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| e, Alisha S Pettit           |                        |                          | Procurem              | ent Budgeting Accounts Receiva | ble Accounts     | Payable              |               |    |         |
|------------------------------|------------------------|--------------------------|-----------------------|--------------------------------|------------------|----------------------|---------------|----|---------|
| tion Response(SR) Dept: 0310 | ID: ESR05212400000     | 007228 Ver.: 1 Function: | New Phase: Final      | Modified by batch , 05/21/2024 |                  |                      |               |    |         |
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| eral Information Contact D   | efault Values Disco    | unt Document Information | Clarification Request |                                |                  |                      |               |    |         |
| Procurement Folder:          | 1420085                |                          |                       | SO Doc Cod                     | e: CEOI          |                      |               |    |         |
| Procurement Type:            | Central Purchase Order |                          |                       | SO Dep                         | t: 0310          |                      |               |    |         |
| Vendor ID:                   | 000000160928           | <b>2</b>                 |                       | SO Doc I                       | D: DNR24000000   | 08                   |               |    |         |
| Legal Name:                  | CIVIL & ENVIRONMENTA   | L CONSULTANTS INC        |                       | Published Dat                  | e: 5/2/24        |                      |               |    |         |
| Alias/DBA:                   |                        |                          |                       | Close Dat                      | e: 5/21/24       |                      |               |    |         |
| Total Bid:                   | \$0.00                 |                          |                       | Close Tim                      | e: 13:30         |                      |               |    |         |
| Response Date:               | 05/21/2024             |                          |                       | Statu                          | s: Closed        |                      |               |    |         |
| Response Time:               | 11:30                  |                          |                       | Solicitation Descriptio        | n: A&E - Holly R | iver State Park Main | Water Service |    |         |
| Responded By User ID:        | kevinhanks             | 1                        |                       |                                |                  |                      | 11.           |    |         |
| First Name:                  | Kavia                  |                          |                       | Total of Header Attachment     | s: 1             |                      |               |    |         |
| Last Name                    | Usela                  |                          |                       | Total of All Attachment        | s: 1             |                      |               |    |         |
| Last name:                   | nanks                  |                          |                       |                                |                  |                      |               |    |         |
| Email:                       | khanks@cecinc.com      |                          |                       |                                |                  |                      |               |    |         |
| Phone:                       | 2676885593             |                          |                       |                                |                  |                      |               |    |         |



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

# State of West Virginia Solicitation Response

| Proc Folder:              | 1420085                | 1420085                         |         |  |  |  |
|---------------------------|------------------------|---------------------------------|---------|--|--|--|
| Solicitation Description: | A&E - Holly Rive       | r State Park Main Water Service |         |  |  |  |
| Proc Type:                | Central Purchase Order |                                 |         |  |  |  |
| Solicitation Closes       |                        | Solicitation Response           | Version |  |  |  |
| 2024-05-21 13:30          |                        | SR 0310 ESR05212400000007228    | 1       |  |  |  |

| VENDOR                               |                         |                |            |                |          |
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| 000000160928<br>CIVIL & ENVIRONMENTA | L CONSULTANTS INC       |                |            |                |          |
| Solicitation Number:                 | CEOI 0310 DNR2400000008 |                |            |                |          |
| Total Bid:                           | 0                       | Response Date: | 2024-05-21 | Response Time: | 11:30:34 |
| Comments:                            |                         |                |            |                |          |

| FOR INFORMATION CONTACT THE BUYER<br>Joseph E Hager III<br>(304) 558-2306<br>joseph.e.hageriii@wv.gov |       |      |  |
|---|-------|------|--|
| Vendor<br>Signature X   | FEIN# | DATE |  |

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

| Line     | Comm Ln Desc       |                  | Qty | Unit Issue | Unit Price | Ln Total Or Contract Amount |
|----------|--------------------|------------------|-----|------------|------------|-----------------------------|
| 1        | Professional engir | neering services |     |            |            | 0.00                        |
| Comm     | Code               | Manufacturer     |     | Specifica  | ation      | Model #                     |
| 81100000 |                    |                  |     |            |            |                             |

#### Commodity Line Comments:

#### **Extended Description:**

Design and contract administration services of new main water service at Holly River State Park.





WEST VIRGINIA DIVISION OF NATURAL RESOURCES

### HOLLY RIVER STATE PARK MAIN WATER SERVICE DNR240000008

CEC | BRIDGEPORT Project 343-280 May 21, 2024



May 21, 2024

Joseph E Hager III Division of Natural Resources Department of Administration Purchasing Division 2019 Washington St E Charleston WV 25305

Dear Mr. Hager and Members of the Selection Committee:

Subject: A&E – Holly River State Park Main Water Service CEOI 0310 DNR240000008 Expression of Interest & Statement of Qualifications CEC Project 343-280

We are pleased to present Civil & Environmental Consultants, Inc. (CEC)'s qualifications for engineering services to the Division of Natural Resources. We are confident that the enclosed materials highlight our project team and explain our water technical design capabilities. Our Principals, Erasmo Rizo and Steve Buchanan, will lead the efforts for CEC.

CEC will bring the following qualities to the project:

- **Vested Interest.** CEC has skin in the game, and we take ownership of the project's clients entrust us to deliver; we will do the same for the Holly River State Park/Division of Natural Resources.
- We are experts. We employ West Virginia's best engineers to deliver the highest technical capability. CEC's water system experts utilize modern technologies.
- **Fiscal responsibility**. We will treat the Division of Natural Resources money like ours. We will work on your behalf to save costs and maximize the value of a dollar.
- Client liaison and communication guidance. Working with various constituents (funding agencies, regulatory agencies, and the public) can be complicated in some instances. CEC will serve as a client liaison, providing guidance and direction in presenting information to funding agencies, regulatory agencies, key decision-makers, community members, and ratepayers.
- We want to be your partner. We do not view this as a one-and-done project; we seek to be your long-term trusted consultant and partner. We will deliver quality work on budget and on time.

CEC understands that the State parks are the catalyst for the growth of recreation and tourism throughout the State. Our team understands how critical the infrastructure is to the park's function. Our team will utilize the experience of our senior professionals to design and implement the improvements for the benefit of locals and tourists alike.

CEC is working hard to become West Virginia's premier engineering and environmental consulting firm by achieving extraordinary results for our clients. We understand the need for adequate infrastructure and the impacts projects can and will have on the citizens of the State of West Virginia. We hope for an opportunity to interview for the project to discuss our detailed approach to your project.

Sincerely, CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Erasmo Rizo

Principal

Steve Buchanan, PE, PS Principal

## PROFESSIONAL ENGINEERING & CONSULTING SERVICES FOR HOLLY RIVER STATE PARK MAIN WATER SERVICE

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## Professional Engineering & Consulting Services for Holly River State Park Main Water Service



# **1.0** Firm Overview

In 1989, four engineers and scientists came together with a singular vision: to be a people-first company, one that promotes a culture where clients and employees enjoy working together, and that is responsive to client needs with integrated services and high-quality work for projects both complex and routine. More than 35 years later, Civil & Environmental Consultants, Inc. (CEC) has 1,500+ team members in offices nationwide. Headquartered in Pittsburgh, Pennsylvania, we are consistently ranked on Engineering News-Record's annual lists of the Top Design Firms and Top Environmental Firms in the nation.

CEC is an expanding, multi-disciplined company that is home to:

- Civil Engineers
- o Geotechnical Engineers
- o Transportation Engineers
- o Structural Engineers
- Environmental Scientists
- o Environmental Engineers
- Chemical Engineers
- ∘ Geologists
- ∘ Hydrogeologists
- ∘ Hydrologists
- Ecologists
- ∘ Biologists
- Wetland Scientists
- o Threatened & Endangered Species Experts
- o Agronomists/Soil Scientists
- Emissions Testing Professionals
- Meteorologists
- ∘ Chemists
- ∘ Archaeologists
- o Construction Managers and Inspectors
- Environmental Technicians
- o Treatment Plant Operators

- Land Surveyors
- Landscape Architects
- GIS Analysts and Programmers

#### **CEC West Virginia**

CEC's Bridgeport and Charleston offices are comprised of senior leaders, engineers, project managers and support staff all with significant private and public infrastructure planning, project funding, design and engineering experience. The offices are adequately staffed with a variety of professionals to ensure appropriate staff is assigned to any task.

The Bridgeport and Charleston offices enjoy a positive relationship with local, regional and state regulatory officials. These relationships are critical to navigating the permitting process through the increasingly difficult regulatory environment. CEC understands the length of time required for permitting tasks and can assist the client in developing accurate project schedules. CEC also has significant experience working with local contractors on similar development, roadway, and utility projects throughout West Virginia. This knowledge of local construction techniques and a thorough understanding of the design and operation/maintenance of public infrastructure provide a technical advantage to CEC.

CEC's team provides a balance of public and private sector experience that allows us to offer an exceptional prospective to our consulting services. Our team has proven experience in both private and public sector projects throughout West Virginia, meeting intensive schedules for projects and locally funded projects while maintaining quality work.



Civil & Environmental Consultants, Inc.

# Municipal Drinking Water Treatment

CEC offers engineering, design, and construction services to provide new or improved water treatment facilities or expansions to existing water treatment facilities for municipal drinking water systems.





CEC engineers and scientists provide comprehensive services to study and design new facilities, or modify, expand or replace existing facilities.

#### LARGER SURFACE WATER & GROUNDWATER PLANTS

CEC designs larger surface water treatment facilities and groundwater plants that clarify and/or soften raw water with lime or lime and soda ash. CEC designs chemical storage, feed systems, and treatment processes for:

- Taste and Odor Control
- Clarification (turbidity removal)
- Organics Removal
- PFAS/PFOS Removal and Regulatory Compliance

- Softening
- Iron and Manganese Removal
- Stabilization
- Disinfection

CEC also designs solids handling, storage, and disposal facilities.

#### SMALLER GROUNDWATER PLANTS

CEC designs smaller groundwater treatment plants to remove methane, iron, arsenic manganese, and hydrogen sulfide. Aeration and chemical oxidation systems are designed to convert soluble iron and manganese into elemental iron and manganese for removal by either gravity or pressure filters.

CEC can further reduce any remaining soluble manganese after aeration and chemical oxidation by using synthetic greensand filter media in lieu of conventional sand media. The greensand is maintained by feeding the proper amount of potassium permanganate.

Natural water hardness can be reduced to locally acceptable levels with an optional cation exchange process. Treated water is stabilized with a sequestering chemical and disinfected before being pumped to users.

#### **MEMBRANE SYSTEMS**

When conditions require advanced treatment technologies, CEC designs pretreatment processes needed for the successful use of membrane technologies. In addition, CEC works with suppliers to design and specify membrane systems that treat water to very high quality standards.

#### **TREATED WATER STORAGE & PUMPING**

CEC designs finished water storage and booster pump stations to meet EPA maximum day requirements plus fire flow conditions. When conditions require, designs for elevated storage tanks or ground storage and pump stations provide and maintain local distribution system pressure requirements.

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# Municipal Water Distribution Systems

CEC provides engineering, design, and construction services for new and/or improved capabilities of municipal water distribution systems. CEC provides municipalities with full-service capabilities including studies, analysis, and engineering, and also can provide additional support for:

- Financing and Funding
- Surveying
- Design Drawings and Specifications
- Bidding- and Construction-Related Services
- Leak Detection Services

#### **DISTRIBUTION ANALYSIS**

CEC hydraulically analyzes existing and proposed transmission mains and local lines of a community's water distribution system. The analyses identify lines and areas requiring upgrading or reinforcing to meet local needs, Fire Underwriters Survey recommendations, and EPA requirements. Thorough hydraulic analyses of distribution systems and storage tanks can provide strategies for additional or replacement water storage tanks.

#### **ELEVATED AND GROUND STORAGE TANKS**

CEC designs elevated water storage tanks and standpipes to provide water ready for delivery without pumping. Storage tanks that float hydraulically on the system stabilize pressures, provide water for firefighting, and allow plants to treat water at a more constant rate where their operation works best and is most efficient.

CEC also designs ground storage tanks with pumping facilities as an economical alternative to elevated storage tanks. CEC designs and prepares final drawings and specifications for bidding tanks, and provides construction-related services.

#### **PUMP STATIONS**

Pump stations are used to boost area pressures and to separate pressure zones hydraulically. This commonly occurs in larger systems or when surface topography reduces area pressures significantly. CEC analyzes the community's specific needs and designs in-line booster pumps or pump stations with associated ground or elevated storage to increase area pressures.







# **Civil Engineering** & Site Development

CEC provides civil engineering and site development consulting services to assist with the development of cost-effective designs to meet regulatory and client requirements. CEC has extensive experience preparing regulatory permits and managing the design, approval, and on-site construction processes associated with the site development of multi-building campuses, commercial, industrial and retail developments, institutional and educational facilities, and residential developments. CEC has developed a reputation for developing high-quality, sustainable and "buildable" design solutions within construction budgets.

#### PREDEVELOPMENT SITE INVESTIGATIONS

CEC provides predevelopment investigation services to evaluate sites for specific uses, addressing site layout, zoning adherence for parking and setbacks, site access, wetlands and other environmental considerations, geotechnical concerns, grading/earthwork, and utility availability and capacity.

#### **CIVIL DESIGN AND PERMITTING**

CEC has extensive design experience and a proven track record of successfully obtaining local, state, and federal erosion and sedimentation control (E&S) permits and/or regulatory approvals and has a working knowledge of the various state and federal E&S and National Pollutant Discharge Elimination System (NPDES) regulations and requirements. Civil design and permitting services include:

- Site Grading/Earthwork Analysis
- Erosion and Sedimentation Control/NPDES Permitting
- Stormwater Management/Water Quality Design
- Utility Design/Coordination
- Roadway Design and DOT Permitting
- Sustainability Planning and Design

#### LANDSCAPE ARCHITECTURE AND PLANNING

CEC provides a diverse range of landscape architecture design services for site and land development, master development planning, feasibility studies, landscape design, green infrastructure and irrigation. CEC is recognized for leadership in applying sustainable design, green infrastructure and low-impact design solutions. CEC's services include the preparation of graphic renderings, photo manipulation services and 3-D modeling visualizations.

#### **GEOTECHNICAL ENGINEERING**

CEC provides geotechnical engineering services to determine foundation and retaining wall design parameters, develop site grading requirements, design pavements, and investigate slope stability, mine subsidence, landslides, and foundation failures.

#### **CONSTRUCTION SERVICES**

CEC routinely monitors the construction of earthmoving operations, the installation of erosion control measures and building construction. CEC provides certified technicians for testing of soils, concrete, masonry, steel and fireproofing. Technicians are certified to meet International Building Code (IBC) Special Inspection requirements and provide construction quality assurance and construction management services for a wide range of civil, geotechnical, environmental and waste management projects.







Civil & Environmental Consultants, Inc.

# **Civil Engineering & Site Development**



#### SITE INFRASTRUCTURE MAINTENANCE AND REHABILITATION SERVICES

CEC engineers, construction managers and field superintendents perform infrastructure assessments, develop recommendations to correct concerns, and deliver cost-effective repair, rehabilitation and maintenance services for site infrastructure, including stormwater facilities, site utilities, landscaping, parking lots and pavement.

CEC inspects, monitors, maintains, restores, repairs and improves property infrastructure. The need for such services can arise from damage, age, poor maintenance of systems, and/or changing regulatory requirements.





# **Geotechnical Engineering**

CEC offers comprehensive geotechnical engineering services to planners, public agencies, industry, architects, developers, and contractors. CEC supports the client's geotechnical needs throughout a project – from assistance with site selection through construction. As a full-service consulting firm, CEC geotechnical engineers work in-house with other disciplines during projects. This results in a more comprehensive approach to project planning and early identification of geotechnical-related issues. It also results in a more cost-effective approach to site development.

During the site selection or the planning phase of a project, CEC offers the following services:

- Geotechnical Desktop Survey
- Site Reconnaissance
- Geo-Hazard Assessment

As a project progresses, CEC geotechnical engineers support conceptual designs and conduct investigations to assess development and construction issues. Projects include:

- Commercial and Residential Buildings
  Industrial Facilities
- Industrial and Office Park Developments
  Dams

During the design phase, CEC geotechnical engineers perform analyses, prepare reports, and support the preparation of drawings and specifications. Analyses and designs performed include:

- Earthwork Design and Recommendations
- Foundation Analysis and Design
- Grouting and Ground Improvement Design
- Landslide Investigation and Stabilization
- Mine Subsidence Investigations, Risk Assessments, and Stabilization
- Pavement Analysis and Design
- Seepage Analyses
- Soil and Bedrock Stabilization
- Slope Stability and Retaining Structure Design
- Subsurface Investigation, Sampling, and Testing

Prior to and during construction, CEC can support project bidding and contractor selection, as well as provide construction oversight and inspection services.

CEC's skilled field engineers and technicians have experience inspecting:

- Fill Placement and Earthwork Operations
- Deep and Shallow Foundation Construction
- Landslide and Deep Mine Stabilization
- Pavement Installation
- Retaining Wall Construction
- Concrete Construction
- Building Materials

Additionally, CEC engineers and technicians often provide construction management services and/or design-build services. Additional professional consulting services provided by CEC include forensic analyses, as well as litigation support on projects such as mine subsidence, retaining wall failures, landslides, and groundwater issues.





Civil & Environmental Consultants, Inc.

# **Construction Management**

CEC engineers, construction managers, and field superintendents provide tailored Construction Management (CM) services to deliver seamless completion of projects. CEC's proactive approach saves time and cost while providing quality results that achieve client objectives.



#### **CONSTRUCTION MANAGEMENT APPROACH**

CEC provides CM services as an agency or as an Owner's Representative, as well as CEC-led Design/Build arrangements to provide a turnkey solution. CEC's collaborative team approach enables early, impactful decisions about a project's design intent, schedule, budget, materials, and more. As the Construction Manager, CEC acts as the Owner's Representative and advocate, managing the construction trades, budgeting, and scheduling. Trade contracts are "held" either by the owner or by CEC as the Construction Manager. In a Design/Build approach, where CEC is responsible for both design and construction of a project, CEC contracts directly with the Owner and is fully responsible for the delivery of the project. CEC's typical Design/Build approach is to offer an integrated team with CEC providing design and engineering on a turnkey basis.

The benefits of a CEC-led CM approach are:

- · Builder/contractor selection flexibility
- Early input on constructability
- Early budget and schedule input/control
- Faster schedule delivery
- Owner advocacy

CEC provides a single point of responsibility for both design and construction.

#### **CONSTRUCTION MANAGEMENT SERVICES**

CEC's suite of construction-related services provides for client advocacy and confidence while we deliver projects in many forms, including:

- Pre-Construction
- Project Administration
- Construction Inspection
- Constructability Reviews
- Project Controls and Document Management
- Scheduling
- ws Claims Management and Resolution
  - Quality Assurance

Cost Estimating

- Startup and Testing
- Project Close-out

#### CONSTRUCTION MANAGEMENT EXPERIENCE

CEC has delivered on-schedule and on-budget quality construction management for a variety of projects, including:

- Site Development
- Earthwork and Grading
- Site Utility Construction
- Soil and Groundwater Remediation
- Landslide Repair and Remediation
- Erosion & Sedimentation Controls Installation
- Wetland and Stream Restoration

Cost Control and Value-Engineering

Change Order Management

- Access Road Rehabilitation and Construction
- Mine Grouting
- Soil Retention Systems
- Paving
- Post-Construction Restoration



# **Survey/Geospatial Services**

With a seasoned team of registered professionals and survey staff, combined with cutting-edge technology and equipment, CEC offers a full range of surveying and geospatial services both on land and in water that meet the changing needs of clients.





#### LAND SURVEYING

CEC surveyors have a depth of professional experience combined with advanced technical skills to locate, analyze, and map property boundaries and existing conditions for a variety of land use and development purposes. From reviewing aged deeds to utilizing the latest survey technology, reconciling boundary and title exceptions, and preparing high-quality documents and deliverables, CEC surveyors are proven expert measurers. Licensed professionals are experienced with various agency and governmental requirements, as well as state and national survey standards. Robust professional capabilities, specialized experience, and technical competence and capacity allow CEC to provide the following surveys:

- Boundary and ALTA/NSPS Land Title
- Topographic, Utility, and As-Built
- Horizontal and Vertical Control
- Construction Surveys and Staking
- Volumetric
- Settlement and Deformation Monitoring
- Route and Right-Of-Way
- Roadway and Railway

#### **BATHYMETRIC/HYDROGRAPHIC SURVEYS**

CEC performs bathymetric/hydrographic surveys using its in-house fleet of survey vessels and depth-sounding equipment to satisfy diverse industry needs for mapping underwater environments. Our vessels are outfitted with required United States Coast Guard (USCG) safety equipment and are operated by CEC personnel with a USCG Captain's License and/or safe boat operation training, and who have been trained to work in aquatic environments.

CEC collects comprehensive bathymetric data to assist manufacturing, mining, natural gas, power, and transportation companies with projects requiring accurate water depth/ bottom surface elevation data. Capabilities and services include:

- Dual-Frequency and Side-Scan Capabilities
- Manned and Autonomous Survey Vessels
- Pre- and Post-Dredging and Demolition Surveys
- River, Harbor, and Impoundment Surveys
- Maintenance Dredging Scans
- Draft and Trench Verification
- Storage Volumes and Resident Time Calculations
- Utility Crossing Alignment Surveys
- Horizontal Directional Drilling (HDD) Scans

#### **UNMANNED AERIAL SYSTEMS (UAS)**

CEC utilizes UAS to conduct site inspections, topographic surveys, construction site monitoring, stockpile and landfill volumetric calculations, vegetation analyses, optical gas imaging, and other similar projects. UAS provide a cost-effective, low-environmental-impact solution that optimizes the quality and value of collected data.



# **2.0** Project Goals and Objectives

CEC anticipates the following approach to this project:

#### Task 1: Communication

CEC will maintain regular communication with Holly River State Park representatives and the Division of Natural Resources. Clear and concise communications are vitally important for achieving the project goals. This task will be continuous from start to finish, beginning with an initial kick-off meeting with all stakeholders to review the project's goals, scope, and schedule.

The Division of Natural Resources representatives will dictate the means of communication. These may include phone calls, texts, e-mails, written correspondence, regular site visits, and attendance of scheduled meetings. Our Bridgeport office is about 1 hour 20 minutes from the State Park, making regular in-person meetings quite feasible. The point of contact for this project resides within 20 minutes of the state park. Points of contact will be identified early and maintained throughout the project. CEC employees will perform all work.

#### Task 2: Problem Identification

CEC will collect all information necessary to identify the problems to be addressed and the improvements to be made. This effort will include in-depth communication with representatives of the Division of Natural Resources and Holly Rivers State Park staff, a thorough review of regulatory reports and requirements, and independent site assessments. The problems identified will be communicated with all stakeholders to build a consensus on the improvements that may be required.

#### **Task 3: Constraint Enumeration**

CEC will identify all facts and understandings that may constrain possible solutions and improvements. This will include obtaining and reviewing all relevant information. It will also include surveying and ecological and geotechnical investigations as required.

#### Task 4: Alternative Solution Evaluation

CEC will consider and evaluate all possible solutions within the constraints enumerated, their advantages and disadvantages, initial capital costs, expected usable lives, ongoing operation and maintenance requirements, and continuing operation and maintenance costs. Life cycle cost analyses will be provided. Recommendations will be made and communicated to the Holly River State Park and Division of Natural Resources representatives. Required reports will be prepared and submitted to Holly River State Park and Division of Natural Resources representatives, as well as the funding agencies.

#### Task 5: Selected Alternative Implementation

CEC will design, permit, and bid the selected alternative, assist in funding closing as necessary, provide full-time construction administration services throughout the construction period, ensure that all start-ups and training are videotaped, ensure that all Operation and Maintenance Manuals are provided, provide Record Drawings of all improvements for future use, and close out the project.

#### **Task 6: Warranty Period Services**

CEC will assist throughout the warranty period to notify the Contractor(s), vendors, and suppliers of any warranty issues. CEC will provide on-site construction observations with the with Holly River State Park and Division of Natural Resources representatives and the Contractor(s) at least one (1) month before the end of the warranty period. Any defects will be reported for the Contractor(s) correction.



Professional Engineering & Consulting Services for Holly River State Park Main Water Service



# **3**.0 Project Team



### **Matthew Fluharty, P.E.**

Vice President



#### **24 YEARS OF EXPERIENCE**

#### EDUCATION

B.S., Civil Engineering, West Virginia University, 2000

Mr. Fluharty has 24 years of experience in the engineering and consulting industry servicing private commercial and industrial, Oil and Gas, and government sectors. His project practice focus includes the design and engineering of fluid hydraulics, hydraulic modeling and treatment systems, Mr. Fluharty's engineering experience include: detailed engineering including water pipelines and pumping stations, water storage tanks, plant layouts, equipment sizing and selection, hydraulics analysis; plans and specifications for bidding and construction; engineering cost estimating including project control-level budgeting and life-cycle costs; bidding and procurement; project planning and permitting. He has worked with a variety of projects including wastewater, raw water, produced water, and brine water.

#### **PROJECT EXPERIENCE**

#### **Public Utilities - Water and Wastewater**

## Water Distribution and Water Treatment Improvements, City of Thomas, Thomas, West Virginia Role: Principal Engineer

Severing as the Principal Engineer to oversee the detailed design plans and specifications, project permitting, bidding, and construction support. This project involves the necessary improvements to the City's existing water treatment and water distribution systems. A complete hydraulic model was built with KY Pipe software to asses the required improvements to the water system. This project involves water line replacement, ns, new water storage tanks, new booster pump stations, new telemetering system, and a new 600 GPM water treatment plant.

## Water Distribution and Water Treatment Improvements, Town of West Union, West Union, West Virginia Role: Principal Engieer

Serving as Principal Engineer for this project. This project involves the necessary improvements to the Towns existing water treatment and water distribution systems. A complete hydraulic model was built with KY Pipe software to asses the required improvements to delivery additional water to a Regional Jail and provide future growth in the local area. This project involves several water line replacements, new water line extension, new control valve stations, new water storage tanks, new booster pump stations, new telemetering system, and a new 1,000 GPM water treatment plant.

#### Water Distribution and Water Treatment Improvements, Town of Coalton, Coalton, West Virginia

#### Role: Project Manager

Served as Project Manager for this project. I over saw the funding, design, permitting, bidding, and construction for this project. This project will involve the replacement of the existing potable water distribution system with 6", 4" and 2" water lines, refurbishing the existing 100,000-gallon water storage tank, replacing the existing 100 GPM water treatment plant and the installation on new meter pits with new meters.

#### Water Line Replacement Project, City of Bridgeport, Bridgeport WV

Role: Design Engineer

Civil & Environmental Consultants, Inc.

#### EXPERTISE

Water Hydraulics Pumps Hydraulic Modeling Wastewater and Water Treatment Water Storage Tanks Fire Pumps

#### REGISTRATIONS



#### CERTIFICATIONS

10-hour Construction Safety, Occupational Safety & Health Administration

SafeLand USA - Basic Orientation, PEC Safety

### Matthew Fluharty, P.E.

### Vice President

Served as the design engineer for the water line replacement project. Project involved the replacement of approximately 6,000 linear feet of water line, installation of new main line valves, fire hydrants, meter setting, and service tubing. Additionally, this project involved the necessary permits, detailed specifications and contract documents, bidding, and construction support.

#### Charles Point Water System, Bridgeport Utility Board, Bridgeport Harrison, WV\*

#### Role: Project Engineer

Water system extension for proposed new development of Charles Pointe and the new United Hospital Center. Project involved the construction of 16" and 12" water line distribution system, two 500,000 gallon water storage tanks, 700 GPM booster pump station, and telemetering system.

## Water Distribution and Water Treatment Support, Clarksburg Water Board, Clarksburg Harrison, WV\* Role: Project Manager

Severed as General Engineer for the Clarksburg Water Board on various projects and tasks. Related projects, Perry Hollow water line extension, Cedar Heights water system improvements, water storage tank rehabilitation, Chestnut Street water line replacement, Farland Avenue River Crossing, VA Park river crossing, Upgrades to electrical generator for 20 MGD water treatment plant, replacement of 8,000 water meters with automatic read.

## Southern Lewis County Water Line Extension Project, Lewis County Commission and Lewis County EDA, Lewis County, WV\*

#### Role: Project Manager

Water line extension project involving approximately 42 miles of water line to serve 400 new customers. Project involved two (2) new 100,000 gallon glass-lined bolted steel water tanks and a 200 GPM booster pump station. Project provided water service along Georgetown Road to US RT 119 and served the communities of Walkersville, Ireland, Duffy, and Vandalia.

#### Hodgesville Water Line Extension Project, Hodgesville Public Service District, Upshur County, WV\*

#### Role: Project Engineer

Water distribution extension involving approximately 30 miles of water line to serve 250 new customers. Project involved a new 240,000 gallon welded steel water tank and a 250 GPM package water booster pump station and telemetering system.

#### State Route 5 Water Line Extension Project, Gilmer County Public Service District, Glenville Gilmer, WV\*

Water line extension project to extend water service throughout Gilmer County. Project involved the construction of 19 miles of water line to serve 115 new customers.

#### Water Line Extension Project, Masontown Water Works, Masontown WV\*

#### Role: Project Manager

Water line extension project involving 15 miles of water line to extend to 90 new customers. Project also involved adding additional 250,000 gallon water storage tank, 200 GPM booster pump station, solenoid operated pressure reducing valve station, and telemetering system.

#### 1.2M Gallon Water Storage Tank Replacement, Kingwood Water Works, Kingwood, WV\*

#### Role: Project Manager

Project involves the replacement of an existing water storage tank with a new 1,200,000 gallon water storage tank and valve vault, and a new 100 GPM constant pressure booster station.

#### Water Treatment Plant Upgrades, City of Parsons, Parsons, WV\*

#### Role: Project Engineer

This project involved the replacement of the existing clearwell with a new 500,000 gallon glass lined water storage tank, new backwash pump station, new filter to waste piping, and new plant water pump supply system. \* *Work performed prior to joining CEC* 

#### PROFESSIONAL AFFILIATIONS

American Water Works Association

American Society of Civil Engineers



### **Steven V. Buchanan, P.E., P.S.** Principal



#### **40 YEARS OF EXPERIENCE**

#### EDUCATION

B.S., Civil Engineering, West Virginia University, 1984

#### REGISTRATIONS



Steve has civil engineering experience in both the private and public sectors in the areas of highway engineering, traffic engineering, site engineering, municipal engineering, potable water engineering, wastewater engineering, passive acid mine drainage treatment engineering, miscellaneous engineering experience, and surveying. This broad ranged experience allows him to approach projects comprehensively. Representative project experience related to the project(s) for which this statement of qualifications is made includes the following:

#### **PROJECT EXPERIENCE**

#### **Potable Water Engineering**

Bath Water System Improvements Phase IV, Berkeley Springs Water Works, Berkeley Springs (Bath), West Virginia\* Role: Engineer Design and construction administration.

Middlebourne Water Treatment Plant Improvements and Water System Improvements, Town of Middlebourne, Middlebourne, West Virginia\* Role: Engineer Construction administration.

Paw Paw Water System Improvements, Town of Paw Paw, Paw Paw, Morgan County, West Virginia\* Role: Engineer

Design and construction administration.

Terra Alta Water System Improvements, Town of Terra Alta, Terra Alta, Preston County, West Virginia\* Role: Engineer Design.

Fowler Road Water Line Extension, Southwestern Public Service District, Taylor County, West Virginia\* Role: Engineer Design and construction administration.

Pennsboro Phase I Water System Improvements, City of Pennsboro, Pennsboro, West Virginia\* Role: Engineer Design.

Chestnut Ridge Public Service District Water System Improvements, Chestnut Ridge Public Service District, Barbour County, West Virginia\* Role: Engineer Design.



### Steven V. Buchanan, P.E., P.S.

**Principal** 

Clarksburg Water Board Phosphate System, Clarksburg Water Board, Clarksburg, West Virginia\* Role: Engineer Design and construction administration.

Clarksburg Water Source Water Advance Warning System, Clarksburg Water Board, Clarksburg, West Virginia\* Role: Engineer Design.

Lewis County Economic Development Authority Alum Fork and Laurel Lick Water Line Extensions, Lewis County Economic Development Authority in cooperation with West Virginia American Water Company, Lewis County, West Virginia\* Role: Engineer Design and construction administration.

Lewis County Economic Development Authority Northwest Water Line Extensions, Lewis County Economic Development Authority in cooperation with West Virginia American Water Company, Lewis County, West Virginia\* Role: Engineer Construction administration.

New Cumberland Water Treatment Plant Improvements and Water System Improvements, City of New Cumberland, New Cumberland, Hancock County, West Virginia\* Role: Engineer Design and construction administration.

West Virginia University Evansdale Campus Water Pump Station, West Virginia University, Morgantown, West Virginia\* Role: Engineer Design and limited construction administration.

Arlington/Glen Falls Water Line Replacement, Clarksburg Water Board, Clarksburg, Harrison County, West Virginia\* Role: Engineer Design and construction administration.

South Chestnut Street Water Transmission Line Replacement, Clarksburg Water Board, Clarksburg, West Virginia\* Role: Engineer Design.

Clay-Battelle Public Service District Water System Improvements, Clay-Battelle Public Service District, Monongalia County, West Virginia\* Role: Engineer Design and construction administration.

Fountain Public Service District Water System Improvements, Fountain Public Service District, Mineral County, West Virginia\* Role: Engineer Design and construction administration.

Piedmont Water Treatment Plant Improvements and Water System Improvements, City of Piedmont, Piedmont, West Virginia\* Role: Engineer Design and construction administration. \* Work performed prior to joining CEC



### Erasmo Rizo Principal



#### **19 YEARS OF EXPERIENCE**

#### **EDUCATION**

B.S., Civil Engineering Technology, West Virginia Institute of Technology, 2005

Mr. Rizo, Project Manager, has 19 years of experience in urban land, transportation engineering, oil and gas, and public utilities. He has performed site layout, profiles, cross sections, grading, earthwork analysis, drainage, water lines, hydraulic analysis, and erosion and sediment control for numerous projects. Mr. Rizo's project experience for the Oil and Gas industry includes design and quality assurance of pipelines, well pads and associated pits & impoundments, and ASTs. He has permitting experience for Army Corp of Engineers, state DOH and environmental permits. His water and wastewater project experience includes emergency action plan review, HEC-RAS modeling, stormwater detention and retention modeling and analysis, dam observation and inspections. Mr. Rizo has also directed a sanitary sewer department which include the wastewater treatment plant, the collections system for sanitary sewer and stromwater, and the maintenance and recovery section. He held first-line leader responsibilities, and served in Operation Iragi Freedom II.

#### **PROJECT EXPERIENCE**

#### **Public Sector**

#### **Boggess Street Sewer and Stormwater Project\***

Design, permitting, and construction management of 300 Linear feet of eight inch SDR 35 PVC pipe, to address old and badly configured existing clay system. Installation of new 300 Linear feet of 12 inch HDPE corrugated pipe to provide stormwater relief in a low lying area. This project allowed the removal of downspouts from the sewer system from homes along project limits.

#### Wood Street Sewer Upgrade, The City\*

Design, permitting, and construction management of 1,800 Linear feet of various size SDR 35 PVC pipe. The Sanitary Sewer main upgrade and associated collection system was constructed while maintaining service to 40 customers.

#### **Brushy Fork Road Sewer Extension, Various\***

Design, permitting, and Right of Away acquisition of 2,500 Linear feet of eight- inch SDR 35 PVC pipe, three-Jack and bore locations, all manholes and apparatus, and associated creek crossings to serve 45 new sewer customers.

#### Swisher Street Culvert Replacement, The City\*

Design, Permitting, and construction management of the relocation of an existing eight-inch Sewer to control elevation for the replacement of the Swisher Street Culvert. Relocated 380 Linear feet of existing vitrified clay line with 8" SDR-35 PVC pipe. Installed a 60 inch HDPE Corrugated culvert and associated traffic rated decking, reinforced grouted rip rap wing walls and aprons.

#### CERTIFICATIONS

10-hour Construction Safety, Occupational Safety & Health Administration

Nuclear Gauge, Troxler Electronic Laboratories, Inc.

Certified Wastewater Treatment Plant Operator Class II, State of West Virginia

Adult and Pediatric First Aid/CPR/AED, Red Cross

SafeLand USA - Basic Orientation, PEC Safety



### **Erasmo Rizo**

### Principal

#### Wastewater Clarifier Upgrade\*

Rehabilitation construction management of two 300,000 gallon concrete and steel wastewater clarifiers/settling tanks. The project included evaluation of steel components to be replaced and refabricated, Selection of blaster media and appropriate paints to withstand a corrosive wastewater environment.

#### **Civil & Site Development Engineering**

#### Building 100, Sterile Manufacturing Facility, Becton and Dickinson & Company, Wilson, NC\*

Project consisted of a new pharmaceutical facility installation on 60-acre site, Duties included: Site design, grading, stormwater management, erosion and sediment control, BMP design, and utility design for a 114,000 square foot sterile syringe plant for BD. Procurement of NCDENR permits, and Civil LEED accredited designs.

#### On Lake Wylie Phase 1, The Vineyards, Charlotte, NC\*

Project consisted of 327 single family homes and 105 town homes on 243 plus acres of residential development. Great measures were taken to ensure plenty of undisturbed common open space and tree save. Duties included: Profile over 26,000 linear feet of road, Fine grade all lots, Storm design with Storm water Best Management Practices (BMP), Organize Construction documents for submittal.

#### The Pringle House, WODA Group, Buckhannon\*

Project Consisted of a two story senior citizen living facility with associated parking and access drive. The site development is situated on five acres, site duties included: Site design, grading, stormwater management, erosion and sediment control. Procurement of WVDEP, city of Buckhannon and county permits.

\* Work performed prior to joining CEC

#### **PROFESSIONAL AFFILIATIONS**

American Society of Civil Engineers



### Travis Adams Senior Project Manager



#### **26 YEARS OF EXPERIENCE**

#### **EDUCATION**

B.S., Environmental Science (Emphasis on Water Quality), West Virginia University, 1998

Mr. Adams has 26 years of experience in the consulting engineering industry servicing municipal, private, commercial, industrial, Oil and Gas, and government sector clients. His project practice focus includes the detailed engineering design of water and wastewater treatment plants, water distribution systems, and wastewater collection systems. Mr. Adams's engineering experience includes: Detailed engineering design of water distribution pipelines, booster pump stations, water storage tanks, sanitary sewer collection pipelines, force mains, existing water and sewer system rehabilitation, development of CSO LTCP, and sanitary sewer pump station design. He has served as the overall project manager for numerous large municipal water and wastewater collection system projects, leading a team of professionals to evaluate, design, permit, bid, and construct projects with challenging construction obstacles and complex technical and regulatory requirements. Mr. Adams serves as the primary point of contact with the client and ownership team, regulatory personnel, and external team members throughout the life of the project.

#### **PROJECT EXPERIENCE**

#### Water Resources/Public Utilities

## Donald R. Kuhn Juvenile Center Wastewater Treatment Plant, State of WV Division of Corrections and Rehabilitation, Julian, West Virginia

#### Role: Senior Designer

Serving as Senior Designer for a \$3.2 million dollar project that consists of replacing an existing packaged wastewater treatment plant. This project proposes to install a 20,000 GPD Packaged Sequencing Batch Reactor (SBR) WWTP consisting of two (2) SBR tanks, floating decanters, mixers, fine bubble diffusers, rotary positive displacement blowers, sludge wasting pumps, and ultraviolet disinfection system. A new duplex submersible pump station is to be installed along with a new mechanical screening unit ahead of the SBR WWTP.

#### Town of Coalton - New Water Treatment Plant, Town of Coalton, Randolph County, WV

#### Role: Senior Project Manager

This project consisted of the design and permitting of a new 100 GPM water treatment plant to provide a source of safe potable water to the community of Coalton. The new water treatment plant was designed to treat raw ground water from the town's existing source water well. The selected treatment technology consists of a two (2) pressure filter vessels utilizing a dual bed media of Greensand Plus and Anthracite to accomplish the catalytic oxidation and subsequent removal of iron and manganese. Chlorine and Potassium Permanganate chemical feed systems were designed to serve as pre-oxidants for iron and manganese ahead of the media filters. A new 3484 square foot pre-engineered metal building was designed to shelter the filters and all treatment plant equipment including an under the slab concrete clearwell, new high service pumps, new filter backwash pumps, miscellaneous chemical feed systems. A separate detached FRP building was constructed to house the new gas chlorination system.



Design of Municipal Water and Wastewater Treatment Plants

Acid Mine Drainage (AMD) Treatment & Control

Sanitary Sewer Collection and Water Distribution System Design

#### CERTIFICATIONS

Adult and Pediatric First Aid/CPR/AED, Red Cross

Certified Compaction Technician, West Virginia Department of Transportation

Certified Concrete Field Testing Technician, West Virginia Department of Transportation

Aggregate Certified Technician, West Virginia Department of Transportation

SafeLand USA - Basic Orientation, PEC Safety



### **Travis Adams**

### Senior Project Manager

## Town of Terra Alta Water Treatment Plant Upgrade & Water Line Extension to Corinth, Town of Terra Alta, Preston County, WV\*

#### Role: Served as Senior Project Engineer

The project scope consisted of the planning, funding, design, bidding, and construction management of upgrades to the Town's existing Water Treatment Plant and the extension of the Town's potable water distribution system to provide potable water service to approximately 200 new residential customers in Corinth. The WTP upgrades consisted of the design and construction of a new pre-treatment sedimentation basin constructed in a new engineered metal building complete with rapid mixers, chemical feed equipment, pumps, and controls. The waterline extension consisted of the extension of 8", 6", 4", and 2" main waterline, a new 100,000 gallon water storage standpipe, 200 new customer meter settings, and miscellaneous fire hydrants, valves, and trench repair items. The residents of Corinth had approached the Town about providing public water service because the area was previously mined and the majority of the residential water wells in the Corinth area had become polluted with large amounts of iron, sulfur, and manganese making the majority of the ground water in the area un-usable. Due to the presence of previous mining activity impacting the ground water supply, the Engineer was able to secure grant funds from the WVDEP Abandoned Mine Lands (AML) Program which resulted in low water customer user rates making the project very affordable.

## New 700 GPM Potable Water Treatment Plant & Water Distribution System Extension to the Hazelton Federal Prison Complex, Preston County, WV, Preston County PSD #4, Preston County, WV\*

#### Role: Served as Project Engineer and Construction Manager

The project scope consisted of the design, permitting, bidding, and construction management of a new 700 GPM Water Treatment Plant and Water Distribution System Extension to serve the Hazelton Federal Prison Complex. Major items included the design and development of source water wells to provide raw water to the new WTP, New 700 GPM Water Filtration Plant, Two (2) new 700 GPM Booster Pump Stations, Three (3) new Water Storage Tanks including a 1 Million Gallon Elevated Water Storage Tank located near the prison complex, and the installation of a new 16" Ductile Iron Waterline installed across country from the new WTP to the Federal Prison Complex.

## Newell Water Company 1,400 GPM Potable Water Treatment Plant, Newell Water Company, Hancock County, WV\* Role: Served as Senior Project Engineer

Project scope consisted of the design, permitting, bidding, and construction management of a new 1,400 GPM Water Treatment Plant to serve residential, commercial, and one (1) large industrial customer near the city of Newell in Hancock County, WV. This project was funded privately by the Homer Laughlin Fiesta Ware China Company who required a constant supply of high quality potable water for their Fiesta Ware china manufacturing facility. The water treatment process consisted of pressure filtration vessels designed to remove iron and manganese from the incoming raw water supply wells.

\* Work performed prior to joining CEC

#### PRESENTATIONS

Travis W. Adams. "No Surface Discharge Allowed". WVAWWA/WEA 2018 Joint Conference, Canaan Valley Resort, Davis, WV, May 21, 2018



### Jason B. Heflin Assistant Project Manager



#### **30 YEARS OF EXPERIENCE**

#### **EDUCATION**

A.S., Applied Science, West Virginia University of Parkersburg, 1993

#### EXPERTISE

Sanitary Wastewater Treatment Plants

Sanitary Sewer Systems and Pump Stations

Raw Water Intake Structures

Domestic and Raw Water Distribution Lines

Mr. Heflin has many years of experience working under multiple engineers as a senior designer. His design experience includes sanitary sewer collection systems and wastewater treatment plants, sewer line replacement and rehabilitation including lining and pipe bursting, potable water lines and plants, raw water intakes and distribution lines for the oil and gas industry, storm systems and pump station, earth slip and slide repairs and general aerial base mapping generation.

#### **PROJECT EXPERIENCE**

#### WATER TREATMENT PLANTS

#### New Water Treatment Plant, Town of Coalton, Randolph County, WV

Role: Assistant Project Manager/Designer

This project consisted of the design and permitting of a new 100 GPM water treatment plant to provide a source of safe potable water to the community of Coalton. The new water treatment plant was designed to treat raw ground water from the town's existing source water well. The selected treatment technology consists of a two (2) pressure filter vessels utilizing a dual bed media of Greensand Plus and Anthracite to accomplish the catalytic oxidation and subsequent removal of iron and manganese. Chlorine and Potassium Permanganate chemical feed systems were designed to serve as pre-oxidants for iron and manganese ahead of the media filters. A new 3484 square foot pre-engineered metal building was designed to shelter the filters and all treatment plant equipment including an under the slab concrete clearwell, new high service pumps, new filter backwash pumps, miscellaneous chemical feed systems, and all required plant control equipment. A separate detached FRP building was constructed to house the new gas chlorination system.

#### WATER SYSTEMS AND TANKS

#### Water Distribution and Water Treatment Improvements, Town of Coalton, Randolph County, WV

Role: Assistant Project Manager/Designer

This project will involve the replacement of the existing potable water distribution system with 6", 4" and 2" water lines, refurbishing the existing 100,000-gallon water storage tank, replacing the existing 100 GPM water treatment plant and the installation on new meter pits with new meters.

#### Raw Water and Re-use water lines, Southwestern Energy Corporation, Northern West Virginia

Role: Designer and plan preparation

Served as Senior Designer on multiple raw water and re-use line extensions from water sources to well pads

#### Water booster station, Melanson Bros. Inc., Lancaster, MA

Role: Designer and plan preparation

Served as Senior Designer for a 44 GPM constant pressure water booster pump that included a 750 GPM fire pump to provide water service and fire protection to a new residential development located near Lancaster, MA.

#### Water system improvements, City of Bridgeport, Bridgeport,WV

#### Role: Designer and plan preparation

Served as the Senior Designer for the water line replacement project. Project involved the replacement of approximately 6,000 linear feet of water line, installation of new main line valves, fire hydrants, meter setting, and service tubing.



## Jason B. Heflin

### Assistant Project Manager

#### SANITARY WASTEWATER TREATMENT PLANTS

#### Donald R. Kuhn Juvenile Center Wastewater Treatment Plant, State of WV Division of Corrections and Rehabilitation,

#### Julian, West Virginia

#### Role: Senior Designer

Serving as Senior Designer for a \$3.2 million dollar project that consists of replacing an existing packaged wastewater treatment plant. This project proposes to install a 20,000 GPD Packaged Sequencing Batch Reactor (SBR) WWTP consisting of two (2) SBR tanks, floating decanters, mixers, fine bubble diffusers, rotary positive displacement blowers, sludge wasting pumps, and ultraviolet disinfection system. A new duplex submersible pump station is to be installed along with a new mechanical screening unit ahead of the SBR WWTP.

## Wastewater treatment plant upgrade project, West Virginia DNR, Blackwater Falls State Park - Davis, WV Role: Designer

Served as Senior Designer for this project. Project consisted of replacement of approximately 2,000 LF of an existing a sanity sewer gravity pipe, a new grinder pump station and forcemain, and making improvements to the existing wastewater treatment plant to extend the useful life of the treatment plant. Prepared plans and details.

#### Wastewater treatment plant, Preston County Economic Development Authority, Hazelton, WV\*

Role: Designer and plan preparation

Served as Senior Designer on 50,000 GPD Mack Industries package wastewater treatment plant with alternating sand filter beds

#### Wastewater treatment plant upgrade project, City of Mount Vernon, Mount Vernon, OH

#### Role: Designer and plan preparation

Served as Senior Designer of installation of new sludge pumps, sludge press screen, new anaerobic digester internals and cover, and heat exchanger

#### Wastewater treatment plant, Preston County PSD, Hazelton, WV\*

Role: Designer and plan preparation

Served as Senior Designer on 500,000 GPD SBR wastewater treatment plant

#### Wastewater treatment plant, City of Thomas, Thomas, WV\*

**Role**: Designer and plan preparation Served as Senior Designer of a 150,000 GPD wastewater treatment plant

#### Wastewater treatment plant upgrade project, City of Clarksburg, Clarksburg, WV\*

Role: Designer and plan preparation

Served as Senior Designer, partnered with another engineering firm on existing wastewater treatment upgrades, my job included expansion of clarification system by designing new clarifier, retaining wall and access road

#### Wastewater treatment plant upgrade project, Town of Terra Alta, Terra Alta, WV\*

**Role**: Designer and plan preparation Served as Senior Designer of 250,000 GPD SBR wastewater treatment plant

#### Wastewater treatment plant upgrade project, Town of West Union, West Union, WV\*

Role: Designer and plan preparation

Served as Senior Designer of a 200,000 GPD wastewater treatment plant expansion and abandonment of existing wastewater treatment plant

\* Work performed prior to joining CEC





# **.0** Project Experience



# TOWN OF COALTON -WATER SYSTEM IMPROVEMENTS

### OWNER OBJECTIVE

Located in Randolph County, West Virginia the Town of Coalton owns and operates a water treatment plant and water distribution system to serve the residents of the Town. The original system was built in the late 1960s and like many water systems this old the system is experiencing breakdowns and failures of the system, especially at the water treatment plant.

#### **CEC APPROACH**

The Town selected CEC to complete an evaluation of the systems and to assist with the funding, design, permitting, and constructing of the proposed system improvements. The proposed improvements will involve the replacement of the water distribution system, including improvements and painting of the existing 100,000 gallon water storage tank. Also included is a new 100 GPM water treatment plant and completion of a backup water well.

CEC completed the design in February 2022 and a WV Health Department permit has been issued. Construction started in July 2023 and is anticipated to be completed in 2025.



**OWNER/CLIENT** 

Town of Coalton

LOCATION

Coalton, WV

Funding

Permitting

**CEC SERVICES** 

**Engineering Design** 

**Construction Quality Assurance** 

**Construction Management** 



Civil & Environmental Consultants, Inc.

# ICE'S RUN PSD WATER SYSTEM UPGRADES

#### **OWNER/CLIENT**

Ice's Run Route 250 Public Service District (IRPSD)

#### LOCATION

Marion County, West Virginia

#### **CEC SERVICES**

Erosion & Sedimentation Control/NPDES Permitting

**Detailed Design** 

**Construction Quality Assurance** 

Construction Surveys/Staking

**Topographic Surveys** 

**Construction Management** 



#### **OWNER OBJECTIVE**

Ice's Run Route 250 Public Service District (IRPSD) provides potable water service to approximately 500 customers in Marion County, West Virginia. IRPSD purchases all of its water from the City of Fairmont Water Department. Water is pumped to the Gaston Knob water tank by the Goose Run Booster Pump Station owned by IRPSD. IRPSD repaired several water line breaks on existing lines coming from the Gaston Knob water tank. The lines were old and needed to be replaced. Additionally, a section of U.S. Route 250 roadway near Katy, WV slipped and damaged a section of 6 inch water line. IRPSD temporarily installed a 2 inch water line to restore service to its customers. IRPSD needed assistance from an Engineer to secure funding and to design the improvements.

#### **CEC APPROACH**

CEC was tasked with developing preliminary construction costs for the project and to help secure funding for the needed improvements. The total cost of the project was \$650,000.00 and consisted of 5,200 LF of 8" HDPE Water Line, 500 LF of 6" HDPE Water Line, and the upgrade of the Gaston Knob gravel access road. CEC requested funding assistance from the Marion County Commission American Rescue Plan Act (ARPA). The Marion County Commission funded the entire project. CEC provided detailed construction plans and specifications, project permitting, bidding, and construction support. Construction started in December 2022 and was competed in December 2023.





# WV 74 WATERLINE EXTENSION (PHASE I)

#### **OWNER/CLIENT**

City of Pennsboro

#### LOCATION

City of Pennsboro and Clay District, Ritchie County, WV

#### **CEC SERVICES**

Utility Design Water Quality & Quantity Modeling Aerial Photography/Videography Construction Management



#### **OWNER OBJECTIVE**

The City of Pennsboro has historically provided water and sewerage service to customers within City limits. The objective of this project was to provide potable water to more than 30 out-of-town customers, some of which reported arsenic in their well water, who were without a safe and reliable source of water.

#### **CEC APPROACH**

CEC assisted Pennsboro is obtaining a Critical Needs Grant from the West Virginia Infrastructure and Jobs Development Council in the amount of \$2,000,000. CEC provided all planning, design, permitting, easement exhibit preparation, funding, and bidding services. The design included hydraulic modelling of 2-inch, 6-inch, and 8-inch waterline totaling approximately 5.5 miles in length in a hilly area with significant changes in elevation/pressure throughout the new service area. Fire flows along the 6-inch and 8-inch waterlines were accommodated in the design. The design also anticipated future extensions off of this waterline to serve other customers in need of safe and reliable potable water. CEC is currently providing Engineering During Construction (Contract Administration) services as well as full time Resident Project Representation. Accurate Record Drawings and a complete record of all Daily Monitoring Reports will be the final deliverables to the City of Pennsboro to allow it to operate and maintain this new portion of its water system.



# CITY OF BRIDGEPORT -WATERLINE UPGRADE TO BELASCO PROPERTY

#### **OWNER/CLIENT**

City of Bridgeport

LOCATION Harrison County, WV

#### **CEC SERVICES**

Engineering Design Permitting Construction Support



#### **OWNER OBJECTIVE**

The City of Bridgeport's existing water system called the Belasco Trailer Park has been in service dating back to the 1970s and has had several additions added on up through the 1990s. This system was constructed by the developer of the trailer park and was turned over to the City for operation. Currently, the distribution system consist of 4", 2", and 1" water lines that provide service to 100 homes. The City has been fixing numerous leaks in recent years, water lines are located under homes, and several of the smaller lines are undersized. In addition, there is currently no fire protection for the development. For these reasons, the City is proposing to replace the majority of the existing water system for the Belasco trailer park.

#### **CEC APPROACH**

CEC was tasked with the design of a new water distribution system that would provide adequate operating pressures and flows to the existing customers, while the existing water system continued to operate. CEC provided detailed plans and specifications, project permitting, bidding, and construction support.

The new water system was designed with new 6" PVC water lines that would provide water service to the existing customers and would also allow new fire hydrants to be installed to provide fire protection. The new system also included new gate valves and new water meter setting to allow for better access for the City to operate and maintained.

The project has been designed, permitted, and construction was completed in 2020.



# EMERGENCY WATER LINE REPAIR PROJECT

#### **OWNER/CLIENT**

Hammond Public Service District

#### LOCATION

Brooke County, WV

#### **CEC SERVICES**

Engineering Design Permitting Construction Support





#### **OWNER OBJECTIVE**

The Hammond PSD owns and operates a potable water system in Brooke County, West Virginia. In 2017 an extreme rain event caused flash flooding along Buffalo Creek, outside of Wellsburg, WV, that caused damage to the existing 8" water line crossing, disrupting water supply to several customers. The scope of this project was to design, permit, and construct a new water line crossing.

#### **CEC APPROACH**

CEC was tasked with the design of a new water line to cross Buffalo Creek that would not get broken or get washed out in the next extreme flood event and in a very confined area with steep slopes that had to be contended with. Based on past experience, it was recommended that a new 8" HDPE water line be constructed by the method of horizontal directional drill. By constructing a new water line with this method would allow the pipe to be installed 15' under the creek bottom and also minimize any disturbance in the creek reducing any specialized permitting needed. The advantage of using HDPE pipe is that the pipe would be one continuous piece of pipe under the creek instead of using 20' pipe joints with PVC or ductile iron water offers. CEC provided detailed plans and specifications, project permitting, bidding, and construction support.

The project was completed in spring 2018.



Civil & Environmental Consultants, Inc.

# TOWN OF GRANT TOWN WATER DISTRIBUTION SYSTEM IMPROVEMENTS

#### **OWNER/CLIENT**

Town of Grant Town

#### LOCATION

Grant Town, WV

#### **CEC SERVICES**

Funding Design Permitting Bidding Construction Support



#### **OWNER OBJECTIVE**

Located in Marion County, West Virginia, the town of Grant Town provides potable water service to approximately 550 customers and also sells water to another utility – Minister's Run Water Association. Like many small utilities in West Virginia, the town of Grant Town is experiencing infrastructure deterioration. They are looking to rectify outstanding issues within their potable water distribution system, which they were not able to address during their last water distribution system improvement project.

The town is looking to complete several improvements to their water distribution system, including the installation of a new above ground water storage tank, removal of an existing water storage tank, installation of two mixing systems in their water storage tanks, booster pump station upgrade, chlorination system upgrades, multiple line replacements, supervisory control and data acquisition (SCADA) system upgrades, and zone meter installation.

#### **CEC APPROACH**

This project consists of the planned replacement and additions of 1,000 LF of 2" C-900 PVC, 5,125 LF of 4" C-900 PVC, 3,100 LF of 6" C-900 PVC, 5,300 LF of 8" C-900 PVC, 200 LF of 6" HDPE DR-9, and 400 LF of 8" HDPE DR-9 from their existing distribution system. This project also includes the planning and design for the installation of additional valves throughout the system to allow the town to complete system repairs without losing flow to other areas or losing high volumes of water during a break due to lack of isolation ability in the system.

The current Booster Pump Stations will also be upgraded as part of this project to address low pressure zones and provide more consistent pressure throughout the system.

Existing potable water storage tanks will be upgraded to include replacement of the existing 100,000 gallon potable water storage tank with a new 200,000 gallon potable water storage tank, introduction of static in-tank mixing, and updated telemetry systems to both of the tanks. The new tank will be placed next to the existing 200,000 gallon tank allowing for shared telemetry systems and improved pressure to the Town's water system while minimizing the foot print of the tank sites. Placing the water tank next to the existing 200,000 gallon tank will equalize head pressure throughout the system and address current utilization issues due to differing tank elevations.

CEC worked with the Town to create a working water system model utilizing KY Pipe 2020. The creation of this model allowed CEC to accurately model the existing system and proposed system upgrades and identify areas with potential pressure/flow issues. CEC will also be able to quickly model future extension requests for residents and developers and assist in determining extension feasibility.

CEC reviewed potential funding opportunities with the Town to determine the best funding option to pursue. CEC reviewed funding options including: the US Department of Agriculture – Rural Development, WV Infrastructure and Jobs Development Council, WV Department of Health and Human Services – Drinking Water Treatment Revolving Fund, and private loans. CEC assisted in developing a project team and completed the necessary funding applications for the Town.

## Professional Engineering & Consulting Services for Holly River State Park Main Water Service

## 5.0

## References



### Andy Blake

City Manager City of Martinsburg 206 Viking Way Martinsburg, WV 25401 304-264-2131 ablake@cityofmartinsburg.org

#### Kortni Sandridge

Mayor Town of West Union 115 Church Street West Union, WV 26456 304-266-1679 kortnisandridge@yahoo.com

#### John Carson

Utility Manager City of Fairmont 200 Jackson Street Fairmont, WV 26554 304-366-6231 jcarson@fairmontwv.gov

#### Jim Rossi

Mayor Town of Coalton PO Box 173 Coalton WV 26257 304-642-4611 panjrossi@gmail.com

#### **Chad Kleeh**

Mayor Village of Valley Grove PO Box 103 Valley Grove, WV 26060 304-547-1550 ckleeh54@comcast.net



"Civil and Environmental Consultants (CEC) is a quality consultant who invests their time, resources, and expertise in projects from inception to completion. CEC teams up with the City of Bridgeport on infrastructure and utility upgrades, site developments, geotechnical concerns, environmental initiatives, and much more. Their services are a valuable asset, providing continued growth and advancement within our municipality." – Beth Fox, Director of Engineering & Public Utilities, City of Bridgeport

"The City appreciates the time and effort of the staff at CEC, to ensure Mayor and Council's initiatives are completed in a timely fashion. The City is proud of the public improvements we are able to complete throughout the City's residential and commercial neighborhoods.

CEC is truly a part of our success." – Mark Baldwin, Former City Manager, City of Martinsburg





Additional Forms

**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.

| (Printed Name and Title)      |
|-------------------------------|
| (Address)                     |
| (Phone Number) / (Fax Number) |
| (email address)               |

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract 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/Contract 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 this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; 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.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

(Company) (Signature of Authorized Representative)

(Printed Name and Title of Authorized Representative) (Date)

(Phone Number) (Fax Number)

(Email Address)

# ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.:

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)

| [] Addendum No. 6  |
|--------------------|
| [] Addendum No. 7  |
| [] Addendum No. 8  |
| [] Addendum No. 9  |
| [] 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.

Company Abut Authorized Signature

Date

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



Civil & Environmental Consultants, Inc.

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