

**State of West Virginia  
Department of Administration  
Purchasing Division**

**NOTICE**

Due to the size of some drawings contained in this bid, they could not be scanned for on line viewing.

If you would like to review the bid in its entirety, please contact the buyer. Thank you.

**Statement of Qualifications  
for  
Engineering Services  
to**

**The West Virginia  
Division of Natural Resources  
Parks and Recreation Section**

**Canaan Valley State Park  
Wastewater System Improvements**

**RFQ # DNR 209026**

**October 9, 2008**

RECEIVED

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PROCURING DIVISION  
STATE OF WV

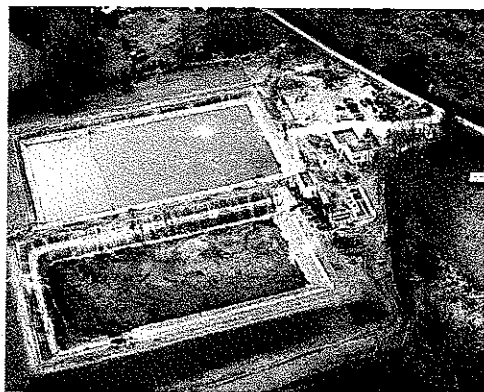
**THRASHER**  
**ENGINEERING**  
CIVIL • ENVIRONMENTAL • CONSULTING • FIELD SERVICES

30 Columbia Boulevard  
PO Box 1532  
Clarksburg, WV 26301  
304-624-4108  
304-624-7831 Fax

Northgate Business Park  
300 Association Drive  
Charleston, WV 25311  
304-343-7601  
304-343-7604 Fax

3000 Thayer Center  
Oakland, MD 21550  
301-334-3866  
301-334-4020 Fax

thrasher@thrashereng.com  
www.thrashereng.com



**GENERAL TERMS & CONDITIONS  
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30
6. Payment may only be made after the delivery and acceptance of goods or services
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

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**INSTRUCTIONS TO BIDDERS**

1. Use the quotation forms provided by the Purchasing Division
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications
3. Complete all sections of the quotation form
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered FOB destination unless alternate shipping terms are clearly identified in the quotation
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P O Box 50130, Charleston, WV 25305-0130



30 Columbia Boulevard  
P.O. Box 1532  
Clarksburg, WV 26301

(304) 624•4108  
Fax: 624•7831  
thrasher@thrashereng.com  
www.thrashereng.com

October 8, 2008

WV Division of Natural Resources  
Parks and Recreation Division  
c/o WV Department of Administration  
Purchasing Division  
Building 15  
2019 Washington Street, East  
Charleston, WV 25305

**RE: *Expression of Interest to Provide Engineering Design Services  
Canaan Valley Resort State Park- Wastewater Facilities Improvements***

To the Members of the Selection Committee:

Thrasher Engineering, Inc. greatly appreciates the opportunity to submit our qualifications to the West Virginia Division of Natural Resources to provide engineering services for the improvements to the wastewater system at Canaan Valley State Park.

We believe our experience with the Park's wastewater system, our work with the newly formed Canaan Valley PSD and our work with Timberline Resort and residential developments in the Valley brings a technical knowledge to the project which is unsurpassed by any other firm. The engineering studies and preliminary design we have completed to date will be of great benefit in completing this project in a cost effective and cost efficient manner.

The aspects of our experience that stand out as most beneficial to this specific project include:

- ***Experience with Canaan Valley State Park and Timberline Resort:*** As demonstrated in the previous experience section of this qualifications statement, we provided engineering design services for the last upgrade to wastewater treatment facility at Canaan Valley Resort, which was completed in tandem with the expansion of the base lodge at the resort. We have a thorough understanding of this facility, its capacity and needs.
- ***Knowledge of the Canaan Valley Area and Canaan Valley PSD:*** Thrasher Engineering, Inc. has been involved with the study of Canaan Valley wastewater issues since 1997 when working with the Tucker County Planning Commission and since 2000 when working with the Hamrick Public Service District. In August of 2007, Thrasher Engineering, Inc. was selected by the newly formed Canaan Valley PSD to provide engineering services to study and design a wastewater collection and treatment system to serve the Canaan Valley area. Our studies of the area bring full understanding of the Total Maximum Daily Load (TMDL) for the Blackwater River watershed area. Our experience in the Valley also includes wastewater treatment systems for the North Point and North Lake residential developments.

- ❑ ***Inflow and Infiltration Experience:*** The wastewater system assessment study provided with the RFQ addendum states that camera investigation and smoke and dye testing be performed within the park as part of the pre-design process. Thrasher Engineering, Inc. is one of the few firms in the state of West Virginia that provides *in-house* services for thorough pipeline inspection, investigation and flow monitoring.
- ❑ ***Personnel:*** Because of our size and expertise, we can begin your project immediately to meet your project schedule. The team we have assigned for the project is made up of those individuals who are involved in the Canaan Valley PSD project. Our working relationship with the PSD will allow for positive communication between the DNR and PSD.
- ❑ ***Evaluation and Design:*** Our abilities in project design and the development of concise and accurate contract documents has proven favorable during the bidding process. Our reputation for quality documentation results in more bidders and a more competitive pricing situation, which in turn brings in bids at, or below estimate.
- ❑ ***Accurate Project Estimating:*** Our track record of accurately estimating construction costs is one of the strongest reasons we have repeat customers and long-term relationships with our clients. Through good design and careful estimating, we save our clients time and money.

As the engineering firm on this project, we can offer you the services of our highly professional staff, equipped with the most up-to-date methods to guarantee a successful completion. We recognize that successful projects result from a ***teamwork approach***, which is how we live up to our company philosophy of "***Successful Projects/Repeat Clientele.***"

We appreciate the opportunity to submit our qualifications to the West Virginia DNR and look forward to meeting with you to discuss our abilities and how Thrasher Engineering can help you achieve your project goals.

Sincerely,

THRASHER ENGINEERING, INC.



KENNETH P. MORAN, P.E., P.S.  
Vice President / Chief Engineer /Principal-In-Charge



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

# Request for Quotation

RFQ NUMBER:  
**DNR209026**

PAGE:  
**1**

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

**RFQ COPY  
 TYPE NAME/ADDRESS HERE**

VENDOR

Thrasher Engineering, Inc.  
 P. O. Box 1532  
 30 Columbia Blvd.  
 Clarksburg, WV 26301

SHIP TO

DIVISION OF NATURAL RESOURCES  
 PARKS & RECREATION SECTION  
 BUILDING 3, ROOM 719  
 1900 KANAWHA BOULEVARD, EAST  
 CHARLESTON, WV  
 25305-0662 304-558-2775

DATE PRINTED <b>09/10/2008</b>	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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BID OPENING DATE: **10/02/2008** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
001	1	LS		906-00-00-001		
<p><b>ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL</b></p> <p><b>EXPRESSION OF INTEREST</b></p> <p>THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF NATURAL RESOURCES, IS SOLICITING EXPRESSIONS OF INTEREST TO PROVIDE ARCHITECTURAL AND ENGINEERING SERVICES FOR IMPROVEMENTS TO THE WASTEWATER FACILITIES AT CANAAN VALLEY RESORT STATE PARK PER THE ATTACHED SPECIFICATIONS.</p> <p>TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO FRANK WHITTAKER IN THE WEST VIRGINIA PURCHASING DIVISION VIA FAX AT 304-558-4115 OR VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS SEPTEMBER 24, 2008 AT THE CLOSE OF BUSINESS. ALL TECHNICAL QUESTIONS, IF ANY, WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.</p> <p>QUESTIONS CONCERNING THE PROCESS BY WHICH A VENDOR MAY SUBMIT AN EXPRESSION OF INTEREST TO THE STATE OF WEST VIRGINIA ARE NOT CONSIDERED TO BE TECHNICAL QUESTIONS AND MAY BE SUBMITTED AT ANY TIME PRIOR TO THE BID OPENING AND IN ANY FORMAT.</p> <p>EXHIBIT 10</p> <p>REQUISITION NO.: DNR 209026 .....</p> <p>ADDENDUM ACKNOWLEDGEMENT</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE 304-624-4108	DATE 10-8-08
TITLE Vice President	FEIN 55-06335966	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ. INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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

# Request for Quotation

RFQ NUMBER  
**DNR209026**

PAGE  
**2**

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

SUPPLIER

**RFQ COPY  
 TYPE NAME/ADDRESS HERE**

Thrasher Engineering, Inc.  
 P. O. Box 1532  
 30 Columbia Blvd.  
 Clarksburg, WV 26301

SUPPLIER

**DIVISION OF NATURAL RESOURCES  
 PARKS & RECREATION SECTION  
 BUILDING 3, ROOM 719  
 1900 KANAWHA BOULEVARD, EAST  
 CHARLESTON, WV  
 25305-0662 304-558-2775**

DATE PRINTED <b>09/10/2008</b>	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
BID OPENING DATE: <b>10/02/2008</b>		BID OPENING TIME <b>01:30PM</b>		

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S</p> <p>NO. 1 .. X. <i>[Signature]</i></p> <p>NO. 2 .....</p> <p>NO. 3 .....</p> <p>NO. 4 .....</p> <p>NO. 5 .....</p> <p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF TH ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY 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.</p> <p style="text-align: center;"><i>[Signature]</i>            .....            SIGNATURE</p> <p style="text-align: center;">Thrasher Engineering, Inc.            .....            COMPANY</p> <p style="text-align: center;">October 8, 2008            .....            DATE</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>[Signature]</i>	TELEPHONE 304-624-4108	DATE 10-8-08	
TITLE Vice President	FEIN 55-06335966	ADDRESS CHANGES TO BE NOTED ABOVE	

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



State of West Virginia  
 Department of Administration  
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 2019 Washington Street East  
 Post Office Box 50130  
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# Request for Quotation

RFQ NUMBER  
**DNR209026**

PAGE  
**4**

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

**RFQ COPY  
 TYPE NAME/ADDRESS HERE**

Thrasher Engineering, Inc.  
 P. O. Box 1532  
 30 Columbia Blvd.,  
 Clarksburg, WV 26301

**DIVISION OF NATURAL RESOURCES  
 PARKS & RECREATION SECTION  
 BUILDING 3, ROOM 719  
 1900 KANAWHA BOULEVARD, EAST  
 CHARLESTON, WV  
 25305-0662 304-558-2775**

DATE PRINTED <b>09/10/2008</b>	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
BID OPENING DATE: <b>10/02/2008</b>		BID OPENING TIME <b>01:30PM</b>		

LINE	QUANTITY	UQP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR EO1: 304-624-7831						
CONTACT PERSON (PLEASE PRINT CLEARLY): KENNETH P. MORAN						
***** THIS IS THE END OF RFQ DNR209026 ***** TOTAL:						N/A

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE  TELEPHONE **304-624-4108** DATE **10-8-08**  
 TITLE **Vice President** FEIN **55-06335966** ADDRESS CHANGES TO BE NOTED ABOVE

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



STATE OF WEST VIRGINIA  
Purchasing Division

## PURCHASING AFFIDAVIT

**West Virginia Code §5A-3-10a states:** 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 the debt owed is an amount greater than one thousand dollars in the aggregate

**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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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.

**EXCEPTION:** The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

**LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

**CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: THRASHER ENGINEERING, INC.

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

Date: OCTOBER 8, 2008

## **FIRM PROFILE**

**Established** 1983

<b>Officers</b>	H. Wood Thrasher, P.E.	Administration
	Kenneth P. Moran, P.E.	Public Utilities
	Kurt L. Newbrough, P.S.	Survey
	Wm. Randy Watson	Public Utilities
	Chadwick Biller, P.E.	Site / Highway / Airport
	Chad Riley, P.E.	Site Development
	Clay P. Riley, P.E.	Public Utilities
	Daniel E. Ferrell, P.E.	Public Utilities

**Scope of Services** Public Work – Water / Sewer / Treatment Plants / Facility Plans  
Business and Industrial Parks  
Environmental Engineering  
Site Development – Schools / Commercial Properties  
Highway Design  
Land Surveying, Platting, Legal Description Preparation  
General Civil Engineering – Municipal Engineering / Subdivisions/  
Construction Management / Materials Testing / Inspection

**Offices** 30 Columbia Boulevard, Clarksburg, WV  
300 Association Drive, Charleston, WV – Thrasher Environmental  
3000 Thayer Center, Oakland, MD

**Employees** 140+ persons, including:

Registered Professional Engineers	Project Designers
Registered Professional Surveyors	Engineer Technicians
Environmental Engineers	CADD Operators
Engineer Interns	Construction Inspectors
Graduate Engineers	Surveyors
Landscape Architects	Office Support

**Typical Projects** \$ 250,000 - \$26,000,000. – Sewer Projects  
\$ 250,000 - \$22,000,000. – Water Projects  
\$ 500,000 - \$15,000,000. – Airport Development Projects  
\$ 250,000 - \$ 8,000,000. – Site Development Projects  
\$ 50,000 - \$ 250,000. – Street Paving and Drainage  
\$1,000,000 - \$ 6,000,000. – Business and Industrial Parks  
\$ 750,000. - Per Year. – Surveying and CADD Work

**Philosophy** **SUCCESSFUL PROJECTS / REPEAT CLIENTELE**

## STATEMENT OF QUALIFICATIONS

Simply stated, Thrasher Engineering, Incorporated offers a higher level of expertise, experience and documented history of client satisfaction for wastewater collection systems projects than other engineering firms.

Thrasher Engineering is **West Virginia's largest owned and operated** full service consulting engineering firm. We can bring you the complete range of services **under single corporate management** with a solid team committed to the success of your projects.

Thrasher Engineering, Inc. is a civil engineering consulting firm specializing in public works projects. The majority of our work involves publicly funded water treatment and distribution systems, sewage collection and treatment systems, and industrial and business parks. Over \$600 million in water, sewer, site development, survey and construction management projects have been designed and supervised by the firm in our 25-year history.

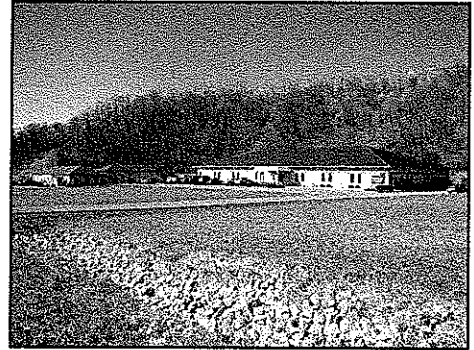
H. Wood Thrasher and Henry A. Thrasher formed the company in 1983 with a commitment to excellence and professionalism in engineering. **H. Wood Thrasher, P.E.** remains principal of the company; also serving as principals are **Kenneth P. Moran, P.E.** and **Kurt L. Newbrough, P.S.**

Thrasher Engineering is based in **Clarksburg, West Virginia**, with a branch office in **Oakland, Maryland**. **Thrasher Environmental** is located in **Charleston, WV**.

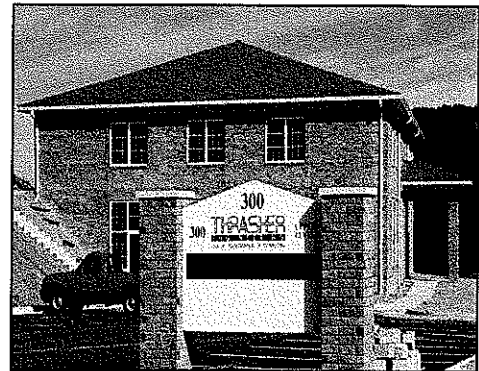
Since our formation, the company has grown to a firm of over 140 persons. This staff includes 25 engineers, 12 of whom are registered professional engineers while the survey department includes 4 registered professional surveyors. The Thrasher Engineering team also includes engineer technicians, project designers, CADD operators, construction inspectors and the administrative / office support team.

Our full and diverse staff has the resources to handle many projects, both large and small, simultaneously. The client base includes cities, towns, county governments, and public service districts. We also provide services to a number of Federal and State governmental agencies and to private corporations.

Thrasher Engineering's philosophy of "**Successful Projects, Repeat Clientele**" is founded on the principle of client satisfaction and repeat business. We do what it takes to assure satisfaction and to ensure project success, and want to be the District's engineer, project after project.



*The home office of Thrasher Engineering is located in Clarksburg, WV*



*Environmental assessments and treatment plant design are the focus of Thrasher Environmental in Charleston, WV*

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## SERVICES

Thrasher Engineering offers a variety of engineering, survey and field services to municipalities and

other government entities, PSDs, and private clients. Through growth and expansion, we now provide a greater variety of services to our clients. The majority of work involves water treatment and distribution systems, sewage collection and treatment systems, industrial and business parks, site development, highways and bridges and airports, along with environmental engineering, inflow and infiltration (I&I) testing and GIS Mapping. Thrasher Engineering's Field Services Division provides surveying services, construction management and inspection along with materials testing.

The services we offer that are directly related to those needed for the West Virginia Department of Natural Resources Canaan Valley wastewater system improvements project include:

### SANITARY SEWER PROJECTS

Because of a reputation for successful projects, we have developed an extensive list of repeat clientele and are highly qualified to perform all engineering services necessary to provide effective and efficient wastewater treatment systems for clients.

Thrasher Engineering's services for sanitary sewer engineering include:

- Wastewater Treatment Plant Design and Upgrades
- Design for Collection System Rehabilitation, Replacement and Extensions
- Lift Station/Pump Design
- I&I Testing and Evaluation
- Design for New Wastewater Systems
- CSO Evaluations and Long Term Control Plans
- Construction Management



*Above – Huttonsville PSD wastewater extensions throughout Southeastern Randolph County*

*Below – Upgrades to the Bridgeport, WV wastewater treatment plant were included in the multi-phased wastewater system project.*

### ENVIRONMENTAL REPORTING SERVICES

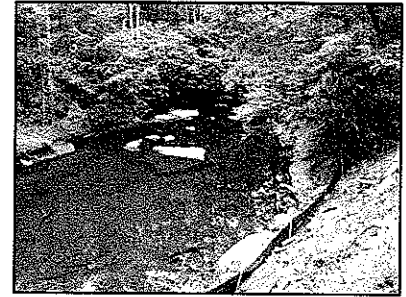
Thrasher Engineering provides full environmental assessment and clearance services to clients. For over 18 years we have conducted assessments and prepared reports for environmental/natural resource compliance consultation with West Virginia Division of Environmental Protection (WVDEP), Federal Aviation Administration and Federal Highways Administration, US Department of Agriculture Rural Development Utility Program, and US Environmental Protection Agency (EPA).

Experience includes:

- Permitting related activities (401 and 404)
- NEPA Environmental Document Preparation
- Wetland Delineation and Mitigation
- Rare, Threatened and Endangered Species Section 7 Informal Consultation



- ❑ Rare, Threatened and Endangered Species Section 10 Habitat Conservation Plans
- ❑ Water Use and Water Quality
- ❑ Air and Noise Impacts, Assessments, and Controls
- ❑ Soils and Geological Resources
- ❑ Cultural Resources - (Sub contracted to a reputable and approved Cultural Resource Consultant)
- ❑ Hazardous Materials
- ❑ Sediment and Erosion Control
- ❑ Consent Orders
- ❑ Compliance Schedules
- ❑ Site Investigations
- ❑ SPCC Plans, Contingency Plans, Ground Water Protection Plans and Storm Water Pollution Prevention Plans
- ❑ Waste Treatment and Site Remediation
- ❑ Waste Disposal
- ❑ Channel Restoration
- ❑ Stream Bank Stabilization
- ❑ Enforcement Actions



### ***SURVEY SERVICES***

The Land Surveying Department performs a wide range of services, not only in conjunction with engineering projects, but independently for both public and private clients. The types of surveys performed include:

- ❑ Right-of-way/Easement surveying.
- ❑ Pre and post mine subsidence surveys
- ❑ GPS ground control surveys for aerial mapping
- ❑ Landfill closure surveys
- ❑ Topographic surveys
- ❑ Construction layout for site development projects, highways, railroads, sanitary sewer systems and water and wastewater treatment plants
- ❑ Lake and river sounding surveys
- ❑ Boundary surveys
- ❑ ALTA/ACSM surveys
- ❑ Pre and post blasting surveys
- ❑ Aerial Photography



Our survey crews are equipped with the latest in conventional and GPS survey equipment. The equipment available and utilized from the various offices of Resource Engineering Group include:

- |                             |                               |
|-----------------------------|-------------------------------|
| ❑ Leica Geosystem 500 GPS   | ❑ Nikon DTM-420 Total Station |
| ❑ Trimble 5800 GPS          | ❑ Topcon AT-F2 Auto Level     |
| ❑ Leica Total Stations      | ❑ Topcon AT-S3 Auto Level     |
| ❑ Topcom G600 Total Station | ❑ K&E 30" Transit             |
| ❑ Nikon Total Station       | ❑ Thales ProMark 2 GPS Single |

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## **PIPELINE INSPECTION**

Utilizing proven methods of **manual inspections, flow metering, smoke and dye testing** and ultimately, **video camera inspections**, Thrasher Engineering provides comprehensive testing of deficient pipeline systems, which can be used to help clients determine the most effective and efficient method to rehabilitate or upgrade their sanitary sewer systems.

The inspection system is used to examine the condition of the pipe, including cracked and separated joints and faulty lateral connections. Additionally, the system has the ability to locate lost manholes and determine their depth and location.



### **Pipeline Inspection Equipment**

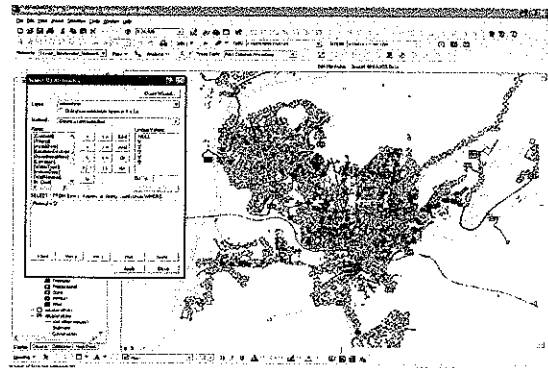
- ❑ Aires Universal Saturn III Video Inspection System
  - Tractor mounted camera for 4" to 30" pipe – Up to 1,000 LF
  - Push camera for 4" or smaller diameter – Up to 400 LF
  - Pan and tilt features
  - Records to VHS / Transferred to DVD
- ❑ Flow - Dar Flow Monitors ( 12" diameter + pipe)
- ❑ Data Gator Flow Monitors (6" to 12" pipe)
- ❑ Complete Smoke Testing Equipment

## **GIS MAPPING**

Thrasher Engineering is one of the first full-service engineering firms in the State of West Virginia offering complete GIS services to county and municipal governments, along with public utility departments and districts.

GIS Mapping services, including survey, field verification and the development of computer software to meet the specific needs of clients is provided for numerous applications, including:

- ❑ Water and Sanitary Sewer Systems including the field identification and verification of sanitary sewer lines, pump stations, lift stations, manholes and storm water systems
- ❑ E-911 Master Street Addressing and Data Bases
- ❑ Zoning and Boundaries
- ❑ Tax Mapping



*Sample of GIS software screen for the City of Bridgeport Sanitary Sewer System*

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## **CONSTRUCTION MANAGEMENT AND INSPECTION**



The integrity of a project design requires inspectors and construction management personnel to protect the owner's interests. TEI provides the knowledgeable and experienced personnel necessary to manage the construction phase of any project.

Project managers and inspectors are experienced in all types of construction activities. From utilities, site development and storm water management to roads, bridges and airports, they apply construction management and inspection expertise to ensure successful projects.

Construction Management and Project Administration Services include:

- Site Layout
- Construction Stakeout
- Inspection
- Quality Control

Over the 25-year history of Thrasher Engineering, we have developed and employed methods in our construction management and inspection process that have been proven effective and efficient whether the project is one Thrasher Engineering has designed, or the project has been designed by another firm

Our measures include:

- Daily logs and Inspection sheets
- Cut sheets
- Quantity tracking
- Field drawings
- Digital Photo Logs

Our Construction Managers bring strong communication and administrative skills to project management and accuracy to inspection. Thrasher Engineering inspects the construction of \$60,000,000 per year in water and wastewater systems, site development, roadways and bridges.

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## **PROJECT TEAM**

The team Thrasher Engineering has compiled to provide full services to the WV DNR for the Canaan Valley Resort project brings experience and expertise along with a reputation for providing a high level of client satisfaction and service. These team members are directly involved in the Canaan Valley PSD project, thereby bringing a complete understanding of both the Canaan Valley area and the Resort to the project.

The key team members, their responsibilities and a summary of their experience are:

### **KEY STAFF MEMBERS**

#### **PRINCIPAL-IN-CHARGE/ PROJECT MANAGER: KENNETH P. MORAN, P.E., P.S.**

Mr. Moran serves as Vice President of Thrasher Engineering. Mr. Moran is Chief Engineer for Thrasher Engineering and Thrasher Environmental, specializing in public utility projects including sanitary sewer, water and storm water management. In this capacity he is responsible for feasibility studies and design, regulatory and funding assistance for state, federal and private clients. Additionally, he has extensive experience working with funding and regulatory agencies in conjunction with projects. In the capacity of Principal-In-Charge, Ken will work closely with the Project Manager to ensure timeliness of the projects, client satisfaction and oversee budgetary aspects.

#### **ASSISTANT PROJECT MANAGER/ PROJECT ENGINEER: CLAY P. RILEY, P.E.**

Clay P. Riley, P.E. is a partner in Thrasher Engineering and serves as Managing Partner for the firm's Oakland, Maryland office. A native of Shinnston, West Virginia, Mr. Riley graduated Cum Laude from West Virginia University with dual Bachelor of Science Degrees in Electrical Engineering and Civil Engineering. He joined Thrasher Engineering in 1998. Clay is responsible for public utility projects from conception to design, through construction, and utility extensions for site development projects. He has a working knowledge of funding sources and requirements within the states of West Virginia and Maryland, and on the federal level. Additionally, Mr. Riley is experienced in all facets of the bid process including preparation of bid documents, bid evaluations and meeting funding administrative needs.

#### **SENIOR CONSULTING ENGINEER: A. DAYTON CARPENTER, P.E. BCEE**

A. Dayton Carpenter, P.E., BCEE (Diplomate) will work with the DNR for treatment plant evaluation and design. He has extensive experience in the design of numerous wastewater treatment plants, including the existing plant at Canaan Valley Resort. Mr. Carpenter joined Thrasher Environmental when it was formed and has twenty three years of experience in civil engineering. Dayton has designed the majority of new wastewater treatment plants for Thrasher projects in addition to utilizing innovative thinking for plant upgrades and rehabilitations. He holds a Master of Science Degree in Environmental Engineering from West Virginia University, and received his Bachelor of Science Degree in Chemistry and Mathematics from the University of Cincinnati. Mr. Carpenter is a licensed professional engineer in West Virginia, Ohio, Kentucky and



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Maryland; he also is Board Certified as an Environmental Engineer by the American Academy of Environmental Engineers.

**CONSULTING ENGINEER - HYDRAULICS: TOM URQUHART, P.E. BCEE**

Mr. Urquhart joined Thrasher Engineering in 1996 after serving as General Manager/ Chief Engineer of the Morgantown Utility Board (previously the Morgantown Water Commission) for 33 years. During his tenure as General Manager for MUB, he was responsible for the budgeting, planning, and management of MUB's water and wastewater services to the citizens of Morgantown and surrounding communities. As a consulting engineer for Thrasher, his primary responsibility is providing hydraulic modeling and design. Tom is both a Certified Master Modeler by Haestad Methods for Water Systems and is trained in KY Pipe Modeling Software for pipe system hydraulic flow analysis. He received his Master of Science Degree in Civil Engineering, as well as his Bachelor of Science Degree in Civil Engineering from West Virginia University. A Registered Professional Engineer in the States of West Virginia, Pennsylvania, Ohio and Maryland, Mr. Urquhart is also a Board Certified Environmental Engineer from the American Academy of Environmental Engineers. His role on the team will be to provide evaluation and assistance for hydraulic issues.

**PROJECT DESIGNER: PHIL SIMMONS**

Working as Project Designer will be Phil Simmons. Mr. Simmons brings 27 years of experience in wastewater systems projects to the team. He has served as a project designer, in addition to experience as a construction manager and inspector on numerous sanitary sewer projects. Mr. Simmons holds a West Virginia Class C-1 certification as a Wastewater Treatment Operator and served over 10 years as water and wastewater plant operator for various PSDs within the state.

**ENVIRONMENTAL ASSESSMENT AND PERMITTING: SHEIRL FLETCHER**

Environmental services will be managed by Sheirl Fletcher, Environmental Manager for Thrasher Engineering, Inc. Ms. Fletcher joined Thrasher Engineering, Inc. after serving 23 years as a geologist, hydrologist and environmental specialist with Consol Energy Corporation. In that position, she participated in the engineering and final reclamation of five Consol Energy mines in Monongalia County.

**SURVEY / RIGHT OF WAY SERVICES: KURT NEWBROUGH, P.S.**

Mr. Newbrough serves as Secretary of Thrasher Engineering and serves as Survey Supervisor for the firm. Kurt has extensive knowledge in all aspects of surveys and is responsible for the assignment and review of all survey activities of his ten fully staffed survey teams. He is experienced in various types of surveys including, but not limited to boundary, topographical, construction layout and GPS for both public and private clientele. Survey projects are performed for Thrasher Engineering and Thrasher Environmental public and private clientele, as well as on an independent contract basis.

Kurt is a registered Professional Surveyor and holds the elected position of County Surveyor for Harrison County, West Virginia.

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**PIPELINE INSPECTION SERVICES: DONALD "BUTCH" BROWN**

Mr. Brown joined Thrasher Engineering in 1985 and serves as Testing Supervisor for the firm, supervising three full-time pipeline inspection crews. He is primarily responsible for scheduling and supervising inflow and infiltration investigations including video camera, smoke and dye testing, flow metering and manhole inspection. He also oversees GIS field crews, as well as CADD work related to these projects.

**CONSTRUCTION MANAGEMENT / INSPECTION : JON KERNS**

Mr. Kerns joined Thrasher Engineering in 1989 and serves as Construction Manager and Project Representative for the firm with a focus on the management of water and wastewater treatment plant construction of both new facilities and upgrades. He served as Construction Manager for the majority of projects shown in the prior experience section of this statement of qualifications.

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**KENNETH P. MORAN, P.E., P.S.**  
*Vice President / Chief Operating Officer/ Chief Engineer*



**SUMMARY OF EXPERIENCE**

*Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Operations Officer and Chief Engineer.*

*Mr. Moran is responsible for management feasibility studies and design of public utility and site development projects for local state, federal and private clients. Additionally, Mr. Moran has extensive experience in all aspects of engineering and with funding and regulatory agencies in conjunction with projects.*

**EDUCATION**

- B.S., Civil Engineering Technology, 1983 – Fairmont State University*

**CERTIFICATIONS**

- Registered Professional Engineer (PE), State of West Virginia #11309*
- Registered Professional Engineer (PE), State of Virginia#0102021855*
- Registered Professional Engineer (PE), State of Ohio #64412*
- Professional Land Surveyor (PS), State of West Virginia#1333*

**REPRESENTATIVE PROJECT EXPERIENCE**

- Canaan Valley Public Service District Waste Water Treatment System – Project Manager.* This project entailed analyzing the Canaan Valley area for implementation of a public sanitary sewer system. There were multiple tasks involved with this project from working with the Environmental Protection Agency and the West Virginia Department of Environmental Protection with regards to the TMDL on the Blackwater River. The project solution provided a managed stream point discharge solution for the Valley.
- City of Belmont, Sanitary Sewer Project – Project Manager and Project Engineer.* Mr. Moran was involved in the Wastewater Treatment Plant Expansion and inflow filtration improvements. Mr. Moran negotiated with the West Virginia Department of Environmental Protection for the removal of the sludge blanket for French Creek. Improvements for the Plant included designs for new clarifiers, sludge thickening, sludge processing and the relocation of the outfall to the Ohio River.
- Brooke County PSD, Sanitary Sewer Project – Principle in Charge and Chief Engineer.* The project entailed planning and design, new sanitary sewer collection systems in and around Wellsburg and Follensbee. The project negotiations with the West Virginia Department of Environmental Protection and various municipalities to determine the sanitary sewer treatment provider.
- Town of Tunnelton Sanitary Sewer Project - Project Manager and Project Engineer.* Mr. Moran designed a sanitary sewer collection system for the Town of Tunnelton and a new 40,000 gallons per day (gpd) Wastewater Treatment Plant.
- Greater Harrison County PSD, Sanitary Sewer Project –Project Manager and Project Engineer.* This project included Wastewater Collection System Extensions in the areas of Lost Creek, Good Hope and Mount Clare. We were involved in the upgrade of the existing West Milford Wastewater Treatment Facility from 300,000 gpd to 600,000 gpd. The improvements included a new pre system upgrade of the aeration system and disinfection systems.

- ❑ **Huttonsville PSD, WWTP, Sanitary Sewer, Collection System, Extensions** - Project Manager. The inflow filtration improvement project removed and replaced the gravity part collection system in the areas of Valley Bin, Daley and East Daly in Randolph County. The project included upgrading the District's existing Wastewater Treatment Facility. The improvements included head works facility, aeration system, filtering system improvements and disinfection system improvements.
- ❑ **Pea Ridge PSD, WWTP, Sanitary Sewer, Collection System, Extensions – Project Manager.** This project included extensions in the existing system, inflow infiltration collection system improvements, upgrades of two (2) Wastewater Treatment Facilities, and abandonment of an existing lagoon system which was converted to a wetlands.
- ❑ **Scott's Run PSD, Sanitary Sewer, Collection System Extensions – Project Manager.** Mr. Moran was involved in the extension of a new gravity sewer collection system in the areas of Osage, Cassville, Wade's Run, Chaplin Hill of Monongalia County. The project removed the existing Wastewater Treatment Facility in the area of New Hill. The project negotiations with the Morgantown Utility Board for the wastewater treatment, operation and maintenance and system boundary.
- ❑ **Pocahontas County PSD, WWTP, Sanitary Sewer, Collection System, Extensions – Project Manager.** The project involved designing a new sanitary sewer collection and treatment system to serve the areas of Snowshoe, Linwood, and Slatyfork of Pocahontas County. The project involved multiple alternative analyses due to the varied environmental and social interest of the county.
- ❑ **City of Bridgeport, Sanitary Sewer Lift Station Improvements, WWTP Upgrades – Project Engineer, Project Manager and Principal in Charge.** Mr. Moran has managed multiple projects for the City of Bridgeport for over 17 years. He has designed multiple pumps station and collection system for the City of Bridgeport. He also designed the City's 2.5 million gpd Wastewater Treatment Facility and has worked with the City of Bridgeport to establish their GIS and Long Term Control Plan solutions.
- ❑ **City of Clarksburg, WWTP Upgrades, Inflow and Sanitary Sewer System Improvements, Colonial Village Line Replacement – Project Engineer, Project Manager and Principal in Charge.** Mr. Moran has managed multiple projects for the City of Clarksburg for over 17 years. He has designed multiple pump stations and collection system for the City. Mr. Moran also worked on various pump station systems and collection systems throughout the City of Clarksburg and as Engineer in Charge management upgrades of their existing Wastewater Treatment Facility. This facility was a 6 million to 8 million gpd facility. Mr. Moran worked with the City to establish their GIS and Long Term Control Plan solutions.
- ❑ **Town of Terra Alta, Sanitary Sewer Collection Improvements and WWTP –Project Engineer and Project Manager.** Mr. Moran designed a new collection system for the Town of Terra Alta and a 250,000 gpd expandable Sequencing Batch Reaction (SBR) Wastewater Treatment Facility.
- ❑ **Hundred-Littleton PSD, New Sanitary Sewer Collection and Treatment System Water System – Project Manager, Project Engineer and Principal in Charge.** Mr. Moran was involved in the Sanitary Sewer Collection System project in and around the Town of Hundred. This was a 50,000 gpd Wastewater Treatment Facility. As Principle in Charge, Mr. Moran was involved with multiple tank replacements and water line replacements throughout the district.

**CLAY P RILEY, P.E.**  
*Partner / Project Manager*



## **SUMMARY OF EXPERIENCE**

*Mr. Riley joined Thrasher Engineering in 1998 and serves as Partner in the firm. Mr. Riley's foremost responsibility is to manage and supervise public utility and site development projects from conception to design and construction. Mr. Riley has a working knowledge of funding sources and requirements on both state and federal levels. Additionally, Mr. Riley is experienced in all facets of bid processes including preparation of bid documents and evaluations to meeting funding administration needs. Mr. Riley serves as President of Potomac Engineering & Surveying (dba Thrasher Engineering's Oakland Branch Office) and serves as Principal-In-Charge for all projects assigned to Thrasher Engineering's Oakland, Maryland branch office. He is also a partner of Thrasher Engineering*

## **REGISTRATIONS**

- Registered Professional Engineer, State of West Virginia #15634*
- Registered Professional Engineer, State of Maryland #30130*

## **EDUCATION**

- B.S., Electrical Engineering, 1998 – West Virginia University (Cum Laude)*
- B.S., Computer Engineering, 1998 – West Virginia University (Cum Laude)*

## **REPRESENTATIVE PROJECT EXPERIENCE- PROJECT MANAGER / ENGINEER**

### **Sanitary Sewer Projects**

- Canaan Valley Public Service District*
- Greater Harrison Public Service District*
- Town of Accident, MD, Sewer Rehabilitation*
- Town of Franklin, WWTP Improvements and Sewer Rehabilitation*
- Hamrick PSD,*
- Norton-Harding-Jimtown PSD, Sanitary Sewer Upgrade and Extension*
- U.S. Army Camp Dawson, WWTP Lagoon Abandonment*
- Garrett County DPU, Trout Run Interceptor*
- Hardy County PSD Caledonia Heights Sewer*
- Loch Lynn Heights, Sanitary Sewer Replacement Project*
- Mt Lake Park, Sanitary Sewer Replacement Project*
- Town of Williamsport, MD, Inflow and Infiltration Reduction Project*

### **Water Projects**

- Hardy County PSD, Baker Water, Rig/Critestown Water Extension; South Fork Water Line Extension; Boker US220 Water Line Relocation; Fire Protection Tank for Robert C. Byrd Industrial Park*
- Greater Harrison County PSD, Lost Creek Supply Replacement Project, Normandy Estates  
Johnstown, Brushy Fork*
- City of Shinnston, Tetrick Road Water Line Replacement*
- Sun Valley PSD, Water System Extension*

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- Pleasants Co Commission, County Wide Assessment*
  - Norton-Harding-Jimtown PSD Kingsville Water Line*
  - Hardy County PSD, Baker Water System Study*
  - Town of Franklin, Water System Improvements*
  - Town of Rowlesburg, Water System and Plant Upgrade Project*

#### **Site Development**

- Federal Bureau of Prisons, McDowell, WV, Utility design and modeling*
- Federal Bureau of Prisons, Canaan Township, PA, utility design and modeling*
- Federal Bureau of Prisons, Glenville, WV, utility design and modeling*
- Federal Bureau of Prisons, Hazelton, WV, Phase I Study*
- Perdue Farms, Sanitary Sewer and Water Well*
- Terra Nova Developments, Meadows Subdivision*
- Tymber Creek Subdivision, Five H Investments*
- Hickory Knoll Subdivision Utilities*
- KAP LLC, Mountaineer Gardens Utilities*

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**A. DAYTON CARPENTER, P.E. , BCEE**  
*Senior Consulting Engineer*



**SUMMARY OF EXPERIENCE**

*Mr. Carpenter joined Thrasher Engineering in 1998 and serves as a Consulting Engineer/Treatment Plant Designer for the firm. Mr. Carpenter is experienced in all facets of civil engineering with technical specialization in the design of water, wastewater and leachate treatment facilities, environmental site assessments, laboratory data interpretation, environmental planning and management, hazardous waste remediation design and construction oversight, and RCRA Facility Investigation/Corrective measures study (FI/CMS).*

**EDUCATION**

- Chemical Engineering, 1968-69, University of Cincinnati*
- B.S. Chemistry and Mathematics, 1973, West Virginia State University*
- M.S. Engineering with Environmental Emphasis, 1983, Marshall University*

**REGISTRATIONS:**

- Registered Professional Engineer (PE) State of West Virginia*
- Registered Professional Engineer (PE) State of Ohio*
- Registered Professional Engineer (PE) State of Kentucky*
- Board Certified Environmental Engineer – American Academy of Environmental Engineers*

**AFFILIATIONS**

- American Academy of Environmental Engineers – WV State Director*
- American Council of Engineering Companies of West Virginia – President-elect*
- American Society of Civil Engineers, Member*
- American Water Works Association, Member*
- National Society of Professional Engineers, Charleston Chapter – Past President*
- Water Environment Federation, Member*

**PROJECT EXPERIENCE**

- Baker Heights WWTP Upgrade; Sequencing of Batch Reactors, UV, Sludge Press Detailed Engineering Design*
- Inwood WWTP Upgrade; Sequencing of Batch Reactors, UV, Sludge Press Detailed Engineering Design*
- R.D. Zande Gladly Fork Acid Mine Drainage WWTP Conceptual Design and Detailed Engineering Design*
- City of Bridgeport WWTP Odor Control Conceptual Design*
- Town of Milton, Plant and Distribution System*
- Pocahontas County 1.5 MGD WWTP and Sequencing Batch Reactors; Detailed Engineering Design*
- Mingo County PSD WTP Upgrade to 1400 GPM and Sand Removal Unit; Detailed Engineering Design*
- City of Weirton, WWTP Upgrade; Sludge Management System, Odor Control System; Detailed Engineering Design*
- Weirton Water Board 1.0 Million Gallon Hydropillar Water Storage Tank; Detailed Engineering Design*

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- ❑ *Town of Ravenswood, Plant*
  - ❑ *City of Parsons WWTP Upgrade; Linear Replacement and Dechlorination Detailed Engineering Design*
  - ❑ *Town of Junior WWTP Upgrade; Troubleshooting During Construction of Sludge Holding Tank and UV System*
  - ❑ *Timberline WWTP Upgrade; Membrane Biological Reactors Detailed Engineering Design*
  - ❑ *Town of Rowlesburg 200 gpm WTP to meet Disinfective Byproduct Rule and Water Treatment Rule; Detailed Engineering Design*

#### **AWARDS**

- ❑ *1991 – Artel Superfund Site – Nitro, West Virginia, Excellence in Environmental Engineering – Presented by American Academy of Environmental Engineers*
- ❑ *2001 – Weirton Water Treatment Plant – Weirton, West Virginia – Gold Award for Engineering Excellence – First Place – Presented by American Council of Engineering Companies – WV*
- ❑ *2002 – Peabody Coal Company – Colfax (Fairmont), West Virginia, Gold Award for Engineering Excellence – First Place – Presented by American Council of Engineering Companies – WV*
- ❑ *2005 – Mingo County Public Service District – Naugatuck, West Virginia – Silver Award for Engineering Excellence – Second Place – Presented by American Council of Engineering Companies – WV*
- ❑ *2006 – Craigsville Public Service District – Craigsville, West Virginia – Wastewater Treatment Plant Upgrade – Gold Award for Engineering Excellence – First Place – Presented by American Council of Engineering Companies  
- WV*



## **SUMMARY OF EXPERIENCE**

*Mr. Urquhart joined Thrasher Engineering in 1996 and serves as Consultant for the firm. Mr. Urquhart is experienced in civil engineering of public utilities including design and construction of water storage tanks, new and replacement water and sanitary sewer lines, pump stations and water treatment and wastewater treatment plants. Mr. Urquhart previously served as General Manager/Engineering for the Morgantown (WV) Utility Board.*

## **EDUCATION**

- M.S. Civil Engineering – West Virginia University*
- B.S. Civil Engineering – West Virginia University*

## **CERTIFICATIONS**

- Registered Professional Engineer (PE) – State of West Virginia #05262*
- Registered Professional Engineer (PE) – State of Pennsylvania #PE014449E*
- Registered Professional Engineer (PE) – State of Ohio #64320*
- Registered Professional Engineer (PE) – State of Maryland #30289*
- Certified Master Modeler by Heastad Methods for Water Systems, 2002*

## **REPRESENTATIVE PROJECT EXPERIENCE**

- Pocahontas County PSD Hydraulic Modeling for County-Wide Water System*
- City of Bridgeport/Charles Pointe, Used Computer Hydraulic Model to design wastewater pumps at four locations pumping into common force main*
- City of Weston, Used Computer Hydraulic Model to design wastewater pumps at four locations pumping into common force main*
- Mingo County PSD, Used Existing Computer Hydraulic Model used to design extension out of Ragland*
- Timberline Four Seasons Resort, Complete Computer Hydraulic Model prepared to evaluate existing water system and design improvements for projected growth*
- City of Milton, Complete Computer Hydraulic Model prepared leading to elimination of troublesome booster station, solving pressure problems in two sections of town, design of two major extensions to the water system and providing alternatives for getting fire flows to a new school and assisted living facility*
- City of Parsons Design of Improvements to Water Filters*
- Town of Rowlesburg, Used Computer Model of Water System to Design of High Service Pumps*
- Fairmont State University, Computer Hydraulic Model of Existing Water System and Design Improvements to Provide Fire Protection*
- City of Weirton, Complete Hydraulic Model and Study for New Tank, Pump Station, and Elevated Tank*
- City of Tunnelton, Used Computer Hydraulic Model to design connection to Taylor County PSD water system*
- Raleigh County Airport Industrial Park, Used Computer Hydraulic Model to design water system to provide maximum fire flows from Beckley water system*
- Sun Valley PSD, Complete Computer Hydraulic Model prepared to design system improvements, including providing water to the City of Salem*

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- Various Subdivisions in Hardy and Berkeley County; Computer Hydraulic Model and Analysis Reports***
  - Greater Harrison County PSD, Existing Computer Hydraulic Model used to design improvements to provide more water to Lost Creek area***
  - Glenville Prison, Water System Design, Computer Hydraulic Model***
  - Canaan Prison, Water System Design, Computer Hydraulic Model***
  - McDowell Prison, Water System Design, Computer Hydraulic Model***
  - River Road PSD, Used existing Computer Hydraulic Model to answer question about their systems ability to serve proposed housing subdivisions***
  - Craigsville PSD, Complete Computer Hydraulic Model prepared to examine several alternatives for constructing new water plant and feeding water from Summersville***

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**PHIL SIMMONS**  
*Engineering Technician*



### **SUMMARY OF EXPERIENCE**

*Mr. Simmons joined Thrasher Engineering in 2005 and serves as Engineering Technician for the firm. He is responsible for the preparation of facility plans, permits, preliminary design, specifications and final design for public utilities projects. Mr. Simmons also participates in project planning and meetings.*

### **EDUCATION**

- Diploma, 1978 – Braxton High School*
- United States Navy, 1979-1983*

### **CERTIFICATIONS**

- NICET Level II – Underground Utilities Construction of Water and Sewer Lines*
- NICET Level II Construction of Water and Wastewater Treatment Plants*

### **REPRESENTATIVE PROJECT EXPERIENCE**

- Malden PSD Sanitary Sewer Improvements Project: Provided field engineering and data collection for upgrade of existing sanitary sewer collection system and head works structure at the Wastewater Treatment Plant.*
- Hampshire County Infrastructure Study: Provided field investigation and report preparation for the Hampshire County Commission detailing future needs for Water and Sanitary Sewer service within the County.*
- Jane Lew PSD Sanitary Sewer Upgrade and Extension Project: Provided field engineering and preparation of Amendment #3 and funding applications to the Original Facility Plan written in 2001 for Sanitary Sewer Extensions to provide service to an additional 300 customers in the Lightburn area of Lewis County.*
- City of Bridgeport: Provided field engineering and plans and specification preparation for Sanitary Sewer Collection System/Pump Stations and Wastewater Treatment Plant Upgrades, to provide service to the new UHC Hospital.*
- Fayette County Urban Development / Fayette County Commission: Provided field engineering and plans and specification preparation, for Sanitary Sewer, Potable Water, Underground Electric, and Fiber-optic utilities, to provide service to the new Wolf Creek Park Development for the Fayette County Urban Development.*
- Hardy County PSD: Provided field engineering and preparation of the Facility Plan and funding applications for the Baker Sanitary Sewer System, to provide service to 46 residences and businesses.*
- Town of Grantsville: Provided field engineering and preparation of the Facility Plan and funding applications for the Town of Grantsville Sanitary Sewer Collection System Pumping Station and Wastewater Treatment Plant Upgrades and Improvements*
- Town of Loch Lynn Heights Maryland: Provided field engineering and plans and specification preparation for Sanitary Sewer Collection System Upgrades and Improvements, for the Towns existing customers.*

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- ❑ ***Paw Paw Route 19 Public Service District: Provided field engineering and plans and specification preparation for Potable Water System Extensions and Improvements, including booster stations, and water storage tanks.***
  - ❑ ***Central Hampshire Public Service District: Provided field engineering and preparation of the Facility Plan and funding applications for the PSD for a Sanitary Sewer Collection System Interconnection with the City of Romney.***
  - ❑ ***Canyon Public Service District: Provided field engineering and plans and specification preparation for a Sanitary Sewer Collection System Upgrades and Extensions to provide service to additional customers within the PSD service area.***
  - ❑ ***Tennerton Public Service District: Provided field engineering and plans and specification preparation for a Sanitary Sewer Collection System Upgrades and Extensions to provide service to additional customers within the PSD service area.***
  - ❑ ***Mingo County Public Service District: Provided field engineering and plans and specification preparation for a Potable Water System Extension, including water storage tanks.***
  - ❑ ***City of Weston: Provided technical support to the project engineer for the upgrade and improvements to the City of Weston Wastewater Treatment Plant.***
  - ❑ ***Nicholas County Commission: Provided field engineering and plans and specification preparation, for Gravity Sanitary Sewer, Sewage Pumping Stations, and Potable Water lines to provide service to the new Glade Creek Business Park***
  - ❑ ***Union Public Service District: Provided field engineering and plans and specification preparation, for a Gravity Sanitary Sewer line extension with Sewage Pump Stations to un-served areas within the PSD service area.***
  - ❑ ***Pea Ridge Public Service District: Provided field engineering and preparation of the Facility Plan and funding applications for the PSD for a Sanitary Sewer Extension to provide service to residences along Route 2 north of the City of Huntington.***
  - ❑ ***Eco Lab: Provided technical support to the project engineer for the upgrade and improvements to the existing Eco Lab Wastewater Treatment Plant.***
  - ❑ ***Norton Harding Jimtown Public Service District: Provided technical support to the project engineer for the design of a sanitary sewer extension.***
  - ❑ ***Canyon Public Service District: Provided technical support to the project engineer for the design of a sanitary sewer extension including lift stations within the Cheat Lake area.***
  - ❑ ***Tennerton Public Service District: Provided technical support to the project engineer for the design of a sanitary sewer extension including lift stations within the Tennerton area.***
  - ❑ ***Hardy County Public Service District: Provided technical support to the project engineer for the design of a sanitary sewer extension to provide service to the Caledonia Heights area of Hardy County.***
  - ❑ ***Hardy County Public Service District: Provided technical support to the project engineer for the design of a sanitary sewer collection system and wastewater treatment plant to provide service to the Baker area of Hardy County.***
  - ❑ ***City of Bridgeport: Provided technical support to the project engineer for the design of upgrades to the City's existing pump stations #3 and #4.***
  - ❑ ***City of Bridgeport: Provided technical support to the project engineer for the design of a sanitary sewer extension to provide service to the new White Oaks Business Development.***
  - ❑ ***JB Realty: Provided technical support to the project engineer for the design of a sanitary sewer extension to provide service to a 25 lot subdivision along Route 33.***
  - ❑ ***Town of Williamsport MD: Provided technical support to the project engineer for the design of upgrades to the Towns existing sanitary sewer collection system and pump stations.***

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**SHEIRL L. FLETCHER**  
**Environmental Manager**



**SUMMARY:**

*Sheirl Fletcher joined Thrasher Engineering, Inc. in 2007 and serves as Environmental Manager for the firm. Prior to joining Thrasher, Sheirl served as Environmental Manager for a major coal firm. She has more than 20 years experience and brings comprehensive knowledge of environmental regulatory programs and reporting requirements in multiple states to our clients' projects, along with technical expertise in environmental engineering, geology and hydrology*

**EDUCATION/TRAINING:**

- West Virginia University, Morgantown, WV - Bachelor of Science- Geology*

***Additional Training***

- Contemporary Supervision*
- Conflict Management*
- Influence Management*

**EXPERIENCE:**

**Environmental Management and Safety Compliance**

- Preparations of applications for required operating permits and licenses regarding air quality, wastewater and construction projects ensuring compliance with all state and federal regulatory requirements.*
- Responsible for compliance with all environmental regulations, including interface with environmental regulators, in a manner consistent with company's policies and procedures.*
- Assure full compliance with OSHA (Occupational Safety and Health Administration) regulations*
- Responsible for the preparation of NEPA documents including Environmental Impact Statements and Environmental Assessments.*
- Developed Probable Hydrologic Impact Studies and provided technical report of findings.*
- Prepare, organized, and maintained inspection reports and records, assuring on-time and accurate filings.*
- Compiled and reported environmental statistics and remedial initiatives to Corporate Environmental Quality Control.*
- Monitored projects to ensure that they were on task in reaching goals and objectives while staying within budgetary limits.*
- Inspected construction sites, and waste water treatment and disposal facilities and systems for conformance with federal, state, or local regulations.*
- Informed company personnel of inspection findings and explained how problems were prevented or corrected.*
- Contributed to the development of company policies, goals, objectives, and procedures, with respect to compliance of environmental regulations.*
- Oversaw activities of outside consultants providing necessary services.*
- Managed staff, prepared work schedules and assigned specific duties.*
- Studied and documented quantities, distribution, disposition, and development of underground and surface waters.*
- Designed and conducted scientific hydro-geologic investigations to ensure that accurate and appropriate information was available for use in water resource management decisions.*

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- ❑ *Coordinated and supervised the work of professional and technical staff, including consultants, engineers, technologists, and technicians.*
  - ❑ *Drafted final reports describing research results, including illustrations, appendices, maps, and other attachments.*
  - ❑ *Studied wastewater and storm water issues, including flood and drought risks, water quality, wastewater, and impacts on wetland habitats.*
  - ❑ *Assessed ground and surface water movement to provide advice regarding issues such as waste management, route and site selection, and the restoration of contaminated sites.*
  - ❑ *Applied research findings to help minimize the environmental impacts of pollution, water-borne diseases, erosion, and sedimentation.*
  - ❑ *Investigated complaints or conflicts related to the alteration of public waters, gathering information, recommending alternatives, informing participants of progress, and preparing draft orders.*
  - ❑ *Determined sampling locations and methods, and collected water or wastewater samples for analysis, preserving samples with appropriate containers and preservation methods.*

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**KURT L NEWBROUGH, P.S.**  
*Partner / General Manager of Survey and Field Services*



**SUMMARY OF EXPERIENCE**

*Mr. Newbrough joined Thrasher Engineering in 1990 and is Principal and Partner in the firm. Mr. Newbrough serves as Survey Supervisor and is responsible for assignment and review of all survey activities. Mr. Newbrough has extensive experience in all aspects of surveys, including but not limited to boundary and easement surveys and the preparation of plats and legal descriptions. Mr. Newbrough also performs courthouse research, computes field data for construction layout, and processes GPS raw data for both public and private clientele in conjunction with Thrasher Engineering projects as well as separate contracts. He also serves in the elected position of Harrison County (WV) Surveyor.*

**EDUCATION**

- Surveying – John Tyler Community College, Chester, VA*
- United Career Center, Clarksburg, WV*

**CERTIFICATIONS**

- Professional Land Surveyor (PS), West Virginia #1618 - 1995*
- OSHA Hazardous Waste Operations and Emergency Response Center 29 CFR 1910.120*
- US Department of Labor/Mine Safety and Health Administration*

**REPRESENTATIVE PROJECT EXPERIENCE**

**Boundary Surveys**

- North and South Levee Areas for the Town of Moorefield*
- Flood Control for the US Army Corps of Engineers*
- FBI Fingerprint Identification Complex for the US Department of Justice*
- Hardy County Rural Development Authority*
- USARC sites for the US Army Corps of Engineers*
- Private Surveys*

**Topographic Surveys**

- West Virginia Division of Transportation, Department of Highways*
- Harrison County Board of Education*
- Gandee and Partners for Huntington Summit High School*
- William A. Bruce, AIA for Food Lion Stores*

**Construction Layout**

- Harman Construction, Inc.*

**GPS Surveys**

- US Army Corps of Engineers, Baltimore Dist*
- Benatech Associates*
- IDG, Inc.*
- Carter Van Dyke Associates*

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**DONALD K "BUTCH" BROWN**  
*Pipeline Inspector Supervisor*



**SUMMARY OF EXPERIENCE**

*Mr. Brown joined Thrasher Engineering in 1985 and serves as Testing Supervisor for the firm. He is primarily responsible for scheduling and supervising inflow and infiltration investigations and G.I.S. field crews, as well as CADD work related to these projects. In addition, Mr. Brown is in charge of development and maintenance of the CADD network.*

**CERTIFICATIONS**

- SPARCstation Networking
- AutoCAD
- AutoCAD Release 12
- WVDOH – Inspection and Testing

**REPRESENTATIVE PROJECT EXPERIENCE**

- Town of Reedsville I&I Investigation; Pipeline Inspection Supervisor*
- Arthurdale Sewage Association I&I Investigation; Pipeline Inspection Supervisor*
- Town of Rowlesbug, Pipeline Inspection Supervisor*
- City of Parsons, Pipeline Inspection Supervisor*
- Grant-Union Public Service District, Pipeline Inspection Supervisor*
- City of Bridgeport, Pipeline Inspection Supervisor and GIS Mapping*
- Town of Clarksburg, Pipeline Inspection Supervisor and GIS Mapping*
- Malden PSD Pipeline Inspection Supervisor*
- Garrett County, MD Mt Lake Park I&I Investigation; Pipeline Inspection Supervisor*
- Garrett County, MD Loch Lynn Heights I&I Investigation; Pipeline Inspection Supervisor*
- Sissonville PSD, Pipeline Inspection Supervisor*
- Pea Ridge PSD, Pipeline Inspection Supervisor*
- Greater Paw Paw Sanitary District, Pipeline Inspection Supervisor*
- Town of Accident, Maryland, Pipeline Inspection Supervisor*
- Town of Terra Alta, Pipeline Inspection Supervisor*
- Huttonsville PSD I&I Investigation; Pipeline Inspection Supervisor*
- Jane Lew PSD, Pipeline Inspection Supervisor*
- Town of Farmington, Pipeline Inspection Supervisor*
- Town of Albright, Pipeline Inspection Supervisor*
- Town of Worthington*
- City of Bridgeport, Route 50/Barnetts Run*
- Town of West Union*
- Town of West Union, Pipeline Inspection Supervisor*
- Town of Kingwood, Pipeline Inspection Supervisor*



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**JON KERNS**  
*Construction Manager / Project Representative*



**SUMMARY OF EXPERIENCE**

*Mr. Kerns joined Thrasher Engineering in 1989 and serves as Project Representative for the firm. Mr. Kerns has experience in construction management and inspection. Additionally, Mr. Kerns is experienced in quality control and construction management for utilities and site projects.*

**EDUCATION**

- Blueprint Reading – Fairmont State University*
- Mine Safety Course – Fairmont State University*
- Drafting Course – Fairmont State University*
- Industrial Orientation Course – Fairmont State University*
- Computer Applications – United Career Center*

**CERTIFICATIONS**

- Registered Building Inspector*
- Registered Plumbing Inspector*
- PSI Radiation Safety Certification*
- VADOT Hydraulic Cement Concrete Qualification Course*
- WVDOT Concrete & Compaction (Expired)*

**REPRESENTATIVE PROJECT EXPERIENCE**

**Public Utilities Projects**

- Inwood WWTP Berkeley County PSSD Project Representative*
- Ecolab WWTP Ecolab Corporation Project Representative*
- Craigsville Public Service District Wastewater Treatment Plant Upgrade and Sanitary Sewer Line Upgrade and Extension Project; Project Representative*
- City of Belmont, Project Representative for WWTP Upgrade, Line Improvements and Sludge Removal*
- Huttonsville PSD, Project Representative for WWTP Upgrade and Line Extension*
- City of Weirton, WTP Sludge Handling Facilities Project Representative*
- Martinka Coal Water Treatment Plant Project Representative*
- Mingo County PSD, Water Treatment Plant, Project Representative for Plant Start-Off Project*
- Preston County Sewer PSD, Project Representative for New WWTP*
- City of Clarksburg, WWTP Expansion and Renovation Project Representative*
- City of Bridgeport, WWTP Renovation*
- Town of Worthington, WWTP Project Representative*

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## **RELATED EXPERIENCE**

In our 25-year history, Thrasher Engineering has surveyed, planned, designed and managed construction for numerous wastewater treatment plant and system improvements along with extension projects.

The following are examples of specific projects that represent our abilities wastewater system improvements, including various treatment methods such as MBR, SBR and ponds.

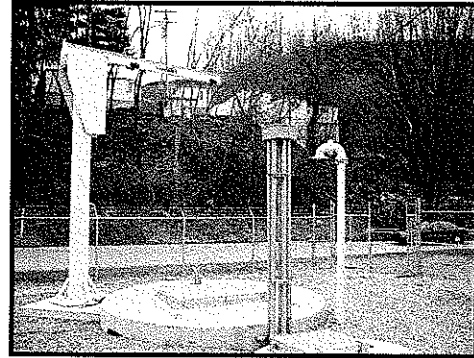
Representative Project Experience Includes:

### **DNR STATE PARK PROJECTS**

- Canaan Valley State Park***
- Lost River State Park***
- Watoga State Park***
- Chief Logan State Park***

### **WASTEWATER TREATMENT SYSTEMS**

- Canaan Valley Public Service District***
- Timberline Resort***
- Berkeley County Public Service Sewer District***
- Craigsville Public Service District***
- Hamrick Public Service District***
- City of Parsons***
- Preston County Economic Development Council – PSD #4 Plant for Hazelton Prison***
- Greater Harrison Public Service District***



The information provided about these representative projects displays not only the scope of our work, but our ability to estimate construction costs and prepare bid documents that result in numerous bidders with bids that match or are below the engineer's estimate.

References for each of these projects are included and we invite you to contact them, most of whom are repeat clients.



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## Canaan Valley Resort Sanitary Sewer Project

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**Client/Contact:**

WV Division of Natural Resources  
State Capitol Complex  
Building 3 Room 714  
Charleston, WV 25305-0662  
304-866-4353

Canaan Valley State Park is located in an environmentally sensitive area in West Virginia. To accommodate an increase in skiers to the area, the base lodge was expanded. This expansion required the management of additional wastewater during peak operations.

**Project Location:**

Tucker County, West Virginia

In 2002, Thrasher Engineering provided design, construction management and inspection services for this project. The project included the review of discharge monitoring reports and water consumption records for the previous five years, and the evaluation of treatment and water-reuse alternatives.

**Project Cost – WWTP:**  
**Approx. \$120,000.00**

**Project Status:**

**Complete**

Additionally, Thrasher Engineering recommended and designed a **13,000 gallon flow equalization basin** to attenuate peak hydraulic loadings and provided uniform organic loadings. Construction of this project has been completed.

# Lost River



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## Lost River State Park Wastewater Collection System Project

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**Client/Contact:**

WV Division of Natural Resources  
State Capitol Complex  
Building 3 Room 714  
Charleston, WV 25305-0662  
304-637-0300

**Project Location:**

Hardy County, West Virginia

**Funding:**

WV State Lottery Commission Fund

**Engineer's Estimate:**

\$345,842.00

**Total Project Cost:**

\$380,000.00

**Project Status:**

Complete

Construction of a new wastewater collection system in Lost River State Park. Construction consisted of:

- 8750 LF of 4", 6" and 8" gravity collection;
- 32 manholes,
- 28 clean-outs,
- Street repair,
- Erosion and sediment control, and
- Other numerous miscellaneous appurtenances.

This project also included:

- The construction of an underground electrical system,
- The installation of 6,400 LF of 7,200 volt cable-in-conduit, and
- 3450 LF of 12/240 volt cable in conduit.

Additionally, this project included the removal of approximately 49 poles and 12,400 LF of overhead electrical lines.



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## Watoga State Park Water and Sanitary Sewer Improvements Project

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**Client/Contact:**

WV Division of Natural Resources  
State Capitol Complex  
Building 3 Room 714  
Charleston, WV 25305-0662  
304-558-2981

This project involved the design and construction of various water and sewer improvements to the Watoga State Park systems.

**Project Location:**

Pocahontas County, West Virginia

**Bid Information:**

\$613,193.74

**Total Project Cost:**

\$675,000.00

**Project Status:**

Complete

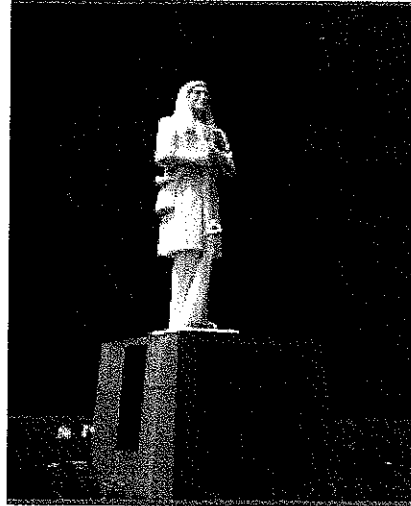
**Sanitary Sewer Projects:**

Scope of services included:

- Installation of a new force main to service the park,
- Installation of a new Island Lick gravity sewer system servicing nine (9) cabins,
- Demolition of the Bush Place Wastewater Treatment Plant and landscaping,
- Removal of the existing Riverside Pump Station and installation of a new grinder pump station to service two (2) cabins in Riverside Campground, and
- Retrofitting existing manholes with watertight lids in the Pine Run portion of the park.

**Water Projects:**

Scope of services include replacement of water distribution system lines, installation of iron and manganese removal filtration systems and cleaning of existing water reservoirs at the Island Lick, Pine Run and Bush Place locations of the park. Also included in this project was painting of the 10,000 gallon water tank servicing Riverside Campground.



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## Chief Logan State Park Utility and Roadway Design/Site Engineering Project

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**Client/Contact:**

WV Division of Natural Resources  
State Capitol Complex  
Building 3 Room 714  
Charleston, WV 25305-0662  
304-345-1060

**Project Location:**

Logan County, West Virginia

**Funding:**

State of West Virginia

**Project Status:**

Complete

This project involved the development of a Conference Center for Chief Logan State Park in Logan County, West Virginia. Types of services provided:

**Utility Design:**

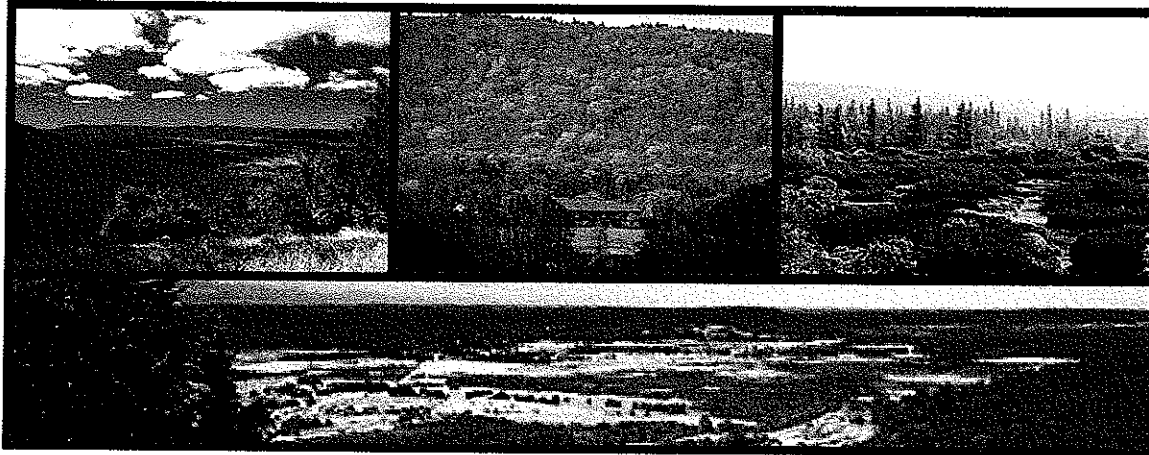
Location, Detailing as required and Specification on site for all utilities including the placement and detailing of a package wastewater treatment plant

**Roadway Design:**

Alignment, profiling, sections, grading, drainage, pavement design, detailing as required specification for the access road and any parking or vehicular travel areas

**Site Engineering:**

Mass grading, drainage, site sections, sediment and erosion control, detailing as required, specification for the site preparation plans



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## Canaan Valley Public Service District – Wastewater Collection and Treatment System

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**Client/Contact:**

Canaan Valley PSD  
P.O. Box 428  
Davis, WV 26260  
Bob Metzger - Chairman  
304 -866-3433

**Project Location:**

Tucker County, West Virginia

**Proposed Funding:**

STAG Grant  
STAG Grant  
SAP Grant  
WVIJDC Grant  
Tucker County Commission  
Canaan Valley Institute  
WVDEP/SRF Loan  
WVIJDC Loan

Estimated Project:  
**\$15,490,000.00**

**Project Status:**

Complete

Thrasher Engineering, Inc. was hired by the newly formed Canaan Valley PSD to analyze the Canaan Valley area for implementation of a public sanitary sewer system. There were multiple tasks involved with this project from working with the Environmental Protection Agency and the West Virginia Department of Environmental Protection with regards to the TMDL on the Blackwater River. The project solution provided a managed stream point discharge solution for the Valley.

The PSD proposes a decentralized approach to provide public sanitary sewer service in the Canaan Valley area. The PSD intends to own, operate, and construct a backbone wastewater transmission and treatment system in the Valley. The system would divide the Valley into five (5) Zones A-E, of which the District would construct three (3)s wastewater treatment facilities in Zones B, C and D as well as a collection/transmission system to gather and transport sewer flow to the proposed facilities in Zone B and D.

Zone A is the Canaan Valley State park system, which will be owned and operated by the DNR or managing company of the resort. Zone E is Winwood Fly In Resort which will not be part of the District system.

As part of TEI's study of the Valley, a preliminary design for the upgrades and improvements to the wastewater system at Canaan Valley State Park were developed as demonstrated on the following drawings.



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**Timberline Resort – Wastewater Collection and Treatment System**  
**THRASHER ENVIRONMENTAL, INC. (AFFILIATE COMPANY) PROJECT**

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**Client/Contact:**

Timberline Resort  
304-866-4801  
1-800-766-9464  
Tom Blanz

Timberline operates an extended aeration lagoon system in Canaan Valley which treats 66,000 GPD in the summer and 120,000 GPD in the winter. The WWTP has difficulty meeting the low ammonia nitrogen discharge limitations because the wastewater temperature in the lagoons falls below 45°F which inhibits the nitrification reaction.

**Project Location:**

Tucker County, West Virginia

Timberline retained Thrasher Environmental to design a new WWTP to meet the NPDES limitations at all times.

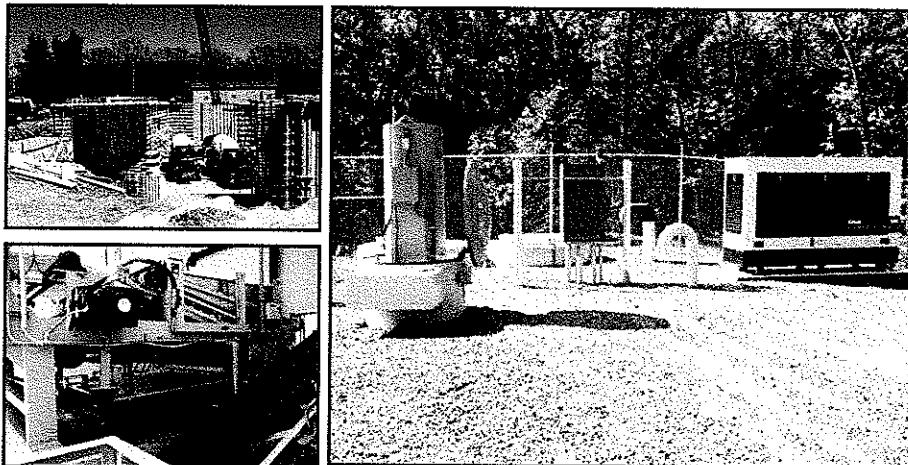
**Project Status:**

Negotiations with Canaan Valley  
PSD

TEI has designed a 120,000 GPD Membrane Biological Reactor (MBR) wastewater treatment plant that has been reviewed and approved by WVDEP. However, the Canaan Valley Public District (CVPSD) was recently formed and the Timberline Four Seasons Resort is in the PSD service territory. CVPSD is in negotiations with Timberline to construct and operate the 120,000 GPD MBR WWTP on property to be purchased from Timberline. Timberline will continue to operate and maintain the existing sewage collection system and pump station.

The proposed high quality effluent from the MBR WWTP will protect the sensitive groundwater aquifer which is used for potable water in the area. Also, the high quality effluent can be considered for numerous reuse alternatives.





## Berkeley County PSSD: Baker Heights WWTP

### Client:

Berkeley County P.S.S.D.  
 P.O. Box 944/65 District Way,  
 Martinsburg, WV 25401  
 Curtis Keller, General Manager:  
 (304) 263-8566

Pentree, Incorporated, an affiliate company of Thrasher Engineering, Inc. is the engineer of record for the BCPSSD. The engineering services performed for the Baker Heights Wastewater Treatment Plant Upgrade are as follows:

### Project Location:

Berkeley Co., WV

- Preparation of an amended Facilities Plan
- Assisting Owner with applications for state and federal funding
- Design in accordance with all applicable State and Federal regulations
- Assisting Owner with permits required and right of way acquisitions
- Preparation of bidding and contracting documents
- Participation in the evaluation of bids received
- Monitor and inspect construction activities
- Assisting Owner with construction administration

### Responsibilities:

Civil/Site Engineering

### Funding Sources:

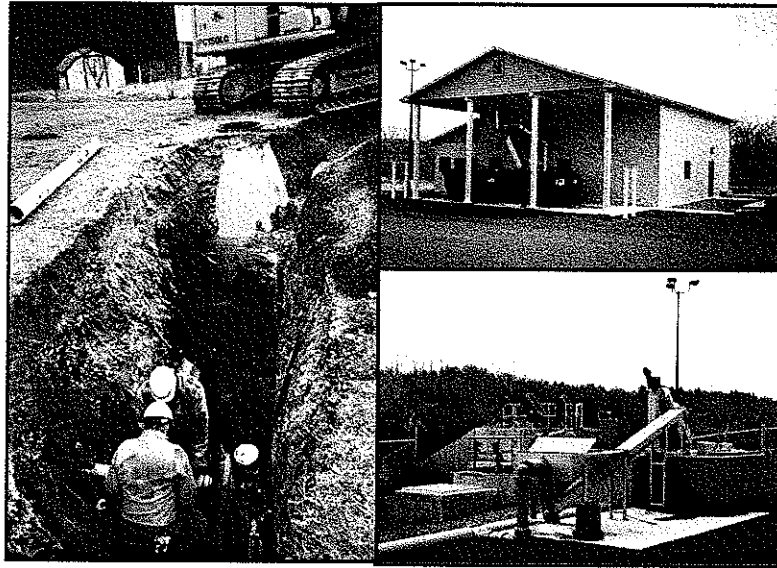
WV DEP SRF

### Project Cost:

\$3 Million

This project consisted of the replacement of an obsolete trickling filter treatment system with a 900,000 gpd capacity Sequential Batch Reactor system, including pre-treatment, disinfection, sludge digestion and sludge dewatering. Given the prodigious growth in Berkeley County, it was decided to blast the area adjacent to the SBR so that when the time came for expansion, the existing basins would not be compromised. Also included in this upgrade were a blower building and chlorine basins. This project was completed under budget and before scheduled completion date.

Thrasher Engineering, as a sub-consultant to Pentree, performed the plant evaluation and design along with Construction Management services.



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## Berkeley County PSSD: Inwood Projects

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**Client:**

Berkeley County P.S.S.D.  
P.O. Box 944/65 District Way,  
Martinsburg, WV 25401  
Curtis Keller, General Manager:  
(304) 263-8566

Pentree, Incorporated, an affiliate company of Thrasher Engineering, Inc. is the engineer of record for the BCPSSD. The engineering services provided for the Inwood Wastewater Collection System and Plant Thrasher Engineering, provided plant evaluation and design, along with construction management services

**Location:**

Berkeley Co., WV

Project were as follows:

**Responsibilities:**

Civil/Site Engineering

This project consisted of eight contracts: **one wastewater treatment plant**, one pumping facility and six pipeline contracts.

**Funding Sources:**

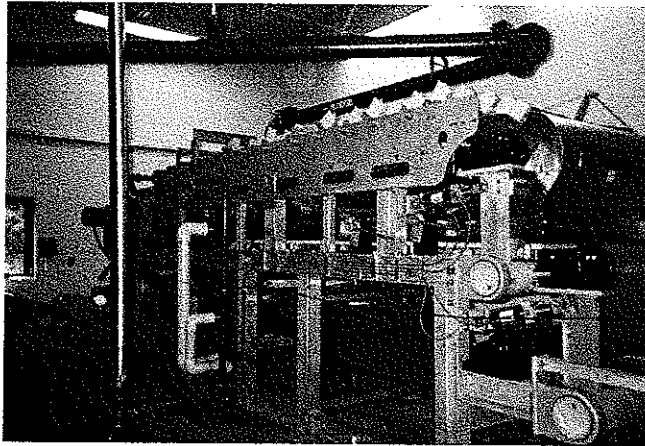
WVIJDC  
WV SRF

The plant is a 750,000 gallon capacity facility with provision for future expansion included in the design. There are six lift stations within the project and fifteen grinder pump stations. The line work consisted of approximately sixty miles of collection and interceptor lines including three miles of 36" diameter trunk line.

**Project Cost:**

\$32 Million

The project serves approximately 2,200 customers with provisions for future expansion throughout southwestern Berkeley County. The total project cost was \$32 million and was funded by: West Virginia Infrastructure and Jobs Development Council and the State Revolving Fund.



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## Craigsville Public Service District WWTP Upgrade and Sanitary Sewer Line Extension – Nicholas County, WV

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**Client/Contact:**

Craigsville Public Service District  
Gary Robinson, Manager /  
Arden Bayless, Chairman  
304-742-5280

**Project Location:**

Nicholas County, WV

**Funding:**

Small Cities Block Grant  
Infrastructure and Jobs  
Development  
Council Loan

**Engineer's Estimate:**

\$1,900,000

**Bid Information:**

\$1,869,300.00 – Contract 1  
\$ 332,549.00

**Total Project Cost:**

\$2,509,000

**Project Status:**

Complete

This project consisted of:

- Upgrade of a 294,000 GPD wastewater treatment plant:
  - *New sludge holding tanks*
  - *Belt filter press and building*
  - *New clarifier*
  - *Equipment replacement*
- Sewer line extension to 15 customers along Bottle Plant Road
- Rehabilitation of sewer line along Apache Drive.



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## **Hamrick PSD Sanitary Sewer Collection System and WWTP Improvements**

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**Client:**

Hamrick Public Service District  
P.O. Box 288  
Hendricks, WV 26271  
304-478-2898

**Location:**

Tucker County, West Virginia

**Funding:**

DWTRF  
Small Cities Block Grant/Loan

**Bid Information:**

Contract 1: \$2,158,825.55  
Contract 2: \$ 301,700.00

**Project Status:**

Complete

**Contract 1: Sanitary Sewer Collection System Project –**

The scope of services for this project included design, bidding, contract administration, survey, construction and inspection services. This project extended sanitary sewer lines in the area of Blackman Flats. This project consisted of:

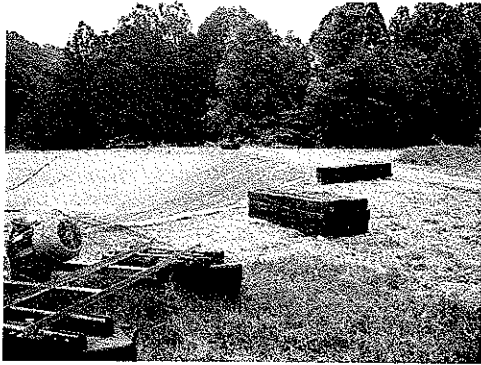
- 37,662 LF of gravity sewer line,
- 8,238 LF of force main,
- 6,986 LF of sanitary sewer service line,
- 680 LF river crossing line,
- 1 non-clog lift station,
- 3 grinder pump stations,
- 1 simplex grinder pump station,
- 181 manholes, and
- 59 gravity line clean-outs.

**Contract 2: Improvements to the City of Parsons Wastewater Treatment Plant**

This project consisted of upgrades to the Wastewater Treatment Plant located in Parsons. This project included the construction of:

- A mechanical bar screens structure,
- Grit removal structure,
- Two floating surface aerators, and
- Pond baffle.

This project also included modifications to the chlorine contact structure and existing pump station.



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## City of Parsons Collection System Extension and Improvements

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**Client:**

City of Parsons  
341 2<sup>nd</sup> Street  
Parsons, WV 26287  
304-478-2311

**Location:**

Tucker County, West Virginia

**Funding:**

DWTRF  
Small Cities Block Grant/Loan

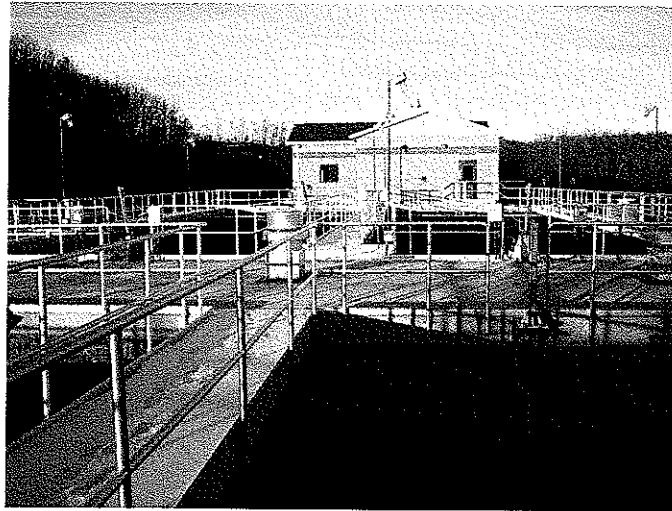
**Wastewater Treatment Plant Upgrade Project**

**Project Description:** The scope of services for this project included design, bidding, contract administration, survey, construction and inspection services. This project included the repairs to the existing wastewater pond liner, construction of a dechlorination facility and the removal and disposal of approximately 1,200 pressed tons of sludge.

**Long-Term CSO Plan**

**Project Description:** This project requires oversight by the firm in developing and managing the CSO system in Parsons. The City was not in compliance with all of the CSO NPDES permit requirements. We are working with the WVDEP and the City of Parsons to establish a schedule to complete the necessary tasks to come into compliance.

The firm is developing a brochure for use in public education and the dissemination of information to the public, conducting public meetings to enlist public involvement in the development of the long-term control plan, and identifying and eliminating illicit dischargers to the CSO system. This project has established measurable goals and target dates for completion.



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## Preston County EDA WWTP and Sewer Line Extension Project

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**Client/Contact:**

Preston County EDA  
330 East Main Street, Suite 100  
Kingwood, WV 26537  
304-329-2299

**Project Location:**

Preston County, West Virginia

**Funding Source:**

US EDA  
WVDOT

**Construction Estimate:**

\$4,086,225

**Bid Information:**

\$4,087,000

**Project Cost:**

\$5,381,110

**Project Status:**

Complete

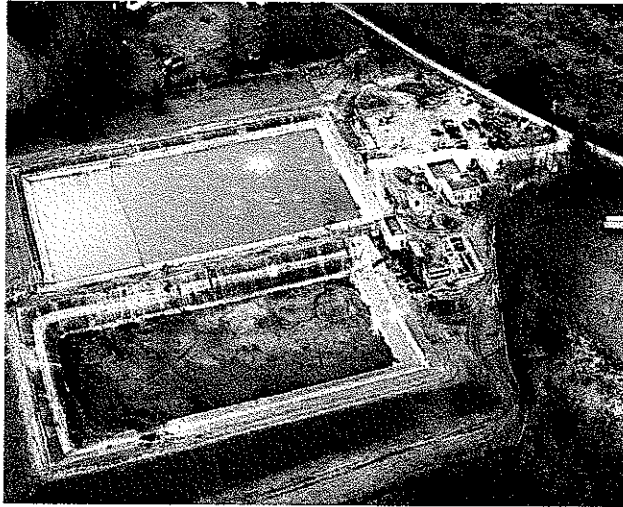
This project consisted of the design and construction of a 500,000 GPD wastewater treatment plant to serve the Northpointe Business and Industrial Park and Hazelton Prison. Additionally, a standard gravity sanitary sewer extension was designed and constructed to serve 30 additional customers and 3 businesses.

Once this wastewater treatment plant was operating, the firm was hired to design a supplemental sanitary sewer line extension that now serves an additional 85 new customers.

This sanitary sewer line extension included:

- 14,300 LF of 8" gravity sewer line,
- 25,295 LF of force main,
- 2 grinder pump stations,
- 3 duplex sewer pump stations, and
- 58 manholes.

This portion of the project cost \$2,148,000 and was funded by WVIJDC loan.



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## Greater Harrison Public Service District WWTP and Extensions

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**Client/Contact:**

Greater Harrison County PSD  
P.O. Box 190  
West Milford, WV 26451  
304-745-3134

This project includes the **upgrade of the PSD's aerated lagoon system WWTP from .3 to .6 MGD**, in addition to modifying screening aeration system to a complete mix system and repairing the chlorine disinfections system.

**Project Location:**

Harrison County, West Virginia

Two Sanitary Sewer extensions are also included in this project.

**Funding:**

WVIJDC Loan and Grant  
DEP SRF Loan

The first extension is in the areas of Good Hope, North Lost Creek, Rt.19 North and South near West Milford and the Laurel Lea Area serving **732 customers**. The second extension is along Routes 73 and 76 near Bridgeport serving **466 new customers**.

**Engineer's Estimate:**

\$5,780,000

Both sanitary sewer line extensions are utilizing 6" and 8" gravity sewer line, 4" force main and 4" service line. Additionally grinder pump stations and manholes are included in these projects.

**Bid Information:**

Contract 1: \$ 3,255,723  
Contract 2: \$ 1,285,000  
Contract 3: \$ 685,821  
Contract 4: \$ 292,204  
TOTAL: \$5,518,748

Design, survey, construction management and inspection services were provided for this project.

**Total Project Cost:**

\$7,886,165

**Project Status:**

Under Construction

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## **CLIENT REFERENCE LIST – SANITARY SEWER**

❑ Garrett County Department of Public Utilities	<b>301-334-6983</b>
❑ Town of Accident, Maryland	<b>301-746-6346</b>
❑ Town of Loch Lynn Heights	<b>301-334-5853</b>
❑ Town of Mountain Lake Park	<b>301-334-2250</b>
❑ Hamrick Public Service District	<b>304-478-2898</b>
❑ Norton-Harding-Jimtown Public Service District	<b>304-636-6223</b>
❑ Hardy County Public Service District	<b>304-530-3047</b>
❑ Greater Harrison Public Service District	<b>304-745-3134</b>
❑ Huttonsville Public Service District	<b>304-335-2035</b>
❑ Enlarged Hepzibah Public Service District	<b>304-623-2217</b>
❑ Pea Ridge Public Service District	<b>304-736-6711</b>
❑ Greater Paw Paw Sanitary District	<b>304-983-5633</b>
❑ Pocahontas County Public Service District	<b>304-456-3127</b>
❑ Jane Lew Public Service District	<b>304-884-1111</b>
❑ Mingo County Public Service District	<b>304-235-2244</b>
❑ Scott's Run Public Service District	<b>304-599-8004</b>
❑ Sissonville Public Service District	<b>304-984-9304</b>
❑ Town of Farmington, WV	<b>304-825-6325</b>
❑ Town of Junior, WV	<b>304-823-1829</b>
❑ City of Bridgeport, WV	<b>304-842-8200</b>
❑ City of Parsons, WV	<b>304-478-2311</b>
❑ City of Belmont, WV	<b>304-665-2160</b>
❑ City of Clarksburg, WV	<b>304-624-1600</b>