



# EXPRESSION OF INTEREST

Prepared for: WEST VIRGINIA DIVISION OF NATURAL RESOURCES

Canaan Valley State Park—Wastewater Improvement Project  
*Tucker County, West Virginia*

RFP No. CEO1 DNR1900000001

Due Date: February 22, 2019

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WV PURCHASING  
DIVISION



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# EXPRESSION OF INTEREST

## EXECUTIVE SUMMARY

Potesta & Associates, Inc. (POTESTA) is pleased with the opportunity to provide engineering and construction phase services to the West Virginia Division of Natural Resources (WVDNR) for renovations to the lodge wastewater plant and collection systems at Canaan Valley Resort State Park. The planned improvements may also include any other work necessary for, or related to, the park facilities, as well as other necessary ancillary work.

Many of the West Virginia state parks' wastewater systems are more than 30 years old and require repairs to maintain operation. POTESTA understands the Canaan Valley Resort lodge wastewater treatment plant (WWTP) is an extended-aeration system and is in need of improvements and the gravity collection system is currently experiencing significant inflow and infiltration issues.

We also understand the owner anticipates several thousand feet of gravity sewer replaced with some form of collection system and the existing 100,000 GPD system requires review and improvements, if necessary.



For over two decades, POTESTA has designed engineering and environmental solutions to help clients navigate through the challenges associated with this type of project. POTESTA's team has extensive experience in design of wastewater systems, sewer lines, and major rehabilitation projects, additionally we have successfully reviewed developer plans. POTESTA has significant experience with inflow and infiltration studies for clients including Boone County PSD, CNX RCPC, and the City of Glenville. POTESTA's other municipality and PSD clients, including Huntington Sanitary Board, Sissonville PSD, and West Virginia American Water, have retained POTESTA to evaluate the condition of the collection system, as well as the operation and maintenance (O&M) practices for collection systems.

Services have included:

- Recommendations on potential areas for rehabilitation and improvement in O&M practices
- Perform Inflow and Infiltration Study
- Perform smoke testing
- Observe sanitary collection system pip via CCTV
- Design collection system
- Develop a preliminary estimate of construction cost for rehabilitation
- Prepare permit applications and submittals
- Perform construction observation and construction administration services

Another successful similar project included the design and permitting of a wastewater treatment plant in Jefferson County for Charles Town Race's & Slots race track and gaming resort. The facility was required due to the racetrack's planned expansion and the local PSD's lack of additional capacity. The post-treatment was with ultraviolet disinfection and aeration was also incorporated into the WWTP. POTESTA also completed construction assistance.

POTESTA has 14 professional engineers on staff who can be dedicated to providing quality wastewater engineering services to the WVDNR. POTESTA has assembled a project team that is highly qualified in providing the services necessary for this project. Mr. Terence C. Moran P.E., Senior Engineer/Project Manager, has served as project manager/project engineer for 60+ water/wastewater projects. POTESTA has the ability to complete every facet of the project from beginning to end, from the preliminary (i.e. planning) study through final design and construction observation/management.



Additional information can be found on our corporate website: [www.potesta.com](http://www.potesta.com)



# EXPRESSION OF INTEREST

## CORPORATE PROFILE

### 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 81 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

- 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), 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 of Engineering, has more than 39 years' experience with civil, geotechnical, mining and environmental engineering projects. Mr. Burns, P.S., P.E., has managed numerous multi-discipline wastewater and water projects, and understands the importance of client communication and the internal coordination of various disciplines on a 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. Our registered professional engineers have over 300 years of experience among them and are supported by a capable team of engineers, designers, and surveyors. Our survey crews have over 150 years of experience among them.



*Ronald R. Potesta*



*Dana L. Burns, P.E., P.S.*



Additional information can be found on our corporate website: [www.potesta.com](http://www.potesta.com)





# EXPRESSION OF INTEREST

## PROFESSIONAL DISCIPLINES



### **WASTEWATER DESIGN SERVICES**

POTESTA has 14 professional engineers on staff who can be dedicated to providing quality wastewater engineering services for WVDNR for this project. POTESTA's wastewater design engineering services and related services include, but are not limited to:

- Feasibility Studies
- Conceptual Design
- Final Design
- Bidding and Construction
- Construction Monitoring
- Engineer's Cost Estimates
- Construction Monitoring
- Wastewater Audits
- Wastewater Minimization Studies
- Combined Sewer Overflow
- Industrial Wastewater Treatment
- Sewer Line Extensions
- Surveying/GPS/Mapping
- Permitting and Regulatory Liaison
- Management, Sampling, and Modeling
- Hydraulic Conveyance Structure Design
- Hydrologic and Hydraulic Analysis
- Small Flows Design
- Sewage Collection and Treatment
- Wastewater Treatment Plant



### **CIVIL ENGINEERING**

Civil engineering is an area of particular expertise and experience at POTESTA. Our engineering staff has a broad background related to the vast field of civil engineering. Civil engineering disciplines such as development of grading plans, storm water management, water/wastewater treatment, utility/infrastructure design and dam/impoundment design are all areas of particular expertise at POTESTA. Our diverse staff of engineers, geologists, and scientists are routinely involved in these types of projects and work to support the project teams assigned to these projects on a daily basis to achieve a completed project that meets the client's expectation.

Once a project has been determined feasible through the preliminary planning stages, POTESTA's design professionals work to complete preliminary and final design plans. Frequent communication is made with the client and other design professionals to review the completed activities and obtain input for the design process.

The following design services are routinely completed for clients at POTESTA:

- Site Development Grading and Drainage Plans
- Storm water Management Plans
- Erosion and Sediment Control Plans
- Hydraulic Structure Design
- Earth Retaining Structures
- Stream Restoration
- Earthwork Optimization (Balance Cut/Fill While Optimizing Developable Property)
- Dam/Impoundment design, Inspection and Recommendations
- Utility Relocation
- Site Reclamation

During the construction process, POTESTA routinely provides professional services throughout the construction of our client's projects. These services often include survey layout, construction management, construction monitoring, record drawings preparation and bid evaluation assistance.



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### PROFESSIONAL DISCIPLINES



#### **SURVEYING**

POTESTA proposes to utilize our own survey crews on this project. POTESTA will perform all of the surveying required for this contract using in-house personnel. POTESTA has three licensed professional surveyors with over 50 years of combined surveying experience. Our surveyors are experienced in all aspects of surveying such as topographic mapping, boundary and property surveys, and construction surveys for layout of work, record drawings, and quantity measurements. We have three survey crews and the capability to add a fourth crew if necessary.

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 has licensed professional surveyors registered in West Virginia, North Carolina, South Carolina, Ohio, Virginia, and Pennsylvania. 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.

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. 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 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.

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.





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## PROFESSIONAL DISCIPLINES



### **GEOTECHNICAL ENGINEERING**

POTESTA's engineers and geologists have extensive experience related to the geotechnical engineering disciplines. POTESTA and its staff have been involved with hundreds of geotechnical projects. Many of these have included a subsurface evaluation, laboratory testing, stability analysis, design of remedial measures, foundation analysis and design, and general site construction consideration.

### SUBSURFACE EXPLORATION

POTESTA's geotechnical engineering group is experienced in many different facets of subsurface explorations. Typically, we work with the client to understand the nature of the project followed by a site reconnaissance survey to determine the location and number of test pits or subsurface borings required for the project. Specific attention is paid to site access, environmental issues, and rock outcrops. Additional information gathered in the field may include signs of soft ground or unstable slopes, as well as access to a water source if rock coring is required. POTESTA field engineers and geologists are familiar with the latest technologies to assist in the collection and analysis of soil and rock samples. Our knowledge of the proper procedures and familiarity with local conditions allow office and field personnel to adjust the investigation if any unanticipated field conditions are encountered.



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, Shelby tubes, Geoprobe™ sleeves, etc.)
- Classification and Logging of Soil and Rock Samples
- Monitoring Well and Piezometer Installation

### SLOPE STABILITY

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



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### PROFESSIONAL DISCIPLINES



### **GEOTECHNICAL ENGINEERING (CONT.)**

#### FOUNDATION DESIGN AND 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.



## EXPRESSION OF INTEREST

### PROFESSIONAL DISCIPLINES



### **CONSTRUCTION MONITORING**

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.







## Sissonville, WV WWTP

- Proposed improvements: replace existing clarifier equipment, drain/clean and epoxy coat clarifier, install new chlorine feed/storage building, replace existing generator, replace transfer switch, replace roof on control building, install vortex grit removal system, modifications to the headworks, oxidation ditch improvements, replace metal grating, replace screen building, miscellaneous painting



## Huntington, WV WWTP

- Proposed improvements: replacement of primary clarifier, headwork replacement, new scrubber for chlorine room, replacement of aerator blow system, new office/lab building, new anaerobic digestion system
- Combined sewer replacement
- 54-Inch HDPE force main flow meter and bypass
- New regional septage receiving and vacuum truck disposal, pump station, septage receiver, and roadway
- Design of bioretention basin
- Evaluation of mixing zone



## Danville, WV WWTP

- Replace mechanical bar screen
- Replace grit pump at grit removal site
- Repair grit removal unit drain line
- Upgrade orbital aeration unit
- Add third clarifier
- Replace UV unit
- Replace belt filter press with rotary fan press
- Replace hydropneumatics tank for non-potable wash water



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### **SIMILAR EXPERIENCE**



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.

### **ENGINEERING DESIGN EXPERIENCE**

Quality is extremely important to POTESta. We have won six "Gold Award in the American Council of Engineering Companies – West Virginia Section" engineering excellence awards competition and approximately 80 percent of our work is from repeat clients; we believe this attests to our commitment for a quality project.

POTESta takes prides in our ability to provide our clients with innovative and concise engineering design packages that will allow more of the client's money to be spent on actual construction rather than engineering design fees. POTESta has the ability to complete every facet of the project from beginning to end, from the preliminary study through final design and construction observation/management. Frequent communication will be made with the WVDNR and other design professionals to review the completed activities and obtain input for the design process.

### **FEDERAL AND STATE FUNDING PROGRAM EXPERIENCE**

Funding water and sewer projects in West Virginia can sometimes be complex and grueling, especially for entities unfamiliar with the process. Approval from the West Virginia Infrastructure and Jobs Development Council (Infrastructure Council), considered the clearing house for water and sewer project funding, is required for all state funded projects. Most federally funded sewer and water projects also tend to require the Infrastructure Council approval either due to their project funding partnering with state funding or because of informal agreements with the Infrastructure Council so that there is consistency between all funding agencies.

POTESta's staff has unique and important experience with funding in West Virginia. POTESta's staff is highly experienced with federal, state and local funding programs and their requirements. We have worked on water supply, sewer, highway, and other projects funded by state and federal agencies. Our staff is particularly experienced in projects funded by United States Department of Housing and Urban Development (HUD, i.e., Small Cities Block Grants), United States Department of Agriculture, Rural Utility Services (RUS), United States Office of Surface Mining (OSM), administered by the West Virginia Department of Environmental Protection Abandoned Mine Lands (AML), congressional offices, West Virginia Infrastructure and Jobs Development Council (WVIJDC), Drinking Water Treatment Revolving Fund (DWTRF), ARC, West Virginia Development Office, and the United States Department of Commerce - Economic Development Administration. POTESta understands funding agency requirements and has developed relationships with administrators of funding agencies that allow for projects to proceed smoothly while agency criteria are met.

### **PERMITTING EXPERIENCE**

POTESta was formed by Ronald Potesta, who headed the West Virginia Department of Natural Resources which, at one point, included the Department of Environmental Protection and Water Resources. Environmental permitting is POTESta's forte. POTESta can assist in all phases of the permitting process and funding, including application preparation, negotiations, modifications, compliance, and renewal. 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 personnel are experienced in permit writing and will

## EXPRESSION OF INTEREST

### SIMILAR EXPERIENCE



work closely with agency staff to ensure that the permit meets both regulatory requirements and the needs of the WVDNR.

### **BIDDING/CONSTRUCTION ADMINISTRATION EXPERIENCE**

POTESTA takes pride in our ability to provide clients with innovative and concise engineering design packages that will allow more of your money to be spent on actual construction rather than engineering design fees.

POTESTA maintains a database with bidding results from recent construction projects. This information allows our designers to develop accurate estimates of probable construction costs based on recent bids from local contractors. We pride ourselves on the accuracy of our cost estimates to be within an acceptable range of actual bid results obtained for projects. POTESTA also has an excellent working relationship with many manufacturers and suppliers that will assist with design specifications and cost estimates.

During construction, POTESTA can provide staff that is familiar with and have had experience working on similar projects. We routinely provide resident project representatives (RPRs) during construction to serve as the “eyes and ears” on behalf of the Owner to document the progress of the Contractor, observe and document the construction activities, and prepare record drawings. Copies of the Daily Field Reports as well as both hard copy and digital copies of the record drawings will be provided to the Owner once construction is completed. POTESTA will also assist the WVDNR with the bidding of the project, review of the bids, review of pay applications, and requests by the Contractor such as change order requests and requests to substitute equivalent products.



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### RELATED PROJECTS



Additional details on included in project abstracts are included in **Appendix A**.

Project	Project Manager/ Contact Information	Type of Project	Project Goals and Objectives
*ECOLAB Berkeley County, WV	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 (BCPSSD) industrial wastewater treatment plant</li> <li>The evaluation focused on bringing the effluent into compliance with permit limitations</li> </ul>
*Berkeley Springs Development Morgan County, WV	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> </ul>
*West Virginia American Water Fayette County, WV	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>
*CNX RCPC, LLC Monongalia County, West Virginia	Dave Sharp, P.E. dsharp@potesta.com	Evaluation of WWTP	<ul style="list-style-type: none"> <li>Evaluation of Hunting Hills Residential Development Sanitary Sewer System</li> </ul>
*Salt Rock Sewer Public Service District Cabell County, WV	Terence Moran, P.E. tcmoran@potesta.com	Engineering for sewage systems	<ul style="list-style-type: none"> <li>Conceptual engineering for on-site sewage systems for residents of Holiday Park</li> <li>Treatment plant was failing and complaints had been filed with the West Virginia Public Service Commission</li> </ul>
*West Virginia American Water Greenbrier County, WV	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 WWTP</li> </ul>
*Old Standard Development Jefferson County, WV	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 Tucker County, WV	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. Pocahontas County, WV	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>
*Town of Ceredo Wayne County, WV	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</li> <li>Design phase included identifying the need to upgrade piping sizes and pumping rates</li> </ul>



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*Salt Rock Sewer Public Service District Cabell County, WV	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>
Tackley Mill Development Jefferson County, WV	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>Design and permitting of a 25,000-gallon per day Membrane Bioreactor (MBR) type WWTP (expandable to 1,000,000 gpd) for a residential development</li> <li>Design included approximately 17,000 linear feet of force main effluent discharge line and a pump station</li> </ul>
Thorn Hill Development Jefferson County, WV	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 225,000 gpd) for a residential development</li> <li>Design included approximately 5,180 linear feet of force main and gravity sanitary sewer collection line and a pump station</li> </ul>
Crosiers Sanitary Service Fayette County, WV	Terence Moran, P.E. tcmoran@potesta.com	Design of new WWTP package	<ul style="list-style-type: none"> <li>Permitting and design phase services for modular moving bed bioreactor/membrane filtration WWTP</li> </ul>
*Steptoe & Johnson PLLC/Berkeley County PSD Berkeley County, WV	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>
*Town of Ceredo Wayne County, WV	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>
*Carneuse Lime & Stone Frederick County, VA	Joe Knechtel, P.E. kjknechtel@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 in Winchester, Virginia.</li> </ul>
*ZMM, Inc. McDowell County, WV	Mark Kiser, P.E. dmkiser@potesta.com	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>
*Boy Scouts of America Pocahontas County, WV	Chris Grose cagrose@potesta.com	Replacement 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>
Private Individual Greenbrier County, WV	Dana Burns, P.E. dlburns@potesta.com	Replacement study for treatment plant	<ul style="list-style-type: none"> <li>Design and preparation of drawings and cost estimate for replacement study for 25,000 gpd package treatment plant in Lewisburg, West Virginia</li> </ul>
*Charles Town Racing and Slots Jefferson County, WV	Dana Burns, P.E. dlburns@potesta.com	Design and permitting of WWTP	<ul style="list-style-type: none"> <li>Design and permitting of an initial capacity 250,000-gallon per day Sequence Batch Reactor (SBR) type WWTP (expandable to 375,000 gpd) for a gaming resort facility</li> </ul>

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Cloverleaf Environmental Consulting Clarke County, VA	Joe Knechtel, P.E. kjknechtel@potesta.com	Repair of failed AOSS system	<ul style="list-style-type: none"> <li>Design and permitting of 450 gpd multi-flow treatment and drip irrigation system (AOSS) for a repair of a failed residential conventional system in a rural, residential areas in Bluemont, Virginia</li> </ul>
Summit at Cheat Lake Monongalia County, WV	Pat Taylor, P.E. pataylor@potesta.com	Design of sanitary sewer collection system	<ul style="list-style-type: none"> <li>Design of a sanitary sewer collection system, incorporating 13,500 linear feet of 8-inch gravity sewer line, as well as 2,500 linear feet of 1.5-inch and 2-inch force main line from three pump stations and package aeration treatment plant</li> </ul>
US Customs & Border Protection Agency Jefferson County, WV	Joe Knechtel, P.E. kjknechtel@potesta.com	Design of WWTP	<ul style="list-style-type: none"> <li>Feasibility study of "living tree" treatment plant, designed 50,000 gpd wastewater treatment plant with UV/aeration post treatment, and</li> <li>Designed gray water system, and prepared permit applications</li> </ul>
Union Carbide Corporation Kanawha County, WV	Doug Bowe, P.E. dwbowe@potesta.com	Sewer line	<ul style="list-style-type: none"> <li>Evaluated 300,000 linear feet of combined process/storm sewer water</li> <li>Designed a new system using a gravity and force main combination system for Union Carbide's South Charleston and Institute plants and their Technical Center, Charleston, West Virginia</li> </ul>
Cloverleaf Environmental Consulting Loudoun and Clarke Counties, VA	Joe Knechtel, P.E. kjknechtel@potesta.com	Repair of failed AOSS system	<ul style="list-style-type: none"> <li>Design and permitting of 600 gpd multi-flow treatment and drip irrigation system (AOSS) for a repair of a failed residential conventional system in a rural, residential areas in Purcellville, Leesburg, and Berryville, Virginia</li> </ul>
*Timberwolf Development Corporation Kanawha County, WV	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, Charleston, West Virginia</li> </ul>

# EXPRESSION OF INTEREST

## PROPOSED STAFFING PLAN



**PRINCIPAL-IN-CHARGE**  
Dana Burns, P.E., P.S.

**PROJECT MANAGER**  
Terence Moran, P.E.

### **DESIGN STAFF**

Mark Sankoff, P.E., P.S.  
D. Mark Kiser, P.E., L.R.S.  
Robert Ammirato, P.E.  
Jarrett Smith, P.E.  
Jordan Beard  
Angela Pugh, P.E.  
Patrick Taylor, P.E.  
Chad Griffith, P.E.  
Everett Mulkeen, P.E.

### **SOILS/GEOTECHNICAL**

Christopher Grose, L.R.S.  
Peter Potesta  
David Sharp, P.E.  
Dennis Litwinowicz  
Jeremi Stawovy, E.I.T.

### **SURVEYING**

Victor Dawson, P.S.  
E. Brad Starkey  
Greg Hodges  
Rusty Hunter  
Charles Shaffer  
Ryan Bennett  
Tyler Aboytes

### **CONSTRUCTION MONITORING**

Robert Lamm  
Michael Whitman  
Bill Cox  
Russ Harper  
Carl Hickman  
Paul Kinzer  
Chuck Bird

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.





## EXPRESSION OF INTEREST

### STAFF QUALIFICATIONS



POTESTA can provide all of the services required for this project in-house using existing staff. Our large, experienced staff allows us to respond quickly, provide flexibility, and will provide opportunity for high level input from our in-house experts on a project of this size and nature. **Appendix B** includes resumes of proposed key personnel.

**Mr. Dana L. Burns, P.E., Vice President**, will serve as principal-in-charge for this project. As such, he will direct POTESTA's staff, answer questions, address problems encountered and review the project budget. Mr. Burns has over 38 years of experience with civil and environmental engineering projects. This experience includes serving as a project manager for various water supply system extensions, sanitary sewer projects, industrial waste water projects, water extension feasibility studies, and most recently five West Virginia American Water Company projects totaling over 240,000 linear feet of line extensions. In addition to providing technical guidance throughout the project, Mr. Burns will be responsible for maintaining the schedule and budget for the project.

**Mr. Terence C. Moran, P.E., Senior Engineer**, will serve as Project Manager and has over 31 years of experience on civil engineering projects, with particular emphasis on water/wastewater projects. Mr. Moran has served as the project manager/project engineer for 100+ water supply projects, including preliminary engineering, environmental assessments, funding applications, hydraulic analysis, booster and storage tank design, line sizing, design of treatment systems, drawings, specifications, cost estimates, bid documents, shop drawing review, construction management and construction observation. Mr. Moran has designed or served as the project manager for evaluation of water treatment plants and water systems to identify deficiencies; design of water line extensions; design of booster stations; evaluation of replacement of controls for water storage tanks including installation of telemetry; and construction of replacement (upgraded) water lines. He has served as project manager for water supply projects in more than 20 counties in West Virginia.

**Mr. Mark A. Sankoff, P.E., Chief Engineer**, has over 36 years of experience on civil engineering projects, with particular emphasis on water projects. As the past Director of Engineering at West Virginia American Water, he served as project manager for numerous water projects, including the Kanawha County 2000 Water Project, installing over 100 miles of water main, six tanks and six boosters serving over 1,700 families. He has served as project manager for the EPA Initial Distribution System Evaluation (IDSE) computer modeling to study water age for the two largest systems in West Virginia with over 2,000 miles of distribution piping. Mr. Sankoff has designed or served as the project manager for the evaluation of water systems to identify deficiencies including evaluating and implementing the most cost-effective solution and has designed multiple water line replacement projects and water line extensions. He brings nine years experience in the operation and maintenance of the largest distribution system in West Virginia which has well over 100 different pressure gradients. Mr. Sankoff has extensive experience on multiple water projects, including preliminary engineering, comprehensive planning studies, funding applications, hydraulic analysis, booster station and storage tank design and rehabilitation, telemetry, line sizing, drawings, specifications, cost estimates, bid documents, shop drawings review, construction management and construction observations.

**Mr. Patrick A. Taylor, P.E., Senior Engineer**, will serve as the planning and funding liaison for the project, as needed. Mr. Taylor has substantial experience with state regulatory and funding programs, as well as technical capabilities.

Some of this experience includes:

- West Virginia Bureau for Public Health (WVBPH) Permitting Program: Directed review and issuance of public water and wastewater, public swimming pool, agricultural waste construction permits and water vending machine permits.



### **REFERENCES**

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

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

#### **WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Mr. Nick Estes  
601 57th Street, SE  
Charleston, West Virginia 25304  
Phone: (304) 926-0499  
Fax: (304) 926-0458

#### **HUNTINGTON SANITARY BOARD**

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



# LOCATION OF MAIN INTERCEPTOR SEWER COLLECTION

*Huntington Sanitary Board  
Huntington, West Virginia*

Potesta & Associates, Inc. (POTESTA) currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

POTESTA worked with the Huntington Sanitary Board staff to identify the location of the City of Huntington's main combined sewer interceptor line to locate manholes for access to clean out the interceptor. This interceptor was installed in the late 1950s and collects flow from approximately 90 percent of the system. Most of the interceptor line is located in excess of 20 feet below the surface and many of the manholes have been buried under material deposit by the Ohio river over the years and have never been located by the HSB. Some tops of manholes were buried over 10 feet in depth.

POTESTA and the HSB initially performed field work to locate manholes visually; however, with the overgrowth of brush and the amount of river sediment deposited, it became apparent that the line and manholes could not be located by conventional methods. Because of access problems, the use of HSB's camera truck was not possible.

POTESTA and the HSB used the SB Leica DidgiCat System and construction "as-built" record drawings, with excavation equipment, to locate the interceptor and manholes.



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# MIXING ZONE STUDY AND CLEAN WATER ACT PERMITS

*City of Huntington  
Cabell County, West Virginia*



Potesta & Associates, Inc. (POTESTA) was retained by the City of Huntington for the development of a mixing zone study and the associated Clean Water Act permitting. The City of Huntington operates and maintains an existing combined sewer wastewater collection system and an existing 17.0 million gallons per day wastewater treatment plant. These facilities are to serve a population equivalent of approximately 90,000 persons within the City of Huntington, City of Kenova, Town of Ceredo, Northern Wayne County

Public Service District, Spring Valley Public Service District, and the Ohio River service area of the Pea Ridge Public Service District. The wastewater treatment plant discharges treated wastewater through Outlet No. 001 to the Ohio River at Mile Point 313.2.

Concerned over the ability of the WWTP to comply with its National Pollutant Discharge Elimination System (NPDES) permit, the City of Huntington retained POTESTA to provide modeling, as well as environmental and engineering services associated with development of a site-specific mixing zone in order to obtain increased permit limitations.

Modeling of the effluent line and diffuser was completed for Outlet 001 using the Cornell Mixing Zone Expert System Version 8.0GTD (CORMIX) mixing zone software. Once the mixing zone study was completed, a report was submitted to the West Virginia Department of Environmental Protection (WVDEP) to support the modification of the City of Huntington's NPDES permit and allow use of a multiport diffuser.

In addition to the NPDES modification, construction of the effluent line and diffuser required United States Corps of Engineers (USACE) Section 404 and Section 10 authorization (dual application), State 401 Water Quality Certification from the WVDEP and West Virginia Public Lands Corporation (PLC) permit from the West Virginia Division of Natural Resources (WVDNR). Authorization of the federal permits required consultation with the United States Fish and Wildlife Service (USFWS) to determine the potential presence of federally listed species and the State Historic Preservation Office (SHPO) to fulfill Section 106 requirements.



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# HUNTINGTON SANITARY BOARD COMBINED SEWER AND FORCE MAINS

*Huntington Sanitary Board  
Huntington, West Virginia*

POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded or is in the process of the following work:

- Specifications, bidding, and construction management of the cleaning, sludge removal and disposal, and camera work of HSB's 18,500 feet of 48-inch concrete interceptor.
- Design, bidding, and construction management of combined sewer replacement project on 13<sup>th</sup> Street West and 19<sup>th</sup> Street, which includes 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.
- Design and construction of 54-inch HDPE force main flow meter and bypass to replace the existing 54-inch PCCP force main that transports the entire HSB's flow and had failed due to a buildup of hydrogen sulfide gas at the top of the pipe at the force main's crossing of the Huntington flood levee prior to the pipes entrance to the WWTP.



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# HUNTINGTON SANITARY BOARD WASTE WATER TREATMENT PLANTS AND ASSISTANCE WITH VARIOUS SERVICES

*Huntington Sanitary Board  
Huntington, West Virginia*



POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded or is in the process of the following work:

- Design and construction services for new regional septage receiving and a vacuum truck disposal, pump station, septage receiver ("the beast") and roadway.
- Management of preparation of wastewater treatment plant sludge incinerator failure analysis and preparation of cost study to replace incinerator including measures to meet new Clean Air Act standards for sludge incinerators.
- 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.
- Evaluation of the mixing zone for the wastewater treatment plant discharge into the Ohio River through computer analysis. Based on the analysis, it was determined that the effluent line required a diffuser to allow for adequate mixing at the discharge.



HUNTINGTON SANITARY BOARD  
WASTE WATER TREATMENT PLANTS AND  
ASSISTANCE WITH VARIOUS SERVICES  
PAGE 2

- Design and construction services of a new HDPE effluent line, diffuser, and air chamber located in the Ohio River to replace 50-year-old existing effluent line which failed due to excessive weight of fill placed on its corrugated metal pipe.
- Design of chlorine room relocation to centralized location within waste water treatment plant to provide a more direct chlorine feed route to contact tank and a more secure area to address chlorine leakage.
- Preparation of preliminary engineering of \$75 million capital projects including waste water treatment plant work to support HSB rate increase. Analysis included cost estimate and schedule for the following:
  - New office/laboratory building.
  - Headwork replacement (including screening and grit removal system).
  - New anaerobic digestion system.
  - New scrubber/chlorine removal systems of chlorine room.
  - Primary and secondary scrubber, cover and drive replacement work.
  - Replacement of primary clarifier sludge removal system.
  - Replacement of aerator blow system including moving blowers from centralized building to each active sludge basin.
- Assistance to the HSB regarding the CSO long-term control plan's implementation schedule.
- Preparation of Asset Management Plan including system wide Conditions Assessment Protocol (CAP).



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# HUNTINGTON SANITARY BOARD PUMP STATIONS

## *Huntington Sanitary Board Huntington, West Virginia*

POTESTA currently has a general agreement with the Huntington Sanitary Board (HSB) to perform services related to the Board's implementation of their Long-Term Control Plan, Water Treatment Plant Modernization Plan, and Storm Water Management Utility Establishment/Operation. This agreement has been comprised of multiple work orders for improvement of Huntington's combined sewer system.

Currently, POTESTA has concluded the following work:

- 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.
- Flow monitoring and preliminary and final design for a new sewage lift station (approximately 31,000 gpm) to replace an existing antiquated station which pumps the majority of Huntington's wastewater to the treatment plant.
- Design, bidding, and construction management of a pump around bypass system at the 13<sup>th</sup> Street West pump. Replacement of two 24-inch discharge line/air relief valves in pump station and capping two discharge lines.
- Management of study and preparation of Preliminary Engineer Report for replacement of Huntington's 13<sup>th</sup> Street West Pump Station (primary pump station facility), including geotechnical evaluation.



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# ASSET MANAGEMENT PLAN

## *Huntington Sanitary Board Cabell County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the Huntington Sanitary Board (HSB) to prepare an Asset Management Plan (AMP) which would serve three purposes: (1) fulfill the West Virginia Department of Environmental Protection (WVDEP) Clean Water State Revolving Fund requirement for systems which have received loans; (2) assist the HSB to estimate the funds required to maintain operation of the system critical assets such as lines, pump stations, and wastewater treatment plant (WWTP); and (3) provide the HSB a process to prioritize their system's annual operational needs.

The HSB provided POTESTA with:

- Geographic Information System (GIS) files containing 10,000 + lines.
- Work orders from lines, 42 pump stations and 420 grinder pumps, and WWTP collected over the past 15 years.
- Equipment list for HSB's 17 MGD WWTP organized into 20 zones.



Since the HSB serves an extensive geographical area, POTESTA delineated the system's critical assets into the following three categories.

### 1. Critical Pipe Lines

- Defined trunk lines, interceptors, force mains, lines installed on or before 1920, and problematic lines identified by HSB.
- Utilized GIS to visualize lines throughout the entire system by reviewing the content of the work orders, notating if work performed was due to a sewer line related failure (i.e., sinkholes) or routine activities (i.e., repair laterals, adding service connections). If there were three or more pertinent work orders associated to a line, it was added to the critical asset list.
- Developed a replacement/rehabilitation cost per linear foot of line based on similar bid tabs, engineering judgement and construction industry publications from 6-inch diameter pipe up to 54-inch diameter pipe.

ASSET MANAGEMENT PLAN  
PAGE 2

2. Pump Stations

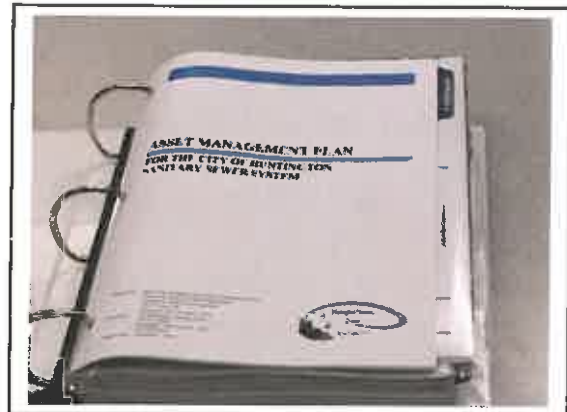
- Worked with HSB's pump station supervisor to evaluate each pump station's condition and estimate the expected useful life.
- Devised a rehabilitation cost per pump station based on the cost to rebuild the pump, valve replacement/rehabilitation, electrical work, communication equipment and variable frequency drive (VFD) costs when applicable.
- Utilized costs derived from work orders on the HSB system, bid tabulations, engineering judgement, and construction industry publications.

3. Wastewater Treatment Plant

- Worked with the WWTP supervisor to assign replacement/rehabilitation costs to WWTP equipment.
- Obtained budgetary estimates from vendors and construction industry publications when historical costs were not available.

POTESTA developed a Conditions Assessment Protocol (CAP) to provide uniform and consistent information currently available on the condition of the critical assets. Critical asset data was input into the Check Up Program for Small Systems (CUPSS) software, provided by the United States Environmental Protection Agency (USEPA). The basis for critical asset evaluation was summarized as follows:

- Condition
- Installation Date
- Original Cost
- Replacement or Renewal Cost: The HSB will look forward and predict whether reparation, rehabilitation or replacement will provide the desired level of sewer collection at the best appropriate cost.
- Maintenance Cost
- Redundancy: The ability for a secondary system to replace the primary system if the primary system fails.
- Probability of Failure
- Consequence of Failure
- Expected Effective Life



Once the critical asset information was compiled into the CUPSS asset import template, the program generated a comprehensive report detailing when each asset was expected to be replaced/rehabilitated and how critical the piece of equipment is to the system. Additionally, POTESTA worked with HSB's accountant to include pertinent financial information in order to run the CUPSS financial projections. POTESTA combined the inventory and financial outputs into a concise one page Preliminary Priority Asset Summary spreadsheet summarizing anticipated replacement/rehabilitation costs over the next four years. POTESTA was cognizant of the tasks outlined on HSB's Long Term Control Plan (LTCP) and highlighted priority assets that were due for rehabilitation/replacement that met requirements of the LTCP.



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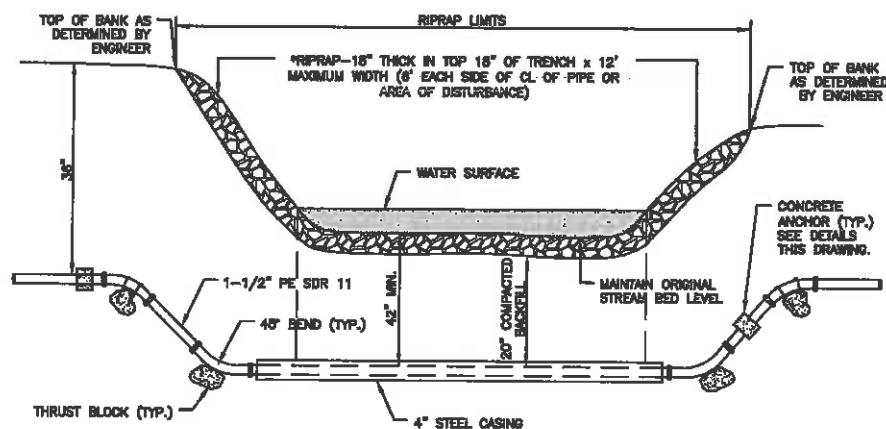
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# ENGINEERING DESIGN OF TIC TOC TIRE SANITARY SEWER EXTENSION

***Boone County Public Service District  
Danville, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to design a sanitary sewer line extension and grinder pump station to serve a strip mall and a tire facility in Danville, West Virginia. POTESTA's effort included:

- Obtained and reviewed background data on the existing sanitary sewer collection system, including old construction drawings and BCPSD supplied information to finalize a concept for a proposed tie-in.
- Contacted Miss Utility and performed field reconnaissance to locate the utilities and pathways.
- Completed topographic and boundary surveys.
- Developed design flow based on water usage records, and an estimate of the infiltration/inflow as described in the appropriate West Virginia Department of Health and Human Resources (WVDHHR) regulations.
- Prepared construction drawings that included the grinder pump station, force main site plans/profile and details.
- Prepared technical specifications.
- Prepared permit applications to United States Army Corps of Engineers, West Virginia Bureau of Public Health/West Virginia Department of Environmental Protection, West Virginia Division of Highways, and Public Lands Corporation.



**FORCE MAIN RIVER/  
STREAM CROSSING DETAIL**  
NOT TO SCALE



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# CONSTRUCTION OBSERVATION OF RELOCATED SEWER LINE

*Boone County Public Service District  
Boone County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to provide construction observation services during relocation of a sewer line adjacent to Boone Memorial Hospital (BMH). The relocation was required due to a BMH expansion.

The following items summarize our effort:

- Provided nearly full time construction technician to observe the relocation of the sewer line.
- Confirmed and documented that: (1) repairs to damaged joints were made when necessary, (2) the pipeline was installed using a laser to insure proper grade, and (3) crossings of water lines were properly cased with the correct casing length and number/spacing of spacers.
- Verified adequate compaction of backfill.
- Documented deviations from plans and notable events. For example, POTESTA documented when the contractor determined that it was desirable to move a manhole 284 feet to accommodate the pipe being out of alignment; these changes were recorded.
- Submitted daily field activity logs to BCPSD.



*Sanitary Sewer Line Encasement at Water Line Crossing*



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# **PRELIMINARY ENGINEERING REPORT FOSTER AREA SANITARY SEWER COLLECTION SYSTEM EXTENSION – PHASE 1**

***Boone County Public Service District  
West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by Boone County Public Service District (BCPSD) to provide a preliminary engineering report evaluating an extension of sewer service along State Route 3 to approximately Phase 1 only potential customers.

Included in this project was:

1. Evaluating existing situation for BCPSD comprised of current customer usage, distribution and collection systems, and need for sewer service extension.
2. Identified three package wastewater treatment plants (WWTP) that could be abandoned.
3. Collected and evaluated historical flow data at the WWTP.
4. Reviewed capacity for various components of the WWTP, relative to the proposed extension.
5. Prepared estimates for future population growth by considering full buildout in project area (up to 580 potential customers).
6. Inventoried permits and certificates required to complete project.

Prepared detailed preliminary estimate of construction cost including 21,500 feet of gravity collection system, 4,200 feet of force main, 600-foot bore and jack crossing of Corridor G, and five pump stations.



***Existing Package WWTP to be Abandoned***



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# DESIGN AND CONSTRUCTION OF SEWER REHABILITATION

*Town of Handley*  
*Handley, Kanawha County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Handley (Handley) to provide design and construction phase services for rehabilitation of their 1980s sewer system. Handley had constant problems with their pump stations over the years, as well as one station being intermittently flooded which caused electrical and pump failure. POTESTA's services included:

- Assisted in obtaining funds for field work and preliminary engineering report.
- Assisted 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 for servicing while waiting for funding.
- Designed total rehabilitation to the three pump stations (including permanent and mobile generators).
- Designed pipe and valve replacement.
- Assisted in obtaining an SCBG construction grant.
- Able to obtain other necessary equipment with excess money from grant funding.



*Before: Upper Drive Lift Station*



*After: Upper Drive Lift Station*



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# MINERAL WELLS REST AREA WASTEWATER TREATMENT PLANT

*West Virginia Division of Highways  
Wood County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the West Virginia Division of Highways (WVDOH) to evaluate sewage disposal options for their rest area along Interstate 77 near Mineral Wells in Wood County, West Virginia. The rest area was being served by a 30-year-old package wastewater treatment plant (WWTP); discharge was not consistently meeting National Pollutant Discharge Elimination System effluent limitations and the WWTP was difficult to maintain due to its age and lack of readily available spare parts.

The objective of the evaluation was to provide the WVDOH with an estimate of necessary capital and operation/maintenance costs and advantages/disadvantages, and provide POTESTA's recommendations to assist the WVDOH in the selection of an appropriate wastewater disposal option.

The following options were evaluated:

Option 1: Replace the existing WWTP with a recirculating sand filter.

Option 2: Pump the sewage to the Mineral Wells Public Service District.

Based on our evaluation, POTESTA recommended to the WVDOH that they should pipe the sewage to the Minerals Wells Public Service District.



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# LONDON LOCKS HYDROELECTRIC PLANT

***American Electric Power Company  
Kanawha County, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by American Electric Power Company (AEP) in regards to replacing their existing wastewater treatment aeration package plant. POTESTA provided the following services.

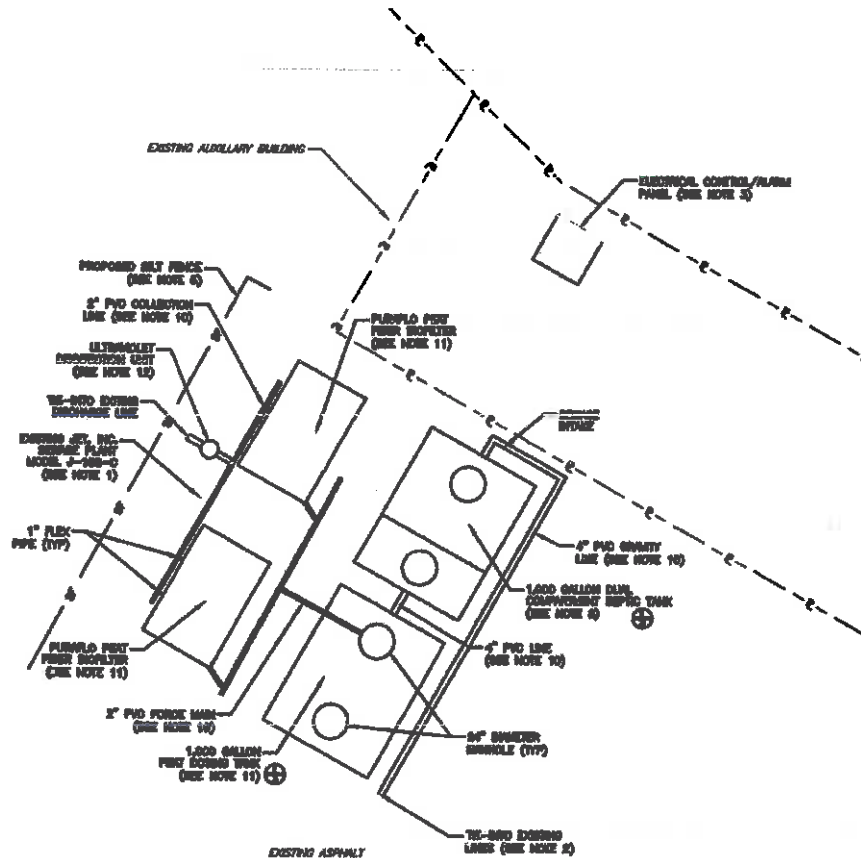
- Assisted AEP in the design and bidding and installing of a grinder pump station and force main to replace the package plant. The force main was to be located via boring under the existing railroad track and West Virginia Division of Highways' roadway. When the bids for the project were deemed excessive for the company, POTESTA continued to assist AEP.
- Evaluated wastewater options including: (1) installing a holding tank to store the wastewater from the London Locks electric generation plant which would then be hauled to the nearest public wastewater treatment facility; (2) installing modifications to the existing wastewater treatment facility in order to meet AEP's National Pollutant Discharge Elimination System (NPDES) Permit Discharge Limits; (3) replacing the existing wastewater treatment facility with a new plant in order to meet AEP's NPDES permit discharge limits; and (4) installing a leach field for treatment thereby not having an NPDES discharge point.
- Evaluated various types of aeration package plants and peat systems and recommended a peat system.



## LONDON LOCKS HYDROELECTRIC PLANT

Page 2

- Designed the specifications for a peat wastewater treatment plant. POTESta then assisted AEP in preparing the Major Modification Application to the existing Individual Industrial permit for submittal to the West Virginia Department of Environmental Protection (WVDEP) and provided general assistance during the WVDEP and Kanawha County Health Department permit review and approval process.



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# EVALUATION OF INDUSTRIAL WASTEWATER TREATMENT PLANT

## **ECOLAB**

*Berkeley County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by ECOLAB to evaluate the Industrial Wastewater Treatment Plant (ITP) in Berkeley County, West Virginia. The ECOLAB facility manufactures sanitizers, lotions and other products. Wastewater from the facility is pretreated by adjusting pH, removing foam, and dechlorinating. The pretreated wastewater is then discharged to the ITP, which is operated by the Berkeley County Public Service Sewer District (BCPSSD). The effluent from the ITP had exceeded limitations for some parameters numerous times. ECOLAB's discharge to the ITP had also exceeded limits per a BCPSSD/ECOLAB agreement on numerous occasions. ECOLAB requested POTESTA's assistance in evaluating the ITP.

The ITP consists of the following equipment: equalizer tank, sequential batch reactor tank, aerobic digester tank, treatment tank, blower building, control building, piping valves and other appurtenances. Tasks completed as part of the evaluation included meeting with ECOLAB, BCPSSD, and West Virginia Department of Environmental Protection (WVDEP) officials to review and discuss the ITP, including a tour of the ITP and onsite operations evaluation; meeting with ECOLAB officials to discuss pretreatment efforts and view their pretreatment facility; review historical data provided by ECOLAB, BCPSSD, and WVDEP; and preparation of a report summarizing the evaluation and recommendations.



*Aerobic Digester Tank (Left) and SBR Tank (Right)*



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# THE VILLAGES AT COOLFONT PROJECT

***Carl M. Freeman Communities  
Berkeley Springs, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by Carl M. Freeman Communities to provide environmental and engineering consulting services in conjunction with the redevelopment of the Coolfont Recreation property in Morgan County, West Virginia. Coolfont included a lodge, lake, spa, chalets, and other recreational facilities developed in the 1960s. Carl M. Freeman Associates acquired the Coolfont resort and other adjacent properties with the plan to create a second home community with high-end amenities.



POTESTA completed pre-acquisition services including a Phase I Environmental Site Assessment, an American Land Title Association (ALTA) boundary and property survey of 997 acres, and completed an assessment of the facility's sanitary sewer wastewater treatment plant to facilitate the acquisition of the property.

POTESTA participated in a week-long planning charrette with Carl M. Freeman Associates, land planners, and other design consultants in order to assess the characteristics of the property, identify opportunities and constraints for development, obtain input from local residents and businesses, and develop design guidelines for the project. At the end of the charrette, a land use plan was presented 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.

POTESTA completed civil engineering design work for potable water and wastewater treatment facilities. POTESTA selected source well locations, drilled potable water test wells, completed field testing and permitting. POTESTA designed a 300 gallon per minute potable water treatment plant to serve the proposed development. POTESTA also designed the water storage and distribution system. The first phase of the storage distribution system was modeled so that fire protection and adequate pressure would result. The distribution system consisting of 22,500 linear feet of 12 inch to 2 inch water mains and a 316,000 gallon storage tank were designed and permitted serving the first phase of the development.

**THE VILLAGES AT COOLFONT PROJECT**  
**PAGE 2**

POTESTA completed the design and permitting for a 440,000 gallon per day membrane bioreactor wastewater treatment plant to serve the ultimate development. The design included the collection system consisting of 18,300 linear feet of 15 inch to 8 inch sewer main, 2 pump stations, and 5,800 linear feet of 8 inch force main for the first phase of development.

POTESTA assisted Carl M. Freeman Associates with permitting required for development of the new lake along with upgrades/expansion of the existing lake. Included were a Section 404 individual permit from the United States Army Corps of Engineers and a Section 404 water quality certification from the West Virginia Department of Environmental Protection.

POTESTA prepared roadway and stormwater management plans for the first phase of development. This included typical pavement sections, road profiles, geometric layout plan, culvert and drop inlet sizing, drainage conveyance pipe and channel profiles, and miscellaneous stormwater management details.



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# EVALUATION OF SANITARY WASTEWATER SYSTEM FOR THE CITY OF OAK HILL

*West Virginia American Water  
Oak Hill, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by West Virginia American Water (WVAW) to evaluate the condition of the collection system and wastewater treatment plants (WWTPs) in the City of Oak Hill, evaluate current operation and maintenance (O&M) practices for the collection system and WWTPs, and provide recommendations on potential areas for rehabilitation and improvement in O&M practices for the Oak Hill Sanitary Collection and Treatment System.

Tasks completed as part of the preliminary evaluation included: file review at the West Virginia Department of Environmental Protection (WVDEP) Division of Water and Waste Management (DWWM); meeting with Oak Hill sanitary wastewater system personnel to review and discuss the existing sanitary wastewater system, including tours of the collection system and WWTPs; meetings with WVDEP-DWWM officials; preparation of a summary of five years of Discharge Monitoring Reports; preparation of a preliminary list of prioritized areas for sewer system evaluation study and/or rehabilitation; and preparation of a report summarizing the findings of the preliminary evaluation and providing recommendations.



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# EVALUATION OF SANITARY SEWER SYSTEM FOR HUNTING HILLS RESIDENTIAL DEVELOPMENT

***CNX RCPC, LLC***

***Monongalia County, West Virginia***

Potesta & Associates, Inc. was retained by CNX RCPC, LLC to complete an evaluation of Hunting Hills Residential Development Sanitary Sewer System. Included in the scope of services was:

- Reviewed violations from the West Virginia Department of Environmental Protection, and preliminarily evaluated existing package plant and determined it was in a state of disrepair.
- Designed a new plant including permit level drawings and all associated permits to bring it back in to compliance.
- Performed an Inflow and Infiltration Study to evaluate problems with the sanitary collection system.
- Performed smoke testing on the sanitary collection system.
- Observed 2,200 feet of sanitary collection system pipe via CCTV (i.e., camera).
- Identified defect in the pipeline, including offset joints, cracks and breaks, and direct connections.
- Developed a preliminary estimate of a construction cost for rehabilitation.



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# EVALUATION OF OVERFLOWS FROM SEWAGE PUMP STATION

***Salt Rock Sewer Public Service District  
Cabell County, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to evaluate overflows at the Culloden pump station. The Culloden pump station is part of a regional sewer transmission system that conveys sewage to Salt Rock's publicly owned treatment works (POTW). The pump station was overflowing during certain storm events, despite having twin 870 gallons per minute (GPM) storm pumps designed to engage during storm events. To complete the study, POTESTA:

- Reviewed project documentation, including design documents.
- Visited the project site to record observations, including electrical components.
- Coordinated obtaining flow/pressure data readings, and then compared results to design conditions.
- Prepared a report summarizing the findings and providing recommendations. Primary recommendations included studying upgrading average daily flow (ADF) pumps to increase velocities to 2 feet per second during ADF pumping to reduce solids deposition, and installation of additional metering.



***Culloden Pump Station with Odor Control Chemical Feed System in Background***



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# HOLIDAY PARK ON-SITE SEWAGE SYSTEM

***Salt Rock Sewer Public Service District  
Padero Drive, Ona, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by the Salt Rock Sewer Public Service District to provide conceptual engineering for on-site sewage systems for residents of Holiday Park in rural Cabell County, West Virginia. The residents of Holiday Park were being served by a failing package treatment plant and complaints had been filed with the West Virginia Public Service Commission (PSC).

Specific services provided by POTESTA on this project included:

- Meeting on-site with the client and the Cabell-Huntington Health Department.
- Identifying that approximately 36 homes existed in Holiday Park that were being served by the failing package treatment plant.
- Developing a conceptual plan for on-site sewage systems, consisting of 12 single-home septic tank/leach bed systems and eight larger septic tank/leach beds serving three homes each.
- Preparing estimates of construction cost and total project cost.
- Communicating results with client and PSC staff.



***Failing Package Treatment Plant***



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# ODOR CONTROL STUDY

## *Salt Rock Sewer Public Service District Cabell County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to complete an odor control study mandated by the West Virginia Public Service Commission (WVPSC). The WVPSC had required that Salt Rock complete the study after complaints arose after a proposed lift station site was modified to include a “headworks” facility. The “headworks” facility included a screening unit and grit chamber. To complete the study, POTESTA:

- Reviewed project documentation.
- Reviewed sewage flow, hydrogen sulfide (H<sub>2</sub>S), and chemical dosing data.
- Visited the project site 10+ times to record observations.
- Estimated capital and operation/maintenance costs for three options (chemicals only, enclosure of facilities, or relocation of facilities) to reduce odors. Included in this was sizing of key components.
- Prepared a report summarizing the findings and providing recommendations.

In addition, POTESTA provided support by responding to additional requests from the WVPSC.

Project was completed using funding from the Clean Water State Revolving Fund (CWSRF).



*“Headworks” Facility with Scrubber Unit*



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# PRELIMINARY ENGINEERING FOR HENRY WHITE ROAD SANITARY SEWER EXTENSION

***Salt Rock Sewer Public Service District  
Cabell County, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by Salt Rock Sewer Public Service District (Salt Rock) to provide preliminary engineering services pertaining to a potential extension of sanitary service to Henry White Road. This project would provide service to approximately 26 customers. To complete the study, POTESTA:

- Reviewed a resident's request to be provided sewer service by Salt Rock.
- Evaluated the 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 would be necessary to extend sanitary service to the Henry White Road area.
- Sized and approximated the location of a grinder pump station.
- Provided a Preliminary Estimate of Probable Construction Costs for the project including potential pump station upgrades, installation of pump controls, and fencing around the grinder pump station.
- Assessed power costs for the pump station in order for Salt Rock to evaluate projected rate increases due to anticipated increased project operation and maintenance costs.



***Terminus of Project at Existing Ona West Pretreatment Facilities***



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# OLD STANDARD DEVELOPMENT SEWER LINE AND WASTEWATER TREATMENT PLANT

***Old Standard Development LLC***  
***Millville, Jefferson County, West Virginia***



Potesta & Associates, Inc. (POTESTA) was retained by Old Standard Development LLC to provide professional services for the design of a sanitary sewer collection line and wastewater treatment plant (WWTP) in Jefferson County, West Virginia. The project consists of a sanitary sewer collection line extending from a housing development to a WWTP with an effluent discharge line to the Shenandoah River. The collection line begins with a pump station located at the Sheridan housing development and extends along U.S. Route 340 to

County Route 27 (Bloomery Road) where the line continues toward the WWTP located on the site of the Old Standard Quarry. The effluent line will then extend onto the Old Standard Quarry property, under the CSX railroad and discharge into the Shenandoah River. The sewer collection line consists of approximately 7,300 linear feet of force main and approximately 4,370 linear feet of gravity sewer line. A gravity discharge line carries effluent from WWTP approximately 1,380 linear feet to an outfall into the Shenandoah River. The WWTP for this project is based on an activated sludge membrane bioreactor (MBR) process supplied by Enviroquip, Inc. of Austin, Texas. The plant is designed to treat a daily average flow of 50,000 gallons per day and is expandable to 250,000 gallons per day.

POTESTA responsibilities included:

- Preparation of the design, construction drawings and technical specifications for the sanitary collection and effluent line, including the lift station.
- Geotechnical investigation and foundation recommendations for the WWTP building enclosure.
- Site design of the WWTP.
- Preparation of the design, construction drawings and technical specifications for the WWTP headworks including the pre-treatment, flow equalization and the lift station facilities and onsite sludge storage.
- Preparation of permit applications including the Waste Load Allocation, West Virginia Department of Environment Protection NPDES permit for discharge into the Shenandoah River, West Virginia Department of Health to construct the collection line and WWTP, CSX railroad crossing and the West Virginia Department of Highways for road crossings, highway entrance and use of right-of way.
- Coordination of sub-consultants for the design of the foundations, heating, lighting and ventilation systems for the WWTP building enclosure and emergency backup power for the WWTP.



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# TUCKER COUNTY INDUSTRIAL PARK CONSTRUCTION OF ADDITIONAL WATER AND SEWER LINES

*Tucker County Development Authority  
Tucker County, West Virginia*

After completion of initial construction at the Tucker County Industrial Park, additional monies remained. The owner, Tucker County Development Authority, authorized Potesta & Associates, Inc. (POTESTA) to prepare bidding documents for construction of additional water and sewer lines at the site, using the remaining monies. More specifically, POTESTA:

1. Completed ground survey to develop topographic mapping to reflect "as-constructed" conditions after the first phase.
2. Prepared drawings and specifications depicting the construction of an additional 1,000 feet of gravity sewer line including five manholes, and 500 feet of additional water line, including construction through wetlands and across a stream.
3. Prepared permit applications for crossing of the stream and wetlands, and to obtain approval from the West Virginia Bureau for Public Health.
4. Prepared bidding documents and coordinated obtaining approval from the United States Economic Development Agency.
5. Presented the project at a pre-bid meeting.
6. Compiled contractor bid information.
7. Provided construction phase services, including attending a preconstruction meeting, reviewing and commenting on shop drawings on manholes, pipe and other materials; and providing nearly full-time construction observation services.



The additional water and sewer lines were successfully installed.



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# EVALUATION OF SANITARY SEWER SYSTEM

## *Pocahontas County Public Service District/Wastewater Management, Inc. Pocahontas County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Wastewater Management, Inc. to complete an evaluation of Pocahontas County Public Service District's Hawthorn Loop Sanitary Sewer System. Included in the scope of services was:

- Observed 6,200 feet of pipe via CCTV (i.e., camera).
- Reviewed previous engineering studies.
- Identified defect in the pipeline, including "humps," "swags," ovality issues, broken or separated pipe, and incorrect grades.
- Developed a preliminary estimate of a construction cost for rehabilitation.



*Manhole Identified for Replacement*



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# **WVIJDC APPLICATION AND PRELIMINARY ENGINEERING – TOWN OF CEREDO MUNICIPAL WATER DEPARTMENT DISTRIBUTION SYSTEM UPGRADE**

*Town of Ceredo  
Wayne County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to evaluate deficiencies in its water distribution system and prepare a funding application for monies to implement upgrades to the system, including deficiencies identified in an order from the West Virginia Public Service Commission. More specifically, POTESTA:

1. Evaluated two alternatives for the upgrade that generally differed by whether West Virginia American Water or the Town of Ceredo would serve approximately 215 existing customers east of Twelvepole Creek. Each alternative included upgrades in water lines, installation of fire hydrants, and replacement of the town's approximate 100-year old reservoir. Preliminary estimates of probable construction cost, operation/maintenance costs, debt service, total project costs, and potential customer rates were estimated for each alternative. One alternative had an estimated total project cost of \$2,100,000, while the other had an estimated total project cost of \$4,300,000. Results of the evaluation were summarized in a preliminary engineering report.
2. Prepared a West Virginia Infrastructure and Jobs Development Council (WVIJDC) preliminary application for funding of the recommended alternative. The West Virginia Drinking Water Treatment Revolving Fund was identified as the source of funding. The WVIJDC application and preliminary engineering report were then submitted to the WVIJDC for approval.



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# SANITARY SEWER SYSTEM UPGRADES

## *Town of Ceredo Wayne County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to provide design, permitting and construction phase services for an upgrade to their sanitary sewer system. The design phase included identifying the need to upgrade piping sizes and pumping rates. The project construction included:

- 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.



After construction, POTESTA completed an Asset Management Plan for the sanitary system.

Project was completed within budgeted amounts using funding from the Clean Water State Revolving Fund (CWSRF).



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# ASSET MANAGEMENT PLAN

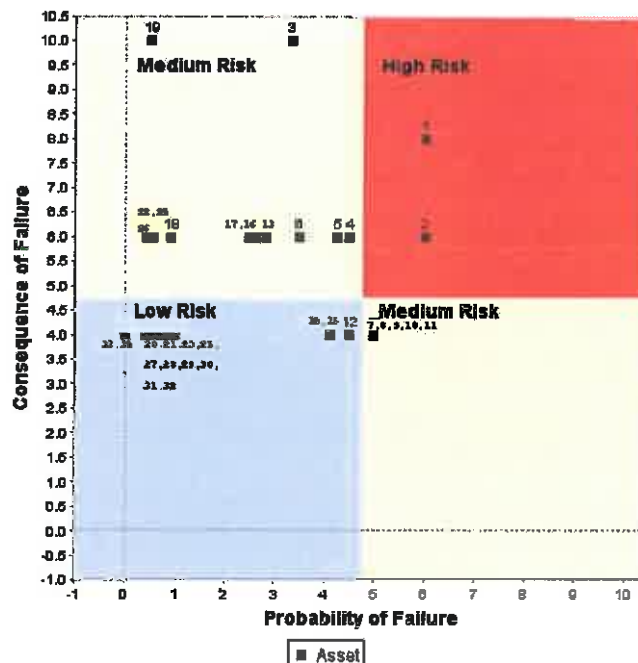
## *Town of Ceredo* *Wayne County, West Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by the Town of Ceredo to prepare an Asset Management Plan, required as part of a sanitary sewer system upgrade funded by the Clean Water State Revolving Fund (CWSRF). Our effort included:

- Met on-site and reviewed the system with Town of Ceredo personnel.
- Development of asset inventory, including gravity lines, force mains, pump stations, etc.
- Identification of level of service and critical assets.
- Identification of asset redundancy, probability of failure, consequence of failure, maintenance cost, expected effective life, and replacement costs.
- Preparation of Long-Term Funding Plan.

The United States Environmental Protection Agency (USEPA) Check-up Program for Small Systems (CUP\$\$) program was used for preparing inventories, financial evaluations, etc.

POTESTA prepared the plan, received CWSRF's approval, and presented the plan in a public setting.



*Figure from CUP\$\$ Report*



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# **UPGRADE OF TOWN OF BRADSHAW VACUUM/SEWAGE COLLECTION SYSTEMS FOR NEW SCHOOLS**

***ZMM, Inc.***

***McDowell County, West Virginia***

Potesta & Associates, Inc. (POTESTA) was retained by ZMM, Inc. to provide design, permitting, bidding and certain construction phase services associated with (a) a collection system associated with two new schools of the same site, and (b) the associated upgrade of the Town of Bradshaw's existing vacuum collection system. Construction included:

- Upgrading an existing single valve vacuum system buffer tank to a triple valve buffer tank.
- Upgrading an existing vacuum pump station by adding a third 10-horsepower (HP) pump.
- Installing an approximate 11,500-gallon equalization tank, with duplex 45 gallons per minute (GPM) pumps with variable frequency drives (VFDs).
- Relocating approximately 200 feet of grinder pump system pipeline.
- Installing approximately 1,500 feet of force main.
- Installing approximately 1,800 feet of 8-inch gravity sanitary sewer line.

The project was completed and went into service with completion of the schools.



***Equalization Tank/Pump Station During Construction***



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# LIME KILN, AGGREGATE PLANT AND RAIL EXPANSION PROJECT

*Carmeuse Lime & Stone  
Winchester, Virginia*

Potesta & Associates, Inc. (POTESTA) was retained by Carmeuse Lime & Stone to provide consulting engineering and environmental services for the expansion of their current quarry operations at their 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. The products include limestone aggregate, lime, and milled limestone. POTESTA, working with our railroad engineering consultant, designed the rail expansion to include grading, stormwater management, and an access road crossing for a rail loop with two side-by-side tracks encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers (Winchester and Western to the north and the CSX to the south). The total project track length consists of approximately 29,000 linear feet of rail. The design of the rail expansion also includes all 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. POTESTA 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). It was also determined that the grading for this rail project would impact wetlands; therefore, POTESTA 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).



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### **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. POTESTA 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 POTESTA working directly for the owner.

Carmeuse 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
- Alocia 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.



## 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 WVAV 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 WVAV'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.

# 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 Virginial American Water – Project Manager for construction administration/monitoring for the Pocahontas 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 feed 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.

Steptoe & 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
- Momenive, 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.

# 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 shale 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 phylloremediation 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, Bevens 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 Bevens 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.

# 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, 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 11th 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

By

*[Signature]* President

*[Signature]*

*[Signature]*

*[Signature]*



# 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, reposing special confidence in the Intelligence, Integrity and Discretion of

Mark A. Sankoff

**DOS, 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: M. A. Sankoff*

*Secretary*  
Kenneth H. Means

*By*

*President*  
Frank Gaddy  
*Robert L. Gaddy*





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

**DONE, 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  
Kenneth H. Means Secretary  
Frank W. Kelly President  
R. E. Engle

By  
Robert B. Smith



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

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 Feb in the  
year of our Lord One Thousand  
Nine Hundred and Ninety Six  
and of the State the One Hundred  
Thirty Second



STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

W. Ben Faulstich  
Secretary

Robert R. Egan  
President

Kenneth H. Means

Robert C. Smith

Frank H. Kelly



# 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:** DNR1900000001 **Contract Description:** Canaan Valley State Park - Wastewater Improvement Project

**Governmental agency awarding contract:** Division of Natural Resources

☐ 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.

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.

Dana L. Burns 25%  
Ronald R. Potesta 75%

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: 2/20/19

### 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 20 day of February, 2019.

Rhonda L. Henson

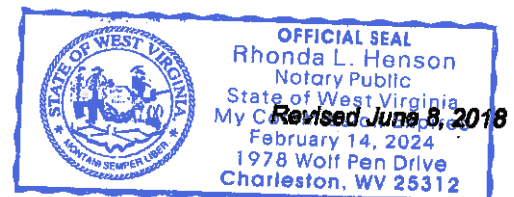
Notary Public's Signature

### 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: 544954

Doc Description: A/E Services-Canaan Valley Resort Wastewater Improvements

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-02-01	2019-02-22 13:30:00	CEOI 0310 DNR1900000001	1

**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

2/20/19

All offers subject to all terms and conditions contained in this solicitation



**ADDITIONAL INFORMATION:**

## Expression of Interest Request

The West Virginia Purchasing Division is soliciting Expression(s) of Interest for the Agency, The Division of Natural Resources from qualified firms to provide architectural/engineering services and other related professional services to design and specify for construction as well as provide construction contract administration, for Renovations to the Lodge Wastewater Plant and collection systems at Canaan Valley Resort State Park. The planned improvements may also include any other work necessary for, or related to, the park facilities, as well as any other necessary ancillary work; all located in Canaan Valley Resort State Park in Tucker County, West Virginia, 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		SUPERINTENDENT DIVISION OF NATURAL RESOURCES CANAAN VALLEY RESORT 134 HEADQUARTERS RD DAVIS WV 26260 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 renovations to the Lodge wastewater plant and collection system at Canaan Valley Resort State Park.

<b>DNR1900000001</b>	<b>Document Phase</b> Final	<b>Document Description</b> A/E Services-Canaan Valley Resort Wastewater Improvements	<b>Page 3</b> <b>of 3</b>
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**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, Charleston, WV 25304

(Address)

304-342-1400/304-343-9031

(Phone Number) / (Fax Number)

dlburns@potesta.com

(email address)

**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)

*2/20/19*

(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: 2/20/19

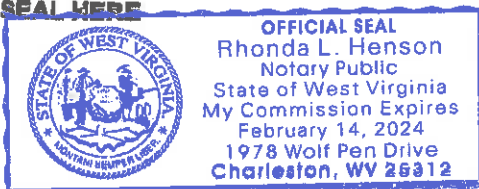
State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 20 day of February, 2019

My Commission expires February 14, 2024

**AFFIX SEAL HERE**



**NOTARY PUBLIC**

*Rhonda L. Henson*

*Purchasing Affidavit (Revised 01/19/2018)*



**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.:** DNR1900000001

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

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

**Addendum Numbers Received:**  
*(Check the box next to each addendum received)*

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

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

Potesta & Associates, Inc.

Company \_\_\_\_\_

*Dana L. Burns*

Authorized Signature \_\_\_\_\_

*2/20/19*

Date \_\_\_\_\_

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



POTE&amp;AS-01

KCOLLINS

## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

03/14/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C, No, Ext):</b> (703) 827-2277 <b>FAX (A/C, No):</b> (703) 827-2279	
<b>INSURED</b>  Potesta & Associates, Inc. 7012 MacCorkle Avenue, SE Charleston, WV 25304	<b>E-MAIL ADDRESS:</b> admin@amesgough.com	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> Valley Forge Insurance Company A(XV) <b>NAIC #</b> 20508	
	<b>INSURER B:</b> Continental Casualty Company (CNA) A, XV <b>20443</b>	
	<b>INSURER C:</b> American Casualty Co of Reading, PA A(XV) <b>20427</b>	
	<b>INSURER D:</b> Evanston Insurance Company <b>35378</b>	
<b>INSURER E:</b>		
<b>INSURER F:</b>		

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:			6057035330	03/07/2018	03/07/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/OP AGG \$ 2,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			6057035327	03/07/2018	03/07/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> EXCESS LIAB DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			6057035358	03/07/2018	03/07/2019	EACH OCCURRENCE \$ 9,000,000 AGGREGATE \$ 9,000,000
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	6057035344	03/07/2018	03/07/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional Liab.			MKLV7PL0003081	03/07/2018	03/07/2019	Per Claim/Aggregate \$ 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
Pollution Liability is included in the Professional Liability policy and shares the limits per the policy terms and conditions.

## CERTIFICATE HOLDER

## CANCELLATION

## EVIDENCE OF COVERAGE

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE