

Southridge Development Project consisting of 16-inch water main extension to serve the Southridge Development on Corridor G.

Responsible for the 55-person department that maintained the Kanawha Valley water distribution system, which repaired an average of 1,500 main breaks per year up to 30-inch PCCP:

- Responsible for providing new water services – the department made an average of 850 taps per year
- Oversaw the leak survey effort to reduce unaccounted for water – developed a system to check night flow in systems using existing telemetry to determine leakage and direct efforts to maximize finding and fixing those leaks
- Coordinated the small diameter main replacement program which averaged over one million dollars per year
- Comprehensive supervisory experience between union and non-union personnel – responsible for five supervisors
- Assisted in union negotiations – developing a process to equalize overtime within the distribution department. Worked with the Manager to develop 24-hour coverage shifts to provide better customer service and reduce O&M costs, including a 12-hour shift schedule using four foremen to provide round the clock coverage
- Served as the liaison with Kanawha County Commission and KCRDA on new water projects to serve un-served areas

Oversaw the completion of the construction of the Consolidated Office Complex for WVAW's corporate headquarters in Charleston in 1997 to 1999.

Kanawha County Water Main Extension Project consisting of waterlines, booster, a 200,000-gallon water storage tank, and four pressure-regulating stations for the Campbells Creek area of Kanawha Valley.

Quarry Creek Subdivision consisting of vertical turbine booster station and a 330,000-gallon water storage tank, with an elevated storage tank bid option and water lines.

Kellys Creek Project consisting of 16-inch water main extension, booster station, and water storage tank along Route 60 using WVDEP, AML funding.

Little Sandy, Aarons Fork and Edens Fork Projects. Construction of water mains, a booster station and a 160,000-gallon storage tank utilizing two Small Cities Block Grants with KCDRA.

Summers-Mercer Water Project included design of an 8-inch water main to Hinton and a 24-inch water main from the new Bluestone plant to Princeton, including the pressure reducing stations along with the 300,000-gallon water storage tank near Pipestem.

Designed and constructed multiple small water main extensions, working with developers, customers and small contractors to serve new subdivisions and unserved areas.

**Sewer Lines and WWTPs**

Project Manager for the replacement of the Wastewater Treatment Plant at Point Pleasant, West Virginia. This included being responsible for design, plans, specifications, regulatory approval, bidding and bond sale, and construction management.

Inspection of wastewater collection systems, writing Operation and Maintenance Manuals, Facility Plans, and Grant Applications for various clients.

Project Manager for the Big Sandy Sewer Public Service District Vacuum System Project, which included the design and construction of three vacuum sewer stations, two sewage pump stations, a 9-mile force main, and the vacuum sewer collection system. Responsibilities of the above involved the preparations of engineering contracts, planning reports, plans and specifications, bid documents, operation and maintenance manuals, and change orders for state and federally funded wastewater and water projects. The process involved cost-effective analysis, public relations, technical writing, and public speaking.

Project Engineer for the Logan Wastewater Interceptor Project, the Town of Barboursville Lagoon Improvements, and the Philippi Wastewater Project including a new Oxidation Ditch Plant, renovation of an existing pump station, sewer main replacement design, and construction. Experience included designing wastewater treatment plants, sludge handling facilities including belt filter presses, wastewater collectors and pumping systems, site developments, access roads, and combined sewer overflow (CSO) facilities.





STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come, Greeting.

Know Ye That The State Board of Registration for Professional Engineers, of the State of West Virginia, reposing special confidence in the Intelligence, Integrity and Discretion of

Mark A. Sankoff

DOES, IN PURSUANCE OF AUTHORITY VESTED IN IT

by law, hereby certify that he, having submitted satisfactory evidence of his ability and experience, is a

REGISTERED PROFESSIONAL ENGINEER

Registration Number [REDACTED]

to hold and use such title, in the practice of his profession, subject to the conditions prescribed by law.



Given under the hand and the Seal of the Board, at the Capitol in the City of Charleston, this 21st day of February in the year of our Lord One Thousand Nine Hundred and Eighty-Nine and of the State the One Hundred Twenty-Fifth.

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

Handwritten signature of the Secretary, Kenneth H. Means.

Secretary  
Kenneth H. Means

By  
Frank Gaddy President  
Robert Scott

## EDUCATION

M.S. Civil/Environmental Engineering, 2012  
Carnegie Mellon University

B.S. Civil Engineering, 2010  
West Virginia University

## EMPLOYMENT HISTORY

2013-Present Potesta & Associates, Inc.  
2010-2011 WVU/U.S. DOE NETL

## PROFESSIONAL REGISTRATIONS

Professional Engineer – West Virginia, Maryland, and Pennsylvania

## PROFESSIONAL CERTIFICATIONS

Troxler Moisture – Density Gauge

## PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

## HONORS

- Summa Cum Laude (M.S.)
- Magna Cum Laude (B.S.)

## AREAS OF SPECIALIZATION

Biological wastewater treatment design; water and wastewater treatment systems; drinking water system improvements; source water protection plans; geotechnical evaluations; and permitting.

## PROFESSIONAL EXPERIENCE

### Source Water Protection Plans

Region VI Planning & Development Council – Preparation of source water protection plans (SWPPs) for eight (8) drinking water utilities in Northern WV. Project included development of GIS-based mapping of the Source Water Protection Area (SWPA) and Potential Sources of Significant Contamination (PSSC); forming a source water protection team comprised of local

stakeholders; prioritizing PSSCs and developing managements strategies; leading source water protection meetings; preparation of final SWPP; presenting the SWPP at a public forum.

### Sewer Lines and WWTPs

Performed plant troubleshooting, permitting, and system upgrade design for operational municipal wastewater plant to increase capacity from 1.8 MGD to 2.5 MGD peak flow.

Secondary clarifier sizing & design, RAS pump station improvements, Orbal Aeration unit improvements, headworks modification & improvements, UV disinfection unit sizing & design, pump sizing, hydro-pneumatic tank sizing & piping design, flow metering/monitoring system design, pipe & valve sizing/layout, incorporation of variable frequency drive pumps (VFD) into existing plant pump system, hydraulic analysis, and geotechnical analysis & recommendations for concrete clarifier basin

Responsible for permitting, hydraulic design & analysis, and geotechnical exploration & recommendations for multiple installations of wastewater effluent diffusers at chemical manufacturing facilities.

### Storage Tanks

Columbia Gas Transmission, Swanson Industries, Morgantown Energy Associates, LP Minerals, LLC – Followed Senate Bills 373 and 423 along with corresponding Legislative Rules associated with the Aboveground Storage Tank (AST) Act:

- Completed over 100 AST Registrations and Inspections.
- Comprehensive electronic documentation comprising of completed inspection sheets, photographs, detailed deficiencies, recommendations and schedule for abatement and a certification page sealed by a Professional Engineer.
- Created site specific Spill Prevention Response Plans various facilities.
- Assisted clients prepare site specific reporting and recordkeeping documentation.

**NPDES Industrial/Municipal Permitting**

National Pollutant Discharge Elimination System (NPDES) mixing and modeling report, mussel survey, safety and health plan, permitting and approval submittals to WVDEP, USACE, WVSHPO, PLC, USDA, and CSX transportation.

Modifications to NPDES permit, composition and submittal of WVDEP Facility Plan, funding application & modifications through WV Clean Water State Revolving Fund (WVSRF), plant inventory & capacity calculations, and service district demographic analysis & flow projection.

Diffuser sizing & design, diffuser backwater & flood stage analysis, incorporation of new diffuser effluent line into existing continuous flow effluent line, connection vault design, conversion of existing effluent line into overflow line, design of degassing manholes, drop manholes, design of high density polyethylene (HDPE) pipe layout and valving, and in-river concrete anchor and diffuser design.

**Geotechnical**

CA Ventures, WVU Housing – Completion of eight (8) test borings, associated laboratory testing, and geotechnical recommendations for a combined shallow and deep foundation system for a proposed 13-story student housing project in downtown Morgantown, West Virginia.

EQT, Ohio River for Horizontal Directional Drilling (HDD) – Completion of 35 test borings, associated laboratory testing, and geotechnical recommendations at three sites in Ohio and West Virginia relating to a proposed pipeline and transmission pad projects.

American Campus Communities, Sunnyside Commons – Completion of 23 test borings, associated laboratory testing, geotechnical recommendations, civil site design, surveying, and construction phase geotechnical consulting/testing for a 5.4 Acre high-density student housing project in downtown Morgantown, West Virginia.

MSES Architects/Marion County Board of Education, Marion County Technical Center – Completion of 11 test borings (indoor), associated laboratory testing, geotechnical recommendations, and construction

monitoring/testing for a pyrite remediation project at the Technical Center due to heave damage to load bearing walls, footers, and slab floors.

Glenmark Holding, LLC, Greenbag Road Development – Completion of four (4) borings, laboratory testing, geotechnical recommendations, civil site design, surveying, stakeout, and construction consulting on a commercial development in Morgantown, West Virginia.

EQT, Gemini Compressor Station and Interconnect – Completion of 11 borings, laboratory testing, wetland delineation, mine mapping/research, and preliminary geotechnical recommendations for a proposed compressor station and interconnect in Harrison County, West Virginia.

MEPCO, Marshall Portal – Completion of nine (9) borings and installation of one inclinometer, associated laboratory testing, geotechnical recommendations, and slope stability monitoring/analysis at a deep mine shaft site to assist with stabilization of mine portal pad and access road near Mount Morris, Pennsylvania.

EQT, Harrison County HDD – Completion of four (4) borings, associated laboratory testing, and geotechnical recommendations for a proposed horizontal directional drill project underneath the West Fork River in Harrison County, West Virginia.

Town of Granville – Completion of five (5) borings, laboratory testing, geotechnical recommendations, civil site design, contract document preparation, and construction monitoring/testing for the Bowser Street Landslide Repair in Granville, West Virginia.

MEPCO, 4West AWT Plant Geotechnical – Completion of five (5) borings, laboratory testing, geotechnical recommendations, and foundation analysis for a proposed reverse osmosis treatment plant at the 4West Deep Mine near Mount Morris, Pennsylvania.

MEPCO, Renner Portal Geotechnical – Completion of eight (8) borings, laboratory testing, and geotechnical recommendations for a proposed mine portal and access road near Mount Morris, Pennsylvania.

Stone Energy, Weekly Pad – Completion of several subsurface borings, laboratory testing, geotechnical recommendations, and installation of an inclinometer to

monitor slope stability/movement at a natural gas well pad in Wetzel County, West Virginia.

Greer Industries, Cheat River Quarry – Completion of several subsurface borings, laboratory testing, geotechnical recommendations, civil site design, and construction monitoring/testing for the landslide repair and drainage improvements at a limestone mine/quarry in Preston County, West Virginia.

Huntington Sanitary Board, North Edgemont Road Landslide – Completed subsurface exploration, installation of six inclinometers to monitor the slope stability and overall movement of the slope, laboratory test/inclinometer data evaluation, as well as worked with the Huntington Sanitary Board and community to evaluate possible stabilization options.



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come Greeting  
Know that The State Board of Registration for Professional Engineers  
of the State of West Virginia, reposing special confidence in  
the Intelligence, Integrity and Discretion of

**Eberett H. Mulkeen**

**DOES IN PURSUANCE OF AUTHORITY VESTED IN IT**  
by law hereby certify that he having submitted  
satisfactory evidence of his ability and experience is a

**REGISTERED PROFESSIONAL ENGINEER**

Registration Number [REDACTED]

to hold and use such title in the practice of his profession,  
subject to the conditions prescribed by law.



Witness under the hand of the  
Act of the Board at the Capital in the  
City of Charleston,  
This 16th day of December  
in the year of our Lord 2016  
and of the State  
the One Hundred Fifty-Third

Members of the Board

*[Signature]*  
*[Signature]* *[Signature]*

**D. MARK KISER, P.E., L.R.S.**  
*Chief Engineer, Licensed Remediation Specialist*



**EDUCATION**

B.S. Civil Engineering, 1984  
West Virginia University

**EMPLOYMENT HISTORY**

1997-Present Potesta & Associates, Inc.  
1995-1997 Terradon Corporation  
1984-1995 GAI Consultants

**PROFESSIONAL REGISTRATION**

- Professional Engineer – West Virginia
- Licensed Remediation Specialist – West Virginia

**PROFESSIONAL CERTIFICATION**

- Hazardous Waste Site Operations and Superfund
- Worker Protection Training, 40-Hour Training
- Supervisory Training and Annual Refreshers
- Troxler Nuclear Densometer Certification

**SERVICE ON BOARDS AND COMMISSIONS**

Commissioner – Sissonville Public Service District

**AREAS OF SPECIALIZATION**

Environmental assessments, environmental sampling and remedial programs, conceptual and final designs for chemical, utility, and municipal solid waste disposal sites, including liner systems, leachate management systems,

stormwater management systems, operational plans and capping/closure systems, abandoned mine land reclamation projects, sludge stabilization and basin/pond closure projects, environmental permitting, hydrologic and hydraulic analyses, quality assurance/quality control monitoring.

**PROFESSIONAL EXPERIENCE**

Civil/ Site Design

Ridgeline, Inc./Cabela's – Retained by developer and Cabela's to provide civil engineering design services for a new Cabela's store in Charleston, West Virginia.

- ALTA survey
- Subsurface exploration
- Grading plan including balanced cut and fill for the building pad, parking fields, and access roads.
- Stormwater collection system design including curb inlets, catch basins, and culverts.
- Pavement design.
- Utility extension designs including sanitary sewer, potable water, fire service, natural gas, underground electric, underground telephone, and underground cable television.
- Permitting services
- Support for local approvals including approval from Charleston Municipal Planning Commission as a Development of Significant Impact and building permit to allow construction to begin.
- MM-109 permit to allow for connection of the store's new roadway with the existing public roadway.

Fieldcrest Subdivision – Project manager/engineer for development of a nine-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater, electric, telephone, cable, and natural gas. Preparation of drawings/specifications for necessary governmental agency approvals and for solicitation of bids. Inspection and certification of completed sanitary sewer system.

Connell Pointe Subdivision – Project manager/engineer for development of an eleven-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, natural gas service, stormwater, electric, telephone, and

cable. Preparation of drawings/specifications for governmental agency approvals and for solicitation of bids. Inspection and certification for completed sanitary sewer systems.

Conner Drive Townhouses – Project manager/engineer for development of 13 townhouse lots just outside of Charleston, West Virginia. Planning, surveying, design, and regulatory approvals for infrastructure, including new street, stormwater management system, sanitary sewer main, water main, electric, natural gas, telephone, and cable.

Gettysburg Subdivision – Project manager/engineer for an 18-lot subdivision located in Kanawha County, West Virginia. Design, surveying, and regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater management system, electric, natural gas, telephone, and cable. Preparation of drawings/specifications for solicitation of bids. Inspection and certification of the sanitary sewer collection system and pump station.

Yorktowne Subdivision – Project engineer for development and construction phase services for a 50-lot subdivision in Charleston, West Virginia. Design of streets, lots, stormwater management systems, sanitary sewer mains and pump stations, water mains, underground electric, natural gas, telephone, and cable.

City of Charleston – Feasibility study for the replacement of the CSX Ramp in Charleston, West Virginia.

Villages at Coolfont – Project manager for project in Morgan County, West Virginia, which included planning, engineering, and permitting associated with developing a second home community on 1.000 acres near Berkeley Springs, West Virginia. Project included:

- Potable water supply source (wells), treatment plant, storage and distribution system
- 0.44 MGD MBR wastewater treatment plant and sanitary sewer collection system
- Community roadways and storm sewer systems
- Detailed plans for the water and wastewater treatment plants and the distribution allocation system serving the first 124 homes
- Permits were obtained for the water and wastewater plants

Project engineer for development of Suncrest Subdivision in Charleston, West Virginia. Project included engineering and permitting for a new residential subdivision including roadway, underground electric, telephone, cable, water, sanitary sewer and storm water. Sanitary sewer system was designed, constructed, and monitored under the terms of an alternate mainline extension agreement with the Charleston Sanitary Board.

Business and Industrial Development Corporation – Preparation of Utility Extension and Roadway Paving Plans for Southridge Centre - Phase 2 area. Project included preparation of bidding/construction drawings to provide natural gas, water, sanitary sewer, telephone, and cable television serving four commercial lots and a 50-lot proposed subdivision. All utilities were underground. The length of the project was approximately ½ mile. The project also included roadway paving and stormwater drainage.

Development of a conceptual development plan for a mixed use industrial park. The evaluation included developing preliminary alignments for two access roadways including earthwork requirements, drainage, subbase, and paving with preliminary cost estimates. Total length of road was over 5 miles. The evaluation also included preliminary layout of water and sewer service for a proposed 400-acre development.

Plasma Processing Corporation – Preparation of permit to construct and site development plan for a secondary aluminum processing facility startup in Jackson County, West Virginia.

Utility relocation plans required for site development, waterline, and sewer construction projects. Projects included determination of utility locations by records review, utility contacts, and surveying. Designs were prepared including locations, details, and pavement replacement. Design also included obtaining approvals from West Virginia Division of Highways and the owners of the utilities.

#### *Abandoned Mine Lands*

West Virginia Division of Environmental Protection Abandoned Mine Lands (WVDEP AML) Reclamation – Project engineer/project manager for open-end contract from 1988 through 1995. Continued after 1995 with AML projects for WVDEP AML including reclamation

designs, preparation of plans, specifications, bid documents, and permitting. Projects included:

- Duncan Hill No. 1 and No. 2 Subsidence
- Urso Subsidence
- Jonben Subsidence
- Doug Gray Subsidence
- Turner Douglas Complex
- Omar Refuse Piles (project won reclamation of the year award)
- Bear Run Refuse (project won 1994 Ducks Unlimited award)
- Kimble Refuse Pile (project won 1995 southern reclamation award)
- Vivian Refuse Pile
- Summerlee Refuse Pile
- Godby Branch Water Extension
- Williamson (Elias) Landslide
- Lefthand Fork Burning Refuse
- Belle Landslide
- Harris Acid Mine Drainage
- Numerous Phase I and Phase II Water Quality Studies/Survey
- Williamson (Hatfield) Landslide
- Taylorville (Cantrell) Drainage
- Sundial Refuse
- Sundial (Hatfield) Refuse Piles
- St. John's Road Subsidence
- Rachel Refuse
- Putney Impoundment
- Pringle Run No. 2
- Peach Ridge Complex
- Mountain Run Refuse and Portals
- Mill Creek Refuse Pile
- Measle Fork Refuse
- Marmet (Wells Drive) Landslide
- Marmet (Clark) Drainage
- MacArthur Mine Subsidence
- MacArthur Phase 2 Subsidence
- Little Whitestick Refuse
- Lando (Edwards) Drainage
- Kopperston (John's Branch) Refuse
- John's Branch Coal Refuse Dam (Kopperston)
- Jessop Highway #10
- High Coal Tipple
- Harris AMD
- Gray and Iaquinta Subsidence
- Grass Run Refuse
- Godby Branch Waterline Extension
- Georges Creek Portals
- Georges Creek (Lucas) Rockslide

- Garrison Complex
- Flipping Hollow Complex
- Fairmont East Mine Drainage
- East Lynn II
- Crany Mine Dump
- Courtright Highwall
- Cora Mine Drainage No. II
- Charleston (Ratcliffe) Landslide
- Cassity Fork Waterline Extension
- Camp Mohonegan Regrade
- Buffalo Creek No. 5 Refuse
- Borderland (Matney) Portals
- Beckley Subsidence
- Allen AMD

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

WVDEP-AML – Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Subsurface investigation, surveying coal refuse reprocessing evaluation and report, and design of reclamation plan to stabilize and approximately 15-acre refuse pile at Buffalo Creek No. 5 in Marion County, West Virginia. Developed plans, specifications, cost estimate, and calculations brief for drainage control and regrading plan.

Subsurface investigation, surveying and design for reclamation of three coal refuse piles and six mine entries. Design included replacement of a water well and related supply piping for the Town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse report, West Virginia Department of Health permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

Subsurface investigation, surveying, coal refuse reprocessing evaluation, water quality monitoring, and design of a reclamation plan for a coal refuse pile, unreclaimed highwalls, and slurry and water treatment



ponds in Lewis County, West Virginia. Plans, specifications, cost estimates, and calculations brief were completed for the project.

#### Environmental Assessments/Impact Statements

Rhone-Poulenc AG Company – Management and oversight of environmental assessment to identify any liabilities or soil/water degradation for a proposed industrial solid waste landfill. Investigation included drilling, sampling, monitoring well sampling, site reconnaissance, and historic records research to establish baseline soils and groundwater conditions. Results presented in a report.

West Virginia Division of Highways – Environmental Assessment for a 1.25-mile proposed four-lane divided highway in Bridgeport, West Virginia.

West Virginia Division of Highways – Environmental Impact Statement (EIS) for proposed Route 19 upgrade from Summersville, West Virginia to Interstate 79 in Braxton County, West Virginia. Project included evaluation of three alternatives over approximately 25-mile length. Responsibilities included hazardous waste section collection of general data used by other scientists, field reviews, and public meeting participation.

Assessment of environmental and reclamation liabilities associated with over 40 surface mine permits in western Virginia. Evaluation included PCB concerns, reclamation costs, underground and aboveground storage tanks, and acid mine drainage.

Massey Coal Service, Inc. – Assessment of environmental liabilities associated with a large tract of property including over 25 permitted mines and a coal preparation plant. Investigation included a review of permits and requirements, past environmental compliance record, walkover of each site, and development of estimated reclamation costs for each site. Report prepared to document results of the liability assessment.

Completion of environmental assessments and a preliminary design report for two inactive commercial solid waste disposal landfills located in Kanawha and Wyoming County, West Virginia. The environmental assessment included completion of a groundwater user's survey for residents located within ½ mile of each facility, drilling shallow groundwater monitoring wells to monitor flow along the soil/bedrock interface

downgradient of each landfill, an extensive geotechnical soils/rock investigation, assessment of each facilities compliance with the solid waste management rules, and developing recommendations for a preliminary closure plan.

#### Mining

Eastern Associated Coal Corporation – Coal ash utilization study including five mining operations and four coal ash sources in Virginia and West Virginia. Study evaluated both surface and underground beneficial uses of ash to neutralize acidic drainage.

Project manager/engineer for the preparation of coal ash utilization permits for West Virginia mining operations. Permits included placing ash in the embankment of refuse disposal sites and placing ash with spoil backfill.

- Elk Run Coal Company
- Appalachian Mining, Inc.
- Peerless Eagle Coal Company
- Rawl Sales and Processing Company

Pace Carbon Fuels, LLC. – Consulting and permitting for the development of seven coal-based synthetic fuel manufacturing plants in West Virginia, Indiana, Kentucky, and Illinois. Project included obtaining pre-construction and operating permits for air, water and mining for the manufacturing plants and the feedstock coal recovery operations. Assignments included permit application preparation, assistance in locating and evaluating coal feedstock sites, construction monitoring, Phase 1 environmental site assessments, and other miscellaneous engineering consulting functions.

Pennsylvania Electric Company – Yearly construction designs for lined coal ash and coal refuse disposal sites at the Keystone and Conemaugh power stations, including a synthetic liner system, groundwater and surface-water control, leachate collection, landfill development, and haul road design. Construction quantity and cost estimates and development of IBM-PC software for evaluating the storage capacity of the disposal sites.

#### Landfills/Solid Waste/Waste Disposal

DuPont Washington Works – Project Manager responsible for design, preparation of construction documents, and construction documents, and construction

quality assurance monitoring for a 6.2-acre expansion of a piggyback of a leachate collection system at an industrial waste landfill.

Eastern Environmental Services, Inc. – Project engineer/project manager for finalizing a permit application for the S&S Landfill near Clarksburg, West Virginia. Components of the plan included a detailed staging and closure plan to comply with sediment control and leachate storage requirements. Successfully represented the landfill in a permit appeal hearing before the Water Resources Board. Prepared two construction/bid packages for constructing the initial 10 acres of the landfill.

Cytec Industries – Quality assurance/quality control monitoring for closure of a 10-acre SWMU containing biological treatment sludge. The contents of the basin were stabilized by mechanical mixing. Activities included supervision of testing, data evaluation, and a revised interim grading and drainage plan. Report and certification provided for WVDEP-OWM.

Cytec Industries – Closure plan and permit application for closure of a 5-acre industrial waste landfill. Steep slopes over a portion of the landfill necessitated the design of an innovative cap system and leachate collection system. Project also included closure and capping of a small pit containing tar residue.

Responsible for detailed hydrogeologic investigation and preparation of a major portion of the WVDEP Part A Solid Waste Disposal Permit Application for the Northfork Landfill near Wheeling, West Virginia. Project included field reconnaissance and mapping of existing site conditions, rock corings, test pits, laboratory analysis of soils for potential construction materials, installation of four monitoring wells, and the corresponding analysis and evaluation of data for completing the Part A Application.

Responsible for hydrogeologic investigation and preparation of the WVDEP Part A Solid Waste Disposal Permit Application for the Sycamore Scenic Landfill in Putnam County, West Virginia. Work included coring, test pit, and laboratory analysis of soils; review of existing groundwater data; and analysis and evaluation of data for completing the Part A Application.

Project Manager responsible for construction quality assurance monitoring for three landfill expansions at

Brooke County Sanitary Landfill, including 6.5 acres of composite liner.

Project Manager responsible for construction quality assurance monitoring for 0.8-acre composite liner expansion at Wetzel County Landfill.

Project Manager/Project Engineer for design of composite liner system expansion, design and construction quality assurance for a 2-acre final landfill cap, and design of a new access road serving Pocahontas County Landfill.

Chambers Development Company – Preparation of solid waste disposal permit applications for the Monroeville Landfill, Monroeville, Pennsylvania, and the Southern Alleghenies Landfill, Cambria County, Pennsylvania, both of which include a double synthetic liner system combined with a drainage net leak detection system to conform to Pennsylvania DER regulations.

Project manager/engineer for the West Virginia Division of Environmental Protection's landfill closure assistance program for 1997 through 2002. Responsible for conceptual design, field investigation, construction drawings, specifications, permit applications, etc., for the following projects:

- Wyoming County Landfill
- Jackson County Landfill
- Kanawha Western Landfill
- Monongalia County Sanitary Landfill
- Fayette County Landfill
- Fleming Sanitary Landfill

QA/QC monitoring oversight for a municipal waste landfill in Tazwell County, Virginia.

Design; preparation of drawings, technical specifications, and contract/bid documents; construction monitoring; air monitoring; sludge sampling and analysis; review and approval of a detailed health and safety plan; permitting; and other miscellaneous engineering services for the stabilization and closure of a 3-acre sludge basin and a 1-acre sludge pond. The project included management of a pilot-scale demonstration, procurement of stabilization reagents from multiple providers, and development of an adjacent soil borrow area.

Design; preparation of drawings, technical specifications, contractor's bid sheet, engineer's cost estimate, contract, and cap acceptability evaluation; evaluation of contractor

bids, and construction monitoring associated with the capping and closure of a 2.5-acre cell of an industrial waste landfill facility. Cap included a multi-layer geocomposite system to minimize infiltration and the production and leachate to improve the areas groundwater quality.

Final design and preparation of construction drawings, detailed technical specifications, and engineer's construction cost estimate for the construction of a 1.9-million-gallon double-lined pond and 5 acres of a landfill liner system. This project included development of an ultimate facility layout plan, a two-year detailed development plan, and construction monitoring. Project also included negotiations with regulatory agency to obtain approval of the permit.

Response to regulatory agency review comments and redesign of a pond liner system and piggyback landfill liner system for a 20-acre landfill in West Virginia.

DuPont Environmental Remediation Services – Consulting regarding the design of a final cover/cap for an industrial waste landfill located in West Virginia.

West Virginia Public Service Commission – Site reconnaissance, development of alternative capping/closure systems, and preparation of engineer's cost estimates for the closure of two West Virginia municipal waste landfills in support of rate making testimony and hearings.

American Cyanamid Company – Project manager/engineer for independent quality assurance/quality control monitoring associated with closure of a three-acre SWMU consisting of a waste impoundment. Project included construction of an earthen buttress to improve slope stability, in-place waste stabilization using fly ash and kiln dust, and construction of a RCRA cap. Responsible for field design revisions to overcome problems, conformance testing, and preparation of certifications and a summary report. Project included sampling and analysis of raw and stabilized sludge.

American Cyanamid Company – Coordination of field activities associated with construction monitoring and laboratory testing for RCRA hazardous waste impoundment (the first permitted and constructed in EPA Region III) in Willow Island, West Virginia, including earth moving, construction of a soil-bentonite liner,

monitoring of three, sealed double-ring infiltrometers, and construction of an HDPE double-lined impoundment.

Pennsylvania Electric Company – Field (construction) monitoring for development of a residual waste landfill including compaction testing for heavy earth moving, synthetic (PVC) liner installation, concrete testing, and other miscellaneous testing.

Virginia Power Company – Consultant for site development and construction of a fly ash disposal facility including a review of site operations, developing a maintenance program, compaction testing and review, and problem shooting.

Rhone-Poulenc Ag Company – Design and permitting for a proposed industrial solid waste landfill. Project included complete hydrogeologic evaluation including several borings and installation of seven monitoring wells; documentation of soils, geology, water quality and hydrogeology; detailed site design of leachate ponds, liner system, storm water collection system, access road, and capping/closure system. Multi-volume permit application prepared including Operations Manual, Quality Assurance/Quality Control Plan, Technical Specifications, Permit Application, and Design Drawings.

Rhone-Poulenc Ag Company – Leachate Minimization Study for a RCRA Hazardous Waste Landfill. Project included assessment of existing landfill operation and recommendations to reduce quantity of contaminated runoff from over 8 million gallons per year (MGY) to between 2 and 3 MGY. Detailed staging and operating plan, storm water management plan, and cost estimates prepared.

American Cyanamid Company – Closure plan and permit application for closure of a three-acre surface impoundment containing sludge and tar. Stability concerns for an existing embankment containing the waste lead to the development of a lightweight cap. Subsurface investigation and field surveying completed. Closure application as required by the West Virginia Division of Environmental Protection provided.

Soundings and sampling of three basins containing sludge. Two basins contained sludge from secondary biological treatment of industrial wastewater. One basin contained petroleum product sludges. Sludge quantities determined from soundings and cross sections prepared.

Samples obtained for laboratory analysis to characterize wastes.

- Rhone-Poulenc Ag Company
- Ashland Petroleum Company

Monongalia County Sanitary Landfill – Engineer responsible for expansions, planning, and upgrades for the Monongalia County Sanitary Landfill from 1990 through 1992. Activities included:

- Three expansions (seven acres total) of the landfill liner and leachate collection system, including grading, groundwater collection drains, landfill liner system and leachate drains, protective cover, and surface drainage control
- Construction monitoring
- Certification of landfill expansions
- Construction of a 1.6-million-gallon leachate storage basin, including clay liner, double synthetic liner, synthetic drainage layer, protective cover, and drainage control devices
- Annual landfill volume reports, including surveyed cross sections
- Two borrow area investigations to identify clay liner sources
- Feasibility study for expansion and continued operation of the facility
- Final closure plan for the facility including a multi-layered cap and drainage control plan

Rhone-Poulenc AG Company – Evaluation of an emergency fly ash pond for a chemical plant in Institute, West Virginia. Recommendations, including conceptual design drawings and an engineer's cost estimate, to increase the settling efficiency of the pond. Special design elements, including a polymer feed system, submerged manifold pipe, splitter dike, and an overflow weir.

Hampton-Clarke, Inc. – Project Manager for Independent Quality Assurance Testing (IQAT) services for removal of contaminated soils and placing clean soil backfill at the site of a former cullet pile disposal area.

### Stormwater

Expert witness for plaintiff damaged as a result of flooding caused by lack of maintenance at a culvert system in Westoreland, Wayne County, West Virginia.

Stormwater drainage plans for site development projects including pre- and post- development discharges, design of sediment control devices, preparation of stormwater general permit application, and consulting for numerous construction projects in West Virginia.

Evaluation of stormwater drainage system (culverts and channels) to alleviate flooding problems for a church in Kanawha County, West Virginia. Project included computer modeling to identify culvert capacities and to identify repair options.

Expert retained to support a property owner damaged as a result of flooding caused by downstream obstructions. Reviewed regulatory agency files, conducted site inspections, evaluated possible remedial measures, and provided support in anticipation of litigation.

Expert witness for plaintiff damaged as a result of flooding from upstream construction. Visited site to observe problem areas, reviewed construction practices/procedures, reviewed regulatory permits, and provided testimony as to the cause of flooding.

Developed stormwater management plans, including calculation of peak runoff rates, storm volumes, and design of stormwater management devices including culverts, ditches, sumps, ponds, principal pipe spillways, and emergency spillways for the following projects:

- Site development projects including commercial, retail, and industrial sites ranging from ¼ acre to more than 100 acres.
- Abandoned mine lands reclamation projects, including landslides, refuse piles, slurry ponds, and subsidence control projects.
- Commercial and industrial waste landfill projects.
- Roadway design projects.
- Other projects involving the disturbance of the ground surface.

Water Lines, Water Storage Tanks, and Water Treatment Plants

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Included in project were 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

Design for waterline extension projects including preparation of construction drawings, specifications, and engineer's cost estimates for the West Virginia Division of Environmental Protection, Office of Abandoned Mine Lands and Reclamation.

- Cassity Fork Waterline
- Beaver Creek Waterline Extension
- Godby Branch Waterline Extension

Design, preparation of construction drawings, preparation of permit applications, and other related activities for the construction of waterline projects. Line sizes ranged from 16 inches to 2 inches. Materials of construction included polyvinyl chloride and ductile iron pipe. Drawings included planimetric maps, topographic maps, and aerial photograph formats to depict proposed construction. Permit applications included Bureau of Public Health, Public lands Corporation Stream Activity Permits, Division of Highways Occupancy Permits, and General Storm Water NPDES Construction.

- Cabell County 2000 Project, 23 miles of new waterline construction, West Virginia American Water Company (WVAWC)
- Poca River Road Waterline Extension, 13 miles of new waterline construction, WVAWC
- Route 60 Contract 3 Waterline Extension, 3 miles of new waterline construction, WVAWC
- Buff Creek/Trace Fork Waterline Extension, 6 miles of new waterline construction, WVAWC
- Route 60 Contract 4 Waterline Extension, 2 miles of new waterline construction, WVAWC
- Yorktowne Subdivision, 3,000 linear feet of waterline serving a 50-lot subdivision.

ESAs (Phase I and II)

Numerous Phase I Environmental Site Assessments including reclamation liability assessments for mining and industrial properties in West Virginia and Kentucky. Projects typically focused on solid waste disposal practices, potential acid mine drainage discharges, underground storage tank status, areas of hydrocarbon soil contamination, PCB transformer concerns, and other environmental liabilities.

Phase II environmental site assessment for an abandoned mining complex located in Fayette County, West Virginia. The new owners wished to identify any liabilities and determine approximate clean-up costs for negotiations with the previous owners. The areas evaluated included two aerial tram head houses, a drum storage area, truck maintenance garage, mine machinery repair shop, two commercial properties, a lamp house, and other storage areas. Numerous areas of petroleum hydrocarbon contamination were identified, and the extent of contamination documented. An on-site laboratory was used to expedite testing and establishing the boundary of areas requiring remediation. The results of the investigation were summarized in a report, including a detailed description of sampling and laboratory analysis methods, drawings showing sample locations, laboratory results, estimated volumes of contaminated soils, and recommendations for cleanup.

West Virginia Regional Jail and Correctional Facility Authority – Phase I Environmental Site Assessment to document potential liability for a tract being considered for a regional jail site in Kanawha County, West Virginia. Activities included historic records search, interviews, site reconnaissance and preparation of a report documenting the findings.

DiMucci Development – Phase I Environmental Site Assessment for property proposed for development as a strip mall.

The Multicare Companies, Inc. – Completion of eight Phase I Environmental Site Assessments for nursing and rehabilitation care facilities in West Virginia.

Virginia Electric Power Company – Assistance with site design and engineer's construction cost estimate for the remedial design of a CERCLIS waste disposal facility.

Phase I environmental site assessments for feedstock recovery sites associated with three coal-based synthetic fuel manufacturing plants. The feedstock recovery sites included numerous coal waste slurry impoundments, dry refuse piles, and mixed refuse disposal areas. Assessments focused on potential acid mine drainage problems, former waste disposal areas, and other mining-related environmental liabilities. A report was prepared detailing the findings for each site.

#### Storage Tanks

Columbia Gas Transmission – Project manager for completion of over 350 AST Registrations, Inspections/Certifications, and site-specific Spill Prevention Response Plans for 40 facilities.

- Followed the Aboveground Storage Tank Act §22-30 Title 47 Interpretive Rule Series 62 and the Draft Emergency Rule additionally conferring with the West Virginia Department of Environmental Protection (WVDEP) to establish accurate classification and compliance.
- Met all regulatory deadlines.
- Reviewed comprehensive electronic documentation comprising of completed inspection sheets, photographs, detailed deficiencies.
- Provided recommendations and schedule for abatement for deficient secondary containment structures.

Rhone-Poulenc AG Company – Geotechnical and environmental investigation for two proposed above-ground reinforced concrete tanks to serve as secondary wastewater treatment unit. Investigation included soil drilling, sampling, laboratory analysis for engineering properties, and analysis for contamination. Field survey completed to locate existing structures. Report prepared outlining soils/geology, environmental concerns and foundation recommendations.

Closure of 13 aboveground RCRA storage tanks. Closure services included review of agency approved closure plan to determine compliance items, visual inspection of tank interiors and earthen containment berm areas, review of rinsate analyses, review of soils testing analysis from berm areas, and preparation of closure documentation and certification.

- Rhone-Poulenc AG Company
- American Cyanamid Company

Cannelton, Inc. – Abandoned underground storage tank investigation including sampling of tank contents, geoprobe investigation, and field and laboratory analysis of soil samples.

#### Sewer Lines and WWTPs

Project manager/project engineer for the Fleming Landfill Sanitary Sewer Extension project in Kanawha County, West Virginia. Project included design, permitting, construction monitoring, and certification of 9,900 linear feet of gravity and force main sanitary sewer, a new duplex pump station, and rehabilitation/upgrade of an existing pump station. The construction contract was over \$1 million. The completed sewer extension was turned over from the West Virginia Department of Environmental Protection to the Sissonville Public Service District for ownership and operations.

Project engineer for sanitary sewer system including 8-inch gravity sewer, pump station, and force main sewer serving the Gettysburg Subdivision in Charleston, West Virginia. Project included an alternate mainline extension agreement with Charleston Sanitary Board, construction monitoring, surveying, road design and subdivision plans.

Project manager/engineer for an industrial wastewater sewer extension. Project included design engineering, permitting, and construction monitoring associated with a 5 million gallon, double-lined storage impoundment, duplex pump station with 70 horsepower pumps, and 5,200 linear feet of force main sewer in Monongalia County, West Virginia.

Design, permitting and construction monitoring associated with a 138,000-gallon double containment storage tank, duplex pump station, and force main piping associated with closure of the Jackson County Sanitary Landfill near Ripley, West Virginia.

#### Oil and Gas

Columbia Gas Transmission Corp – Project Manager for in-house consulting services provided for environmental reports and permit applications for natural gas pipeline transmission projects.

Columbia Gas Transmission – Field reconnaissance of approximately 16 miles of pipeline route, preparation of erosion and sediment control measures, and preparation of stream crossing permits for the NJET project.

**Spill Prevention, Control & Countermeasure Plans**

Union Carbide Corporation, South Charleston Plant – Audit of chemical manufacturing plant to determine compliance with the facility Spill Prevention Control and Countermeasures (SPCC) plan. Project included review of SPCC plan prepared by facility staff, on-site inspection of over 50 storage areas to ascertain compliance with the SPCC plan and pertinent regulations, preparation of a list of observed deficiencies, and certification of the SPCC plan by a professional engineer.

**Stream/Wetland Delineation, Permitting, and Mitigation**

Columbia Gas Transmission Corp – Design of stream stabilization and restoration plan for a section of East Fork of Queer Creek in Hocking County, Ohio. Project included obtaining 401/404 certification and preparation of a detailed construction plan.

# WEST VIRGINIA UNIVERSITY



THE COLLEGE OF ENGINEERING

KNOW ALL PERSONS BY THESE PRESENTS  
THAT THE WEST VIRGINIA BOARD OF REGENTS  
UPON THE RECOMMENDATION OF THE FACULTY  
HAS CONFERRED UPON

DAVID MARK KISER

THE DEGREE OF

BACHELOR OF SCIENCE IN CIVIL ENGINEERING  
SUMMA CUM LAUDE

WITH ALL THE RIGHTS, HONORS AND PRIVILEGES THEREUNTO  
APPERTAINING. WITNESS THE SEAL OF THE UNIVERSITY  
AND THE SIGNATURES OF ITS DULY AUTHORIZED OFFICERS  
HEREUNTO AFFIXED THIS THIRTEENTH DAY OF  
MAY, NINETEEN HUNDRED EIGHTY-FOUR

*E. Andrew Lee*  
PRESIDENT OF THE UNIVERSITY

*Robert W. Sproull*  
PRESIDENT, WEST VIRGINIA BOARD OF REGENTS

*Curtis J. Tompkins*  
DEAN OF THE COLLEGE

*William H. Simmons*  
CHANCELLOR, WEST VIRGINIA BOARD OF REGENTS



# MARY M. ARMSTEAD, PH.D., L.R.S.

*Senior Scientist, Licensed Remediation Specialist*



## EDUCATION

- Ph.D. Biology/Ecotoxicology, 1994  
Virginia Tech
- M.S. Biology/Aquatic Ecology, 1991  
Marshall University
- B.S. Biology, 1987  
University of Charleston

## EMPLOYMENT HISTORY

- 1997-Present Potesta & Associates, Inc.  
1996-1997 Terradon Corporation  
1991-1996 Virginia Tech  
1989-1991 Marshall University

## PROFESSIONAL REGISTRATION

Licensed Remediation Specialist – West Virginia

## PROFESSIONAL AFFILIATIONS

- Society of Environmental Toxicology and Chemistry
- North American Benthological Society
- American Society for Surface Mining and Reclamation
- Society of Environmental Toxicology and Chemistry

## AREAS OF SPECIALIZATION

Development of remediation, recovery and restoration plans, as well as environmental and human health risk assessments. Evaluating toxicity data, conducting habitat assessments and biological surveys, conducting biomonitoring and bioaccumulation studies, and NPDES permit development.

## PROFESSIONAL EXPERIENCE

### Biological Studies and Sampling

American Electric Power Company – Developed in-situ testing methodology for juvenile unionid mussels.

Environmental Planning and Analysis, Inc. – Reviewed data collected to determine the effects of pulp and paper mill effluent on freshwater and marine receiving systems to advise legal counsel for industry.

Army Corps of Engineers, Waterways Experimental Station – Assessed the effect of white phosphorous from ammunition on the benthic macroinvertebrate community structure in streams running through impact zones. Conducted similar studies on the LaCrosse River at Fort McCoy, Wisconsin and on two streams at Fort Bragg, North Carolina.

Massey Coal Corporation – Spill response involving a 250-million-gallon coal mine slurry release including physical, chemical and biological monitoring, consulting relating to remediation and restoration, liaison with regulatory and emergency response agencies, assessment of damages and negotiations of fines.

Sonoco Products Company – Conducted field and laboratory analysis including effluent toxicity testing, water chemistry analysis, and benthic macroinvertebrate community structure analysis for an industrial facility in Downingtown, Pennsylvania to determine the impact of effluent treated with chlorine dioxide on the receiving stream.

Duquesne Light Company – Conducted sediment testing as part of a larger project to assess the fate and effects of a nuclear power plant outfall following the application of a molluscicide.

Sonoco Products Company – Determined the source of acute toxicity in settling pond effluent using toxicity testing, chemical analysis and measurement of retention time for an industrial facility in Hartsville, South Carolina.

Sheidow Bronze Corporation – Conducted benthic survey using USEPA Rapid Bioassessment Protocols to assess potential impacts from storm water runoff from a non-ferrous foundry that manufactures bronze castings.

Allegheny Energy Supply – Conducted a Use Attainability Analysis on a river system designated as a cold-water fishery in Tucker County, West Virginia.

Client Confidential – Responsible for study design, data interpretation and expert witness testimony for a coal company on issues relating to treatment of mine discharge. Specific issues include aquatic toxicity and deposition of precipitates in a receiving stream.

MEPCO – Conducted benthic survey using USEPA Rapid Bioassessment Protocols to assess stream quality prior to the issuance of a re-mining permit in two streams in Monongalia County, West Virginia.

#### Stream/Wetland Delineation, Permitting and Mitigation

American Electric Power Company – Development of a watershed scale restoration plan for Leading Creek in southeastern Ohio. This project involved integration of biological surveys, toxicological testing, water chemistry monitoring and hydrological modeling into a GIS database for watershed scale modeling.

Client Confidential – Reviewed and prepared comments on study design and modeling of Total Maximum Daily Loads Strategies for several streams in West Virginia.

#### Water Pollution

IBM Corporation – Monitored effluent toxicity and permit compliance for industrial facility in New York.

Hoechst Celanese Corporation – Monitored 30-day chlorination of industrial facilities in Virginia and South Carolina for the control of *Corbicula fluminea* biofouling. Also, advised industries of most effective treatment initiation dates based on regular monitoring of the organisms' reproductive condition.

Client Confidential – Reviewed water chemistry and toxicological studies from waste streams at a chemical plant to provide assistance in designing waste treatment plant upgrades.

Hoechst Celanese Corporation – Determined the effects of a thermal effluent mixing zone on juvenile fish recruitment and use of macrophyte habitat in the New River, Virginia.

Hoechst Celanese Corporation – Evaluated the effects of a thermal effluent mixing zone on fish passage and distribution in the New River, Virginia.

Allegheny Energy Supply – Mixing zone delineation using the CORMIX model and field surveys, including permitting modifications to incorporate a diffuser outfall and negotiations with state agencies to expedite permit modifications.

Virginia Environmental Endowment – Assessed the effect of agricultural runoff and other non-point source pollutants on habitat availability and benthic community structure in the Little River watershed, Floyd County, Virginia.

American Electric Power Company – Evaluated the impacts of point and non-point sources of pollution on sediment toxicity and unionid mussel recruitment in the Clinch River, Virginia.

#### NPDES Industrial/Municipal Permitting

Koppers Industries, Incorporated – Preparation of an NPDES and UIC permit applications for a wood treatment facility.

#### Risk Assessment

Conducted human health and ecological risk assessments relative to industrial site with lead and PCB contamination, including modeling of human health and ecological impacts, resulting in a site remediation and future use plan.

#### Stormwater

Conducted toxicity reduction investigations and toxicity reduction evaluations for a large bronze foundry/casting operation relative to storm water impacts from metals.

Mountain State Airgas – Storm water permit registration and pollution prevention plan updates for welding supply facilities.

Tetra Technologies – Prepared storm water permit and Storm Water Pollution Prevention Plan for calcium chloride production facility in northern West Virginia.

Sheidow Bronze Corporation – Responsible for reviewing a toxicity reduction evaluation, storm water toxicity data, and water quality data for a non-ferrous foundry that manufactures bronze castings to determine the source of toxicity.

**Groundwater**

Client Confidential – Responsible for database design, data analysis and interpretation for a long-term monitoring study of groundwater quality at an industrial landfill.

**Regulatory and Litigation Support**

Client Confidential – Researched regulatory and permitting issues relevant to expanding markets for a thermal vaporization facility.

**Laboratory**

AC&S Incorporated – Laboratory Supervisor for a state certified Aquatic Toxicity Laboratory which conducts acute and chronic single species toxicity tests.

Hester Industries – Statistical evaluations for the Quality Assurance/Quality Control program of an industrial facilities' laboratory.



## EDUCATION

M.S. Aquatic Ecology, 1990  
Marshall University

B.S. Biological Sciences, 1987  
West Virginia State College

## EMPLOYMENT HISTORY

1997-Present Potesta & Associates, Inc.  
1990-1997 Terradon Corporation  
1990 Union Carbide Corporation  
1988-1989 Marshall University

## PROFESSIONAL CERTIFICATIONS

- OSHA Hazardous Waste Site Operations Supervisor Training
- OSHA 40-Hour Hazardous Waste Site Operations Workers Training

## AREAS OF SPECIALIZATION

Water permitting and compliance, SARA III (EPCRA) reporting and regulatory compliance, air permitting, and environmental management system manual preparation.

## PROFESSIONAL EXPERIENCE

### Water Permitting and Compliance

Industrial NPDES Permitting for a variety of West Virginia facilities:

- Cytec Industries, Inc
- MPM Silicones, LLC
- Koppers Industries, Inc.
- Elementis Specialties, Inc.
- Pilgrim's Pride Corporation
- PNGI Charles Town Gaming, LLC
- Armstrong World Industries
- Akzo Nobel Chemical, Inc.
- York Bronze Company
- Creo Manufacturing America, LLC

NPDES Permitting for municipal facilities and publicly-owned treatment works:

- Salt Rock Public Service District
- Boone County Public Service District
- City of Martinsburg, West Virginia
- City of Follansbee, West Virginia

NPDES Permitting for quarry mining facilities in West Virginia:

- Southern West Virginia Asphalt, Inc.
  - Kelly Mountain Quarry – Elkins, West Virginia
  - Bowden Quarry – Elkins, West Virginia
  - Sugarlands Quarry – St. George, West Virginia
- Continental Brick Company

NPDES General Storm Water Permitting, Storm Water Pollution Prevention Plans (SWPPP) and/or Groundwater Protection Plans (GPPs) for various facilities:

- Southern West Virginia Asphalt, Inc.
  - Alta, West Virginia
  - Beaver, West Virginia
  - Elkins, West Virginia
  - Huntington, West Virginia
  - Moorefield, West Virginia
  - Princeton, West Virginia
  - Summersville, West Virginia
  - Whitman, West Virginia
- West Virginia Paving, Inc.
  - Dunbar, West Virginia
  - Poca, West Virginia
  - Ripley, West Virginia

- Camden Materials,
- Kelly Paving, Inc.
  - Ravenrock, West Virginia
  - Benwood, West Virginia
  - Weirton, West Virginia
- Al Rec, LLC
- DALB, Inc.
- Hino Motors Manufacturing
- Steve Simpson & Associates, Inc.
- Integrity Delaware, LLC
- Lowe Products Company, Inc.
- Multicoat Products, Inc.
- PC West Virginia Synthetic Fuels, LLC
  - Chelyan, West Virginia
  - Summersville, West Virginia
  - Eckman, West Virginia
- J.F. Allen Company
- Enron Global Markets, LLC
- Potomac Construction Industries, Inc.
- Poor Charlie & Company
- Riverside Technologies, Inc.
- Greer Industries, Inc.
- Parks Corporation
- Constellation Power Development
- Shelly & Sands, Inc.

Metals Translator Studies and development of site-specific metals translators for various facilities in West Virginia:

- Boone County Public Service District
- Bluewell Public Service District
- Pilgrim's Pride Corporation
- Hobet Mining
- Continental Brick Company
- Coyote Coal Company
- White Flame Energy
- Creo Manufacturing America, LLC
- City of Follansbee, West Virginia
- Greer Industries, Inc.
- CONSOL Energy

Background Water Quality, Baseline Water Quality, and/or Mixing Zone Studies for various West Virginia facilities:

- Cytec Industries, Inc.
- Koppers Industries, Inc.
- Pilgrim's Pride Corporation
- Clearon Corporation
- Boone County Public Service District
- Bluewell Public Service District

Discharge Monitoring Reporting:

- Cytec Industries, Inc.
- Al Rec, LLC
- Southern West Virginia Asphalt, Inc.

Benthic Macroinvertebrate Studies:

- Hester Industries, Inc. - South Branch of the South Fork of the Potomac River
- Union Carbide Corporation – Ward Hollow of Davis Creek

Stream/Wetland Delineation, Permitting, and Mitigation for various projects in West Virginia:

- Resource Consultants and Developers, Inc.
- Morgantown Energy Technology Center
- Capels Resources
- Proposed 560-acre site of Apple Grove Pulp and Paper
- Howe's Leather

#### SARA III (EPCRA) Reporting and Compliance

Form R Toxic Chemical Release Inventory (TRI) evaluation and/or reporting for various facilities throughout West Virginia:

- DALB, Inc.
- UGM Addcar, Inc.
- LP Minerals, LLC
- Arch Coal, Inc.
- International Coal Group
- Greer Industries, Inc.
- Hester Industries, Inc.
- Sheidow Bronze Company
- AC&S, Inc.
- Creo Manufacturing America, LLC

Tier II Hazardous Chemical Inventory reporting for various facilities throughout West Virginia:

- Hester Industries, Inc.
- Walker Machinery Company
- AC&S, Inc.
- Creo Manufacturing America, LLC
- Greer Industries, Inc.
- Pfaff & Smith, Inc.

Section 304 Initial Notifications and Material Safety Data Sheet (MSDS) reporting for facilities in West Virginia:

- Patriot Mining Company, Inc.
- Greer Industries, Inc.

USEPA SARA III compliance audits for facilities in West Virginia:

- Hester Industries, Inc.
- Sheidow Bronze Company
- Patriot Mining Company, Inc.

#### Air Permitting and Compliance

Regulation 13 Permitting for various West Virginia facilities:

- Hester Industries, Inc
- Parks Corporation
- Greenbrier Limestone Corporation
- Century Limestone, Inc
- Meadows Stone & Paving, Inc
- Pfaff & Smith, Inc.
- Arrow Concrete Company
- Southern West Virginia Asphalt, Inc
  - Elkins, West Virginia
  - Whitman, West Virginia
  - Beaver, West Virginia
- West Virginia Paving, Inc.
  - Poca, West Virginia
  - Dunbar, West Virginia

Regulation 21 emissions calculations and registrations for a variety of industries in West Virginia, including manufacturing and chemical facilities, a bulk fuel terminal, numerous gasoline stations, and dry cleaners.

Title V Certified Emissions Statements (CESIs) and emissions inventories (EIs) for a variety of facilities throughout West Virginia, including manufacturing facilities, small chemical companies and numerous quarries and asphalt plants.

Emission Inventory Statements (EISs) for over 30 facilities, including a bulk gasoline terminal, manufacturing facilities, and numerous asphalt plants and quarries.

#### Environmental Management

Prepared Environmental Management System Manuals for facilities in West Virginia and Ohio:

- Gestamp West Virginia, LLC
- Greer Industries, Inc.
- PC West Virginia Synthetic Fuels, LLC
- Creo Manufacturing America, LLC
- SDR Plastics, Inc.
- West Virginia Forestry Association
- Koppers Industries

#### Landfills/Solid Waste/Waste Disposal

Jackson County Landfill:

- Monthly tonnage reports
- Coordination of groundwater, surface water and methane gas sampling and
- Operations Manual and Annual Operational Reports
- Hazardous Waste Exclusion Plan and associated training
- Response to DEP Notices of Violation

Operations Manual and Hazardous Waste Exclusion Plan for a landfill in Omar, West Virginia.

Comprehensive Litter and Solid Waste Control Plans for Jackson, Mason and Wood Counties, West Virginia.

Solid Waste Facility Siting Plans for Jackson, Mason, and Wood Counties, West Virginia.

#### Environmental Assessments/Impact Statements

Environmental Assessment or Categorical Exclusion documents for facilities in West Virginia and Maryland:

- Crown Communications (numerous cellular towers)
- Greystone Development
- Columbia Gas Transmission Corporation
- West Virginia Division of Highways

#### FERC Reports

Columbia Gas Transmission Corporation – Environmental Resource Reports for FERC applications for several pipeline projects. The projects included individual pipeline replacement projects and a large market expansion project.

ESAs (Phase I and II)

Phase I Environmental Site Assessments:

- Hester Industries, Inc.
- Parks Corporation
- Juliana Glass
- Resource Developers and Consultants, Inc.
- Barrack's Auto
- Go-Mart, Inc.

Phase II Environmental Site Assessments:

- Hester Industries, Inc.
- Juliana Glass
- Barrack's Auto

Remediation

Site Characterization/Remediation Plans for various facilities in West Virginia:

- Swanson Plating Company
- Transdistribution Company
- Wayne Lumber Company
- Batteries, Inc.
- Vienna Cleaners
- Inco Alloys



# Michael Mills

AIA, NCARB

## MANAGING PRINCIPAL

### EDUCATION

BS, BARCH / 1993 / RENSSELAER  
POLYTECHNIC INSTITUTE

### PROFESSIONAL REGISTRATIONS

WEST VIRGINIA  
VIRGINIA  
OHIO  
PENNSYLVANIA  
MASSACHUSETTES

## BIOGRAPHY

Mr. Mills leads all facets of the daily operations of the Mills Group. He has over 25 years of experience in historical preservation, architectural design, and planning. Through his extensive work with historic structures, he has a detailed working knowledge of the Secretary of the Interior's Standards for Historic Preservation Projects. His work includes interior and exterior preservation, window restoration, foundation waterproofing, roof repair, integration of MEP systems in a historic structure and the design of interpretive exhibits for historic structures. The other aspects of his work include historic design guidelines, contextual design of new structures, and the issues related the revitalization of main streets across the country.

## EXPERIENCE

### **Hawks Nest Event Center** - Ansted, WV

Michael oversaw the creation of construction documents for the interior renovation of the Museum and Pavilion. He also oversaw the verification of historical accuracy of particular finishes and assisted in designing the entire site to be ADA accessible.

### **Hawks Nest/Twin Falls State Park** - Ansted & Twin Falls, WV

Michael assisted with communication between the project manager and the State Historic Preservation Office, documenting the work of the installed units and compiled data to comply with Federal and state regulations.

### **Buller Fish Hatchery** - Marion, VA

Mills Group served as an architectural consultant to develop a concept for the Buller Fish Hatchery in Marion, VA. The Hatchery building is approximately 6,000 sq. ft. with designated areas like a production area, mechanical/filter room, storage area, brine shrimp prep room, two offices and more.

### **Morgantown Ice Arena** - Morgantown, WV

Michael assisted with the concept study to renovate the existing ice arena in Morgantown. The concept study proposed three different designs for the client to choose. Other services included in the study was the site and landscape masterplan and upgrades to the mechanical, electrical and plumbing systems.

### **1200 Bottleworks** - Fairmont, WV

Mills Group has been leading the interior renovations and tenant build-out of an existing pre-engineered metal building and a new 40' x 60' warehouse building in the industrial park. The interior renovations will provide 4,700 sq. ft. of warehouse space and 2,980 sq. ft. of office areas, conference room, large training space as well as restrooms and locker rooms to service the warehouse areas.





# Stacey Bowers

AIA, NCARB

PROJECT  
ARCHITECT

## EDUCATION

MA / 2009 / UNIVERSITY OF  
ILLINOIS AT CHICAGO

BS, BARCH / 2007 / FAIRMONT  
STATE UNIVERSITY

## PROFESSIONAL REGISTRATIONS

WEST VIRGINIA  
PENNSYLVANIA:  
CERTIFIED BUILDING  
CODE OFFICIAL

## BIOGRAPHY

Stacey Bowers works as a project architect for Mills Group. Her background includes commercial and industrial projects, educational facilities, historic properties, residential projects, renovations and additions. Stacey also is a professor of Architecture at Fairmont State University.

Stacey has experience working with a variety of clients including local governments, county commissions, county school systems as well as different funding agencies and the WV State Historic Preservation Office. Stacey is also registered with the WV State Fire Commission as a certified Building Code Plans Examiner where she would perform code reviews for a local municipality.

## EXPERIENCE

### **Hawks Nest Event Center** - Ansted, WV

Stacey created construction documents for the interior renovation of the Museum and Pavilion. Along with creating construction documents, Stacey verified historical accuracy of particular finishes and assisted in designing the entire site to be ADA accessible.

### **1200 Bottleworks** - Fairmont, WV

Mills Group has been leading the interior renovations and tenant build-out of an existing pre-engineered metal building and a new 40' x 60' warehouse building in the industrial park. The interior renovations will provide 4,700 sq. ft. of warehouse space and 2,980 sq. ft. of office areas, conference room, large training space as well as restrooms and locker rooms to service the warehouse areas.

### **MVB Bank** - McLean, VA

This interior fit-out of the first floor of the MVB branch includes interior upgrades to align with the client's brand and spatial awareness for better flow of the space. The 1,800 sq. ft. space includes a lobby, administrative offices, teller line, safety deposit box room and a staff break room.

### **St. Mary's Church** - Petersburg, WV

Stacey administered the documentation of existing conditions assessment for the rehabilitation of the St. Mary's Parish. She also completed as-built drawings, building evaluation, and concept plan for expansion of historic church building.

West Virginia Ethics Commission  
**Disclosure of Interested Parties to Contracts**

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Potesta & Associates, Inc.

Address: 7012 MacCorkle Avenue, SE, Charleston, WV 25304

Name of Authorized Agent: Dana L. Burns Address: 7012 MacCorkle Avenue, SE, Charleston, WV 25304

Contract Number: CEOI 0310 DNR200000006 Contract Description: A/E Services Palestine Hatchery Facility

Governmental agency awarding contract: Division of Natural Resources Parks & Recreation

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

**1. Subcontractors or other entities performing work or service under the Contract**

Check here if none, otherwise list entity/individual names below.

Mills Group

**2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**

Check here if none, otherwise list entity/individual names below.

Ronald R. Potesta  
Dana L. Burns

**3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**

Check here if none, otherwise list entity/individual names below.

Signature: *Dana L. Burns* Date Signed: 04-13-20

**Notary Verification**

State of West Virginia, County of Kanawha:

I, Dana L. Burns, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 13<sup>th</sup> day of April, 2020.

*Rhonda L. Henson*  
Notary Public's Signature

**To be completed by State Agency:**

Date Received by state agency: \_\_\_\_\_

Date submitted to Ethics Commission: \_\_\_\_\_

Governmental agency submitting Disclosure: \_\_\_\_\_





Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Centralized Expression of Interest  
 02 — Architect/Engr

Proc Folder: 697854

Doc Description: Addendum No.01 - A/E Services- Palestine Hatchery Facility

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2020-03-26	2020-04-14 13:30:00	CEOI 0310 DNR2000000006	2

**BID RECEIVING LOCATION**

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

**VENDOR**

Vendor Name, Address and Telephone Number:

Potesta & Associates, Inc.  
 7012 MacCorkle Avenue, SE  
 Charleston, WV 25304  
 304-342-1400

**FOR INFORMATION CONTACT THE BUYER**

Guy Nisbet  
 (304) 558-2596  
 guy.l.nisbet@wv.gov

Signature X

FEIN # 31-1509066

DATE 04-13-20

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

Addendum

Addendum No.01 issued to publish and distribute the attached information to the vendor community.

\*\*\*\*\*

Expression of Interest (A&E SVC's)

In accordance with West Virginia Code: 5G-1-3, The West Virginia Purchasing Division is soliciting Expression(s) of Interest for the Agency, The Division of Natural Resources (WVDNR) from qualified firms to provide architectural/engineering services and any other related professional services to design and specify for construction of hatchery facilities including mussel rearing capabilities for the Palestine State Fish Hatchery located near Elizabeth in Wirt County, WV.

The project will include all necessary permitting including WV DEP, WV Culture and History, and any other required permits. per the bid requirements, specifications and terms and conditions as attached hereto.

\* Online submissions of Expressions of Interest are Prohibited\*

INVOICE TO		SHIP TO	
DIVISION OF NATURAL RESOURCES PARKS & RECREATION-PEM SECTION 324 4TH AVE SOUTH CHARLESTON WV25305 US		DIVISION OF NATURAL RESOURCES PALESTINE HATCHERY ELIZABETH WV 26143 US	

Line	Comm Ln Desc	Qty	Unit Issue
1	Civil engineering		

Comm Code	Manufacturer	Specification	Model #
81101500			

**Extended Description :**

Architectural/engineering services and contract administration for new fish/mussel facility at Palestine State Fish Hatchery, located in Wirt County, WV.

<b>DNR2000000006</b>	<b>Document Phase</b> <b>Final</b>	<b>Document Description</b> Addendum No.01 - A/E Services- Palestine Hatchery Facility	<b>Page 3</b> <b>of 3</b>
----------------------	---------------------------------------	--	------------------------------

**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

*Dana L. Burns*

\_\_\_\_\_  
(Name, Title)

Dana L. Burns, Vice President

\_\_\_\_\_  
(Printed Name and Title)

7012 MacCorkle Avenue, SE

\_\_\_\_\_  
(Address)

Charleston, West Virginia 25304

\_\_\_\_\_  
(Phone Number) / (Fax Number)

304-342-1400 304-343-9031

\_\_\_\_\_  
(email address)

dlburns@potesta.com

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Potesta & Associates, Inc.

\_\_\_\_\_  
(Company)

*Dana L. Burns*

\_\_\_\_\_  
(Authorized Signature) (Representative Name, Title)

Dana L. Burns, Vice President

\_\_\_\_\_  
(Printed Name and Title of Authorized Representative)

04-13-20

\_\_\_\_\_  
(Date)

304-342-1400 304-343-9031

\_\_\_\_\_  
(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA  
Purchasing Division

# PURCHASING AFFIDAVIT

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** 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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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: Potesta & Associates, Inc.

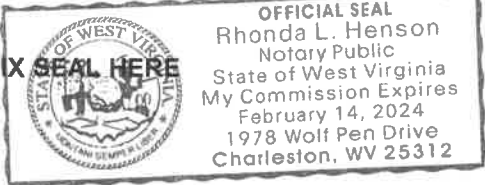
Authorized Signature: *Dana L. Burns* Date: 04-13-20

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 13<sup>th</sup> day of April, 2020.

My Commission expires Feb. 14 2024, 20  .



AFFIX SEAL HERE

NOTARY PUBLIC *Rhonda L. Henson*

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: DNR2000000006**

**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 checked="" 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.

Potesta & Associates, Inc.

\_\_\_\_\_  
Company

*Diana L. Burns*

\_\_\_\_\_  
Authorized Signature

04-13-20

\_\_\_\_\_  
Date

**NOTE:** This addendum acknowledgement should be submitted with the bid to expedite document processing.  
Revised 6/8/2012