



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

DEP15612

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

GUY NISBET
304-558-8802

RFQ COPY

TYPE NAME/ADDRESS HERE

Gwin, Dobson & Foreman, Inc.
3121 Fairway Drive
Altoona, PA 16602

ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV
25304

304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/25/2012				

BID OPENING DATE:

03/01/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29	NO PRICE QUOTATION! (Per Section 1.14 of General Information)	
	WAITMAN - BARBE HW #1			DESIGN		
				EXPRESSION OF INTEREST		
				THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE WAITMAN - BARBE HIGHWALL #1 PROJECT IN MONONGALIA COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.		
				BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THIS CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.		
				ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERETO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION.		

RECEIVED

2012 FEB 29 A 9:58

PURCHASING DIVISION
STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

[Signature]

TELEPHONE

814-943-5214

DATE

02-27-12

TITLE

President/CEO

FEIN

25-1685351

ADDRESS CHANGES TO BE NOTED ABOVE

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

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. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
 4. 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.
 5. Payment may only be made after the delivery and acceptance of goods or services.
 6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
 7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
 8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
 9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
 10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
 11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
 12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
 13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and 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.
 14. **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. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
 15. **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, and the West Virginia Insurance Commission. 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.
 16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.
- I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. 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. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. 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
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

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.

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Gwin, Dobson & Foreman, Inc.

Authorized Signature:  Date: 02-27-12

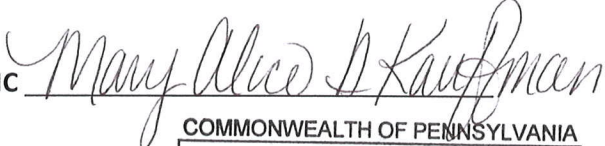
State of PA

County of Blair, to-wit:

Taken, subscribed, and sworn to before me this 27th day of February, 2012.

My Commission expires March 21, 2013.

AFFIX SEAL HERE**NOTARY PUBLIC**


COMMONWEALTH OF PENNSYLVANIA

Notarial Seal
 Mary Alice D. Kauffman, Notary Public
 City of Altoona, Blair County
 My Commission Expires March 21, 2013
 Member, Pennsylvania Association of Notaries

QUALIFICATIONS AND EXPERIENCE

ABANDONED MINE RECLAMATION AND ACID MINE DRAINAGE ABATEMENT PROJECTS

General - Gwin, Dobson & Foreman, Inc. is considered one of foremost mine reclamation/mine drainage abatement consultants in the Eastern United States. GD&F has a long and distinguished history of innovative AMR/AMD solutions.

Our 50 years of experience covers the entire range of mine-related environmental problems including surface mine reclamation, deep mine sealing (in-situ and remote hydraulic mine sealing), acid mine drainage treatment (including physical-chemical, passive wetlands, membrane microfiltration), refuse pile reclamation and shaft sealing, mine fires, mine subsidence, surface sealing, outcrop barriers (slurry trench, impervious clay trenches), mine discharge and stream quality monitoring, basin-wide AMD assessment and reclamation plans and related disciplines.

GD&F has completed more mine reclamation/mine drainage abatement projects for the state of Pennsylvania over the last 50 years than any other consultant. GD&F has also prepared over 1,000 mining permits for various coal companies in Pennsylvania, Western Maryland and West Virginia during this time.

Specific Experience - In addition to the projects listed in Attachment "B", AML Consultant Qualifications Questionnaire (CQQ) and Attachment "C" Related Project Experience Matrix (RPEM), we present the following specific AMR/AMD projects with detailed technical information. These AMR/AMD projects show the full range of our technical expertise and breadth of our project experience.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Abandoned Mine Reclamation
Ebensburg District
Ebensburg, Cambria County, PA

Telephone: (814) 472-6330

- Projects:
- a. **OSM 17 (0097) 101.2, Strip Mine Reclamation Project, Kellytown Area, Clearfield County, PA**
 - b. **OSM 17 (1530) 101.2, Strip Mine Reclamation Project, Victor — Gearhartville Area, Clearfield County, PA**
 - c. **OSM 17 (2576) 101.1, Strip Mine Reclamation Project, Newtown Area, Clearfield County, PA**
 - d. **OSM 17 (0875) 101.1, Strip Mine Reclamation Project, Pine Run, Clearfield County, PA (Not constructed)**

Project Cost: \$ 800,000

Project Description: The projects consisted of the reclamation of a total of 80 acres of abandoned strip mined area in Clearfield County, including the removal of abandoned mining equipment, sealing four (4) deep mine drift entries, backfilling vertical mine openings and restoration of surface run-off conditions. The project involved development of a reclamation plan, preparation of working drawings and specifications, cost estimates, and general supervision of construction.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Abandoned Mine Reclamation
Ebensburg District
Ebensburg, Cambria County, PA

Telephone: (814) 472-6330

Project: **Highland Fuel Mine Sealing and Reclamation Project,
Wolf Creek Township, Mercer County, PA, SL 110-4-102.1**

Project Cost: \$ 500,000

Project Description: This project consisted of sealing the abandoned Highland Fuel Deep Mine Complex in Mercer County. Discharges from the mine were contaminating local streams. An outcrop barrier consisting of a slurry trench (which was one of the first installations in Pennsylvania to control mine discharges) was employed.

The mine, located in the alluvium section of the state, required special reclamation procedures, drainage facilities and erosion and sedimentation control devices. An adjacent refuse pile was reclaimed and revegetated.

The mine was successfully flooded through the slurry trench process and resulted in the improvement of the mine discharge. However, the flooding of the mine liquified the overburden and resulted in some subsidence problems. The mine pool was eventually lowered. However, the quality mine discharges were still well above those that existed prior to reclamation.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Abandoned Mine Reclamation
Ebensburg District
Ebensburg, Cambria County, PA

Telephone: (814) 472-6330

Projects: **OSM 32 (2425) 101.2, Strip Mine Reclamation Project,
Brush Valley Township, Indiana County, PA**

Project Cost: \$150,000

Project Description: The project consisted of the reclamation of a 12 acre abandoned strip mine area on Laurel Run in State Game Lands No. 276 in Indiana County. The project involved removal and disposal of abandoned mine structures and debris, sealing of an existing deep mine opening, and restoration of surface run-off conditions. The project involved development of a reclamation plan, preparation of working drawings and specifications, cost estimates, and general supervision of construction.

Detailed Project Summary:

Client: Bureau of Mines
U.S. Department of Interior
Bruceton, PA

Telephone: (724) 675-6795

Projects:

- a. State Game Lands, No. 276, Indiana County, PA**
- b. State Game Lands, No. 105, Armstrong County, PA**
- c. State Game Lands, No. 35, Jefferson County, PA**

Project Cost: \$ 640,000

Project Descriptions: The projects were administered by the U.S. Bureau of Mines for reclamation of abandoned strip mines on State Game Lands in Indiana, Armstrong and Jefferson Counties. The work involved development of reclamation plans, specifications, drainage design, erosion and sedimentation control, grading, revegetation, and detention pond design.

Extensive drainage design was required on a multi-bench site to prevent excessive erosion and flooding of a nearby community in Indiana County. Specialized backfilling, pond installation, and revegetation were required.

Detailed Project Summary:

Client: State of Ohio
Department of Natural Resources
Abandoned Mine Reclamation Division
Columbus, OH

Telephone: (614) 265-6565

Project: **Lake Hope State Park, Mine Sealing and Abandoned Mine Reclamation Project,
Vinton County, Ohio**

Project Cost: \$ 1,100,000

Project Description: GD&F designed one of the first mine sealing reclamation demonstration projects in the state of Ohio; an abandoned deep mine complex located upstream of the Lake Hope State Park which was contaminating the water quality of Lake Hope. GD&F was contracted to develop mine sealing plans for this project.

A clay barrier trench was designed along the outcrop of the abandoned deep mine and impervious material installed to flood the mine complex. Several surface seals were provided in the form of concrete bulkheads. Mine overflow facilities were installed in addition to drainage facilities and diversion ditches. An adjacent strip mine was reclaimed as part of the project.

The project was completed on time and under budget. It was subject of a U.S. Geologic Survey study for monitoring the discharge from the deep mine. The mine was successfully flooded and water quality in Lake Hope has now reached pre-mining conditions.

Detailed Project Summary:

Client: Tanoma Mining Company
Marion Center, PA

Telephone: (412) 254-1110 or (412) 349-8833

Project: **Tanoma Refuse Pile Reclamation and Installation,
Rayne Township, Indiana County, PA**

Project Cost: \$ 1,500,000

Project Description: GD&F developed the plans and specifications for the installation of refuse piles for the multi-square mile Tanoma Mine Complex in Indiana County.

The Tanoma Mine Complex is one of the latest deep mines to have been permitted under new regulations of the Department for deep mining and refuse piles. Extensive stability analysis were prepared for installation of refuse piles in severe slope areas. Specialized design features included detailed stability analysis, benching design, rock toe, underdrains, drainage and diversion ditches, specialized soil and seed mixtures for refuse pile revegetation, erosion and sedimentation pond construction, acid mine drainage treatment facilities and other features. Wetlands investigations and environmental site assessments were part of the design.

GD&F also was responsible for permitting the initial mining complex under the auspicious of the Barnes and Tucker Coal Company. Working drawings, plans, specifications and general observation of construction have been provided over the last 15 years.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Abandoned Mine Reclamation
Ebensburg District
Ebensburg, Cambria County, PA

Telephone: (814) 472-6330

Projects: **Sankertown Refuse Pile Reclamation Project, Cambria County, PA**
OSM 11 (2724) 101.1

Project Cost: \$ 280,000

Project Description: This project involved the complete reclamation of an abandoned coal mine refuse pile site in Sankertown, Cambria County, PA near Cresson Borough. The project, associated with the Cresson Shaft Deep Mine Complex, involved 15 acres of grading, seeding and erosion/sedimentation control facilities. Sedimentation control ponds were installed throughout the project.

The site presented several design restrictions as it was confined by the main line of the Consolidated Rail Corporation and an adjacent Township road. The refuse pile was graded to facilitate water runoff and to prevent infiltration for acid mine drainage control. A deep mine shaft was sealed with a concrete cap and vent. The project was completed ahead of schedule and under budget.

Detailed Project Summary:

Client: U.S. Department of Interior
Office of Surface Mining
Washington, D.C.

Telephone: (202) 208-2553

Project: **Centralia Abandoned Mine Fire Assessment,
Borough of Centralia, Schuylkill County, PA**

Project Cost: \$ 50,000 (study only)

Project Description: GD&F was contracted by the Office of Surface Mining to perform the mapping of abandoned anthracite deep mines in the vicinity of the Centralia mine fire. The project involved assessing the extent and possible implications of ultimate mine fire spread on the vicinity of Centralia. Extensive mapping of underground deep mines were performed in addition to review of all drill logs and related underground mine maps.

This project also involved mapping of the geologic features of two synclinal basins and the anticline in between. The data base used to develop the structure came from existing available mine maps and from proprietary mine maps from two coal companies in the area as well as the proprietary mine maps in our possession.

A great deal of emphasis was placed on the accurate location and evaluation of existing mine seals as well as an assessment of their long term effectiveness and their ability to withstand additional heads (in the event that the abatement included partial flooding).

In addition, since mining was conducted in beds whose dips varied from 45° to 85° and numerous horizontal rock tunnels had been developed, the assessment of the potential for spreading of the mine fire was important. This required an assessment of the current extent of the mine fire. This was accomplished by utilizing thermocouple readings of downhole temperatures to contour the temperature throughout the basins on a seam by seam basis. The spread of the fire could then be predicted based on existing high temperature areas and the location of the numerous (over 200) rock tunnels and interconnections.

Detailed Project Summary:

Client: PA Department of Environmental Protection
Harrisburg

Telephone: (814) 472-6330

Project: **OSM 36 (2524) 102.1, Oven Run (Koonztown) Successive Alkalinity Producing Wetland Treatment Facility, Somerset County, PA**

Project Cost: \$ 951,954

Project Description: GD&F is helping restore one of the most severely degraded streams in western Pennsylvania. Oven Run, tributary to the Stoneycreek River, discharges acid mine drainage from abandoned deep mine complexes near Stoystown, Somerset County. GD&F designed possibly the largest passive mine drainage treatment system for the PA DEP Bureau of Abandoned Mine Reclamation at this location.

Design elements included vertical flow wetlands (VFW) overlain by limestone (3-4 feet), compost material (0.5 to 2 feet) and wetland plants, distribution box, sedimentation ponds, waterproof PVC liner, perforated underdrain pipe collection system and flushing, outlet and bypass piping.

The Oven Run wetlands are effectively treating a poor quality (pH-3), high flow (750 gpm) acid discharge. The treatment system is generating more than one ton of alkalinity per day and has had few problems since operation began. GD&F also designed a 50-acre surface mine reclamation project nearby.

Stony Creek is now showing significant improvement because of this and other projects on Oven Run. The PA Fish Commission has documented beneficial impacts more than twenty-two miles downstream in the City of Johnstown.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Abandoned Mine Reclamation
Harrisburg, PA

Telephone: (717) 783-2267

Project: **Big Bertha Abandoned Mine Gas Well Acid Mine Drainage Control Project,
SL 110-7-101.5**

Project Cost: \$ 75,000

Project Description: This project involved the sealing of an abandoned gas well that was discharging acid mine drainage to Slippery Rock Creek in Butler County. A detailed hydrogeologic investigation was performed in conjunction with the U.S. Geologic Survey. Geochemistry and hydrogeologic techniques were employed to determine the source of pollution. The source was the abandoned Hamilton Mine Complex and adjacent abandoned outcrop strip mine.

This job involved all phases of investigation of the site including surface and deep mines, as well as the abandoned flowing well. Several prior studies had been conducted and each had reached a similar conclusion - that this well could not be safely sealed.

The results of the investigation conducted by Gwin, Dobson & Foreman, Inc. were that the well could be safely partially sealed and that this would have a final discharge which would not be pollutional. This was based on the correct identification of seven physically and chemically different aquifers contributing flow to this well.

The investigation included the construction of multiple piezometers to measure ground water parameters and the installation of numerous weirs to simultaneously observe surface water trends. All of the twenty-five sample locations were sampled 26 times to determine the normal seasonal variation.

The investigation also included multiple tracer dye studies, pump tests, surcharge tests, packer tests, partial aquifer confinement tests, and complete closure of the flowing well.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Abandoned Mine Reclamation
Harrisburg, PA

Telephone: (717) 783-2267

Project: **Altoona Acid Mine Drainage Water Treatment Plant Evaluation**
Blair County, PA, SL 116-5-101.2

Project Cost: \$30,000

Project Description: Assessment, alternatives evaluation, recommendations and report preparation for process operational problems at the 20 MGD Altoona AMD/potable water treatment plant. Process includes multi-media filtration, lime-soda ash neutralization, softening, activated carbon, aeration, sedimentation, flocculation, rapid mix, solids contact units and sludge dewatering. Work included raw water chemical/flow analysis, process equipment assessment, process analysis, piping/structure corrosion evaluation, mechanical systems review, raw water temperature/ solids study, alternatives evaluation, sampling, monitoring and recommendations for inclusion in comprehensive report. Many of these recommendations are now being implemented in the \$16 million plant upgrade and expansion project for the Altoona City Authority as follows:

Complete design of facilities to renovate, expand and upgrade AMD and potable water treatment plant including direct filtration, ozonation, sludge handling and dewatering equipment replacement, upgrade chemical addition and feed facilities, conversion of aeration tanks to ozone generation and contact equipment to accommodate ozonation process, plant structural/architectural renovations and additions, sedimentation basin collection equipment replacement, sludge holding tank covers, computer control process control and monitoring equipment, yard piping, flocculation and rapid mix facilities replacement and appurtenances.

Detailed Project Summary:

Client: United States Environmental Protection Agency Region III,
Philadelphia, PA

Telephone: (814) 949-2222

Project: **Acid Mine Drainage Neutralization by Lime-Soda Ash Method Technical Performance
Evaluation, CR 103, Altoona Acid Mine Drainage Treatment Plant, Blair County, PA**

Project Cost: \$80,000 (study only)

Project Description: Evaluation of Altoona AMD treatment plant lime-soda ash neutralization process performance including sampling, monitoring, chemical analysis, sludge generation and dewatering characteristics resulting in EPA formatted technical paper and reports for nationwide distribution.

Detailed Project Summary:

Client: Altoona City Authority
20 Greenwood Road
Altoona, PA 116602

Telephone: (814) 949-2222

Project: **Renovate, Upgrade and Expand Horseshoe Curve (Altoona) Acid Mine Drainage/
Potable Water Treatment Plant, Logan Township, Blair County, PA**

Project Cost: \$16,000,000

Project Description: Complete design of facilities to renovate, expand and upgrade AMD and potable water treatment plant including direct filtration, ozonation, sludge handling and dewatering equipment replacement, upgrade chemical addition and feed facilities, conversion of aeration tanks to ozone generation and contact equipment to accommodate ozonation process, plant structural/architectural renovations and additions, sedimentation basin collection equipment replacement, sludge holding tank covers, computer control process control and monitoring equipment, yard piping, flocculation and rapid mix facilities replacement and appurtenances.

Detailed Project Summary:

Client: Department of Environmental Resources
Office of Resources Management
Harrisburg, PA

Project: **Piney Creek Watershed Acid Mine Drainage Abatement Evaluation, Clarion County, PA, SL 192**

Project Cost: \$150,000 (study only)

Project Description: Evaluation of 70 square miles of Piney Creek watershed in Clarion County, tributary to the Clarion River and Piney Dam Lake. Project consisted of installation of 307 source sampling stations and 32 stream sampling stations to quantify pollutional impacts of acid mine drainage to Piney Creek.

Sampling and data collection extended over a one (1) year period. Project included a proposed acid mine drainage abatement plan with a total project cost of \$4,500,000. A report was issued summarizing the study methodology, data evaluation and abatement plan.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Office of Resources Management
Harrisburg, PA

Project: **West Branch of the Susquehanna River, Acid Mine Drainage Abatement Evaluation, Central PA, SL 163-3**

Project Cost: \$165,000

Project Description: This project involved the identification, location and characterization of the sources of acid mine drainage in the Pennsylvania Bituminous Coal fields.

During the field investigation, thousands of weirs and/or staff gauges were set and each was periodically sampled (typically monthly for 6 samples). This resulted in the development of a large data base for each basin.

Each tributary drainage area was evaluated and if significant degradation was present, then each discharge (sample station) was evaluated to identify the principal source(s) of the acid mine drainage. The evaluation was based on "percent contribution of actual loadings" for acid mine drainage parameters for the entire sampling period (showing the seasonal/variation).

Implicit in this type of study were activities such as 1) mapping abandoned underground and surface mined areas, 2) developing abatement strategies, 3) estimating abatement costs and, 4) providing a cost-benefit analysis for each area.

This project was administered by the Penn DER under the Project 500 program (Operation Scarlift). The project also involved a comprehensive study of the West Branch, with particular emphasis upon the reach from Cherry Tree to the headwaters. Flow monitoring and sampling was conducted on the entire river and its tributaries in addition to specific mine drainage sources. Reclamation plans were developed for deep mine drainage abatement, strip mine reclamation, refuse pile reclamation, stream diversions, and acid mine drainage treatment facilities.

Detailed Project Summary:

Client: Department of Environmental Resources
Office of Resources Management
Harrisburg, PA

Project: **Deer Creek Watershed Acid Mine Drainage Abatement,
Clarion County, Pennsylvania, SL 193**

Project Cost: \$110,000 (study only)

Project Description: Evaluation of 69 square miles of Deer Creek watershed in Clarion County, tributary to Clarion River and Piney Dam Lake. Project consisted of installation of 280 source sampling stations and 18 stream sampling stations to quantify pollutional impacts of acid mine drainage to Deer Creek.

Project included exploratory drilling and testing program to determine hydrogeological conditions contributing to acid mine drainage problems. Sampling and data collection extended over a one (1) year period. Project included a proposed acid mine drainage abatement plan with a total project cost of \$14,000,000. A report was issued summarizing the study methodology, data evaluation and abatement plan.

Detailed Project Summary:

Client: Department of Environmental Resources
Office of Resources Management
Harrisburg, PA

Project: **Slippery Rock Creek Watershed Assessment, Butler County, PA, SL 110**

Project Cost: \$ 50,000

Project Description: Watershed evaluation of 12 square mile upper Slippery Rock Creek Watershed in Butler County, Pennsylvania. Project consisted of installation of source sampling stations and stream sampling stations to quantify pollutional impacts of abandoned oil or gas wells discharging to Slippery Rock Creek.

Project included extensive exploratory drilling and monitoring program for determination and abatement of hydrogeological contributions associated with mine drainage production from well head. Sampling and data collection extended over a one (1) year period. A report was issued summarizing the results of the study.

Detailed Project Summary:

Client: Commonwealth of Pennsylvania
Department of Environmental Resources
Office of Resources Management
Harrisburg, PA

Project: **Moraine State Park/Muddy Run Acid Mine Drainage Abatement Projects and Assessment, MD-83-SL 110**

Project Cost: \$4,000,000

Project Description: During final construction of Lake Arthur in Moraine State Park, it was discovered that A.M.D. would render the lake "dead". The remote sealing of 67 mine entries and reclamation of surface mines, gob piles and refuse piles.

This project involved the identification, location and characterization of the sources of acid mine drainage in the proposed State Park. During the investigation, hundreds of weirs were set and periodically sampled. These same points were sampled following construction (for 1 year) to assess the success of the project. Ten years after the completion, the U.S. Bureau of Mines reestablished many of these points and evaluated the project to assess to long-term success of this work.

The results of these post-project studies indicate reasonable "short-term" reductions in discharge loadings to the lake and exceptional "long-term" reductions as the lake went from pH 3.0 -- 4.0 range to pH 5.7 -- 6.9 and now supports a viable, multi-specie population of fish. In addition, the reclamation was perceived adequate to serve as beaches and camp areas. The Boy Scouts held their national jamborees at the reclamation sites.

PERSONNEL/PROJECT ORGANIZATION PLAN

The following individuals will provide engineering, environmental and surveying for the AMR/AMD projects. Resumes for the individuals listed in Attachment "C" are attached to this Section:

- **Mark Glenn, P.E.**, President of GD&F, will serve as Project Principal. Mr. Glenn has thirty-five years of consulting engineering experience and extensive AMD/AMR project experience. He has been the engineer-of-record and principal designer for over 25 AMD/AMR projects. Mr. Glenn will provide engineering oversight and design direction for the AMD/AML projects. He will also ensure that key milestone dates are met and that GD&F provides a quality, cost-effective design package. He holds a Bachelor's Degree in Civil Engineering Technology from the University of Pittsburgh and is currently an MSCE candidate at the New Jersey Institute of Technology. Mr. Glenn is a registered professional engineer in West Virginia and seven (7) other states.
- **Thomas E. Boland, P.E.**, Design Operations Director and Engineering Manager, will serve as the team's overall Project Coordinator and is responsible for all aspects of engineering quality control and deliverables. Mr. Boland has more than thirty-nine years of experience in site/civil work, AMR/AMD projects, structural and architectural engineering and project management. He has extensive experience with contract documents, specifications and other design and permitted related documents. Mr. Boland possesses a Bachelor's of Science Degree in Civil Engineering Technology from Penn State University (Capital Campus) and is a registered professional engineer in West Virginia and two (2) other states.
- **Christopher M. Eckenrode, P.E.**, Project Engineer, will serve as Project Engineer for the AMR/AMD project. Mr. Eckenrode has more than seven years of experience in the design and construction management of engineering projects. Mr. Eckenrode has a BSCE degree from Penn State University and is a registered professional engineer. Mr. Eckenrode has extensive AMR/AMD experience with the PADEP Bureau of Abandoned Mine Reclamation and has worked on many reclamation/abatement projects in various project capacities.
- **James L. Balliet, M.S.**, will serve as Senior Project Environmental Scientist. Mr. Balliet has over twenty-two years of experience in environmental engineering including AMD, SAP wetlands and advanced water treatment process design. He holds a bachelor's degree in Environmental Resource Management and a Master's Degree in Water Resources from Penn State University. He is a licensed water and wastewater plant operator.
- **Travis J. Long**, Project Engineer, has over twelve years experience in the acid mine drainage abatement field. Mr. Long has a bachelor of science degree in biology from Juniata College. He has extensive AMD aquatic biology, wetlands, advanced water treatment, permitting and water quality assessment experience.
- **Matthew R. Orner**, Project Manager, has over fourteen years experience in civil engineering projects. Mr. Orner will serve as Project Designer with responsibility for design development, project management support, environmental permitting, construction administration support and related tasks. He has significant mine reclamation design experience by virtue of the Glen Campbell North AMR project. He holds a BS degree in Civil Engineering Technology from the University of Pittsburgh.

- **Jerome D. Brunner, P.L.S.,** is GD&F's Chief of Surveys and will serve as the Project Surveyor. Mr. Brunner possesses over thirty-five years of surveying experience in both field and office capacities. His experience includes construction stakeouts, property utilities and topographic surveys, as well as cadastral, engineering, geodetic and photogrammetric engineering surveys involving subdivisions and rights-of-way, drainage, water and sanitary lines, storm sewers and aerial controls for topographic mapping. Mr. Brunner's office experience includes supervision of survey crews, calculations, plottings, deed description preparation and plans and drawings. Mr. Brunner is a professional licensed surveyor in West Virginia.
- **Robert Beck,** CADD Manager, will be the team's Project CADD Supervisory Technician. Proficient in CADD systems and software, Mr. Beck supervises a staff of eight CADD Technicians using the latest AutoCAD and AutoDesk software.

MARK GLENN, P.E., PRESIDENT

Assignment: Project Principal

Education: BS - Civil Engineering Technology, University of Pittsburgh, 1977
MSCE Graduate Studies - University of Pittsburgh, 1978
MSCE Graduate Studies - New Jersey Institute of Technology (Current)
IWPC Biological Treatment Certificate, Manhattan College, 2008

Registration: Professional Engineer, Pennsylvania, P.E. - 30528-E, 1981
Professional Engineer, West Virginia, P.E. - 13375
Professional Engineer, Maryland, P.E. - 22577
Professional Engineer, Virginia, P.E. - 31894
Professional Engineer, New York, P.E. - 74992-1 (Inactive)
Professional Engineer, Delaware, P.E. - 11160
Professional Engineer, Ohio, P.E. - 61312
Professional Engineer, New Jersey, P.E. - 40844
Professional Engineer, Florida, P.E. - 56484 (Inactive)

Affiliations: American Academy of Environmental Engineers, Diplomate, 1993
American Society of Civil Engineers, Member, 1978
American Society of Highway Engineers, Member, 1990
Water Environment Federation, Member, 1982
American Water Works Association, Member, 1983
Association of State Dam Safety Officials, Member, 1984
American Concrete Institute, Member, 2010
United States Society of Dams, Member, 2010
Deep Foundation Institute, Member, 2011

Honors & Awards: American Academy of Environmental Engineers - Excellence Award Finalist
Association of State Dam Safety Officials - 1996 Regional Award of Merit
PA Governor's Award for Environmental Excellence - 1999
ACEC/PA Diamond Award - Water Resources, 2001, 2006

Professional Experience

President and principal-in-charge of 55 employee full service consulting engineering firm. Responsible for all civil, structural, mechanical, electrical, environmental, architectural and transportation engineering projects. Value of capital projects exceeds one billion dollars over the last twenty-five years. Oversees support services including project administration, surveying and construction management.

Discipline experience includes water/wastewater treatment facilities; water/transmission distribution, storage and pumping systems; wastewater collection, conveyance and pumping systems; combined sewer overflow (CSO) analysis and modeling; CSO storage and pumping systems; architectural engineering; structural/building/environmental systems; hazardous waste management; environmental assessments; commercial, institution and industrial buildings; dams and reservoirs; groundwater hydrology and development; stormwater management; bridge design; process treatment design; highways, transportation and traffic facilities; hydraulic modeling; reports and studies; research projects; mining engineering and reclamation; valuation and rate studies; civil/site work and residential, commercial and industrial site development.

Experience also includes facilities management and operation; capital project financing; municipal facilities operations; infrastructure system and mineral property valuation and appraisals; state/federal project management and procurement; regulatory review and facilities planning design.

Key Projects

ABANDONED MINE RECLAMATION/ACID MINE DRAINAGE ABATEMENT

- **PADEP Bureau of Abandoned Mine Reclamation, Annandale-Hallston Deep Mine Sealing and Outcrop Barrier Restoration, Butler County, PA.** Project engineer for design of remote hydraulic deep mine seals at portal entry, slurry trench outcrop barrier, abandoned surface mine restoration and refuse pile reclamation. Project cost of \$850,000.

ABANDONED MINE RECLAMATION/ACID MINE DRAINAGE ABATEMENT

- **PADEP Bureau of Abandoned Mine Reclamation, Oven Run Mine Reclamation and Acid Mine Drainage Abatement Project, Shade Township, Somerset County, PA.** Design of \$1.5 million, 30-acre mine/refuse pile reclamation and 10-acre passive, successive alkalinity producing wetland treatment facility associated with 700 GPM mine drainage discharge from abandoned Ralphton No. 15 deep mine. At the time, this SAP wetland system was the largest passive AMD treatment system in Pennsylvania.
- **PA DEP Bureau of Resources Management, Deer Creek Watershed Mine Drainage Abatement Project, Knox Township, Clarion County, PA.** Design of 2500 L.F. slurry trench outcrop barrier for sealing abandoned deep mine complex. Project cost - \$400,000.
- **Ohio Dept. of Natural Resources, Lake Hope Mine Drainage Abatement Project, Vinton Co., DOH.** Design of clay blanket outcrop barrier seal, hydraulic deep mine seals, drainage facilities and strip mine/refuse pile reclamation. Project cost - \$1,000,000.
- **PA DEP Bureau of Resources Management, Toby Creek/Piney Creek/Deer Creek Watersheds, Clarion County, PA.** Principal author and project engineer for basin-wide reports on acid mine drainage pollution with abatement measures. Total projected abatement cost - \$50 million.
- **Hampton Twp. Municipal Authority, Wildwood Mine Discharge Water Treatment Feasibility Study, Allegheny Co., PA.** Project principal and process system engineer for treatability evaluation of discharge from the Wildwood deep mine complex as a potable water source including economic and structural geology, mining engineering, recharge assessment, safe yield and conservation release, statistical analysis, process treatment (reverse osmosis) and engineering report.
- **City of Moundsville, New Water Treatment Facility, Marshall County, WV.** Project principal for new \$18 million, 3.5 MGD water treatment facility with ozonation, direct filtration, high pressure nanofiltration membrane system (softening) and ABW filtration systems for Moundsville Water Board. Water source is an acid mine drainage-affected groundwater source adjacent to the Ohio River and Alexander deep mine complex.
- **PADEP Bureau of Resources Management, "Big Bertha" AMD Affected Gas Well Discharge, Butler County, PA.** Project engineer for the evaluation and abatement of an AMD affected artesian discharge from the "Big Bertha" gas well along Seaton Creek. Evaluated recharge/interconnection with upgradient Hamilton No. 3 deep mine complex. Designed abatement measures by isolating confined aquifer via reaming, casing and grouting.
- **PADEP Bureau of Abandoned Mine Reclamation, Clearfield - Cambria County Abandoned Mine Land Reclamation Projects.** Project Manager for reclamation projects including the Kellytown, Laurel Run, Victor-Gearhartville, Newtown, Pine Run, Glen Campbell (North) and Cresson Shaft AML sites. Project elements included surface mine reclamation, riprap channels, sedimentation ponds, E&S controls, habitat management plans, refuse pile reclamation, shaft and portal sealing, equipment and structure removal and revegetation for over 400 acres of AML reclamation. Project Cost - \$1,500,000.
- **PADEP Bureau of Abandoned Mine Reclamation - Highland Fuel Mine Complex, Deep Mine Sealing and Abandoned Mine Reclamation, Mercer County, PA.** Project engineer for the design of a slurry trench outcrop barrier, hydraulic deep mine sealing, highwall backfilling/reduction, abandoned surface mine reclamation and refuse pile reclamation. Project cost - \$350,000.
- **Tanoma Mining Co. Refuse Pile Design, Rayne Township, Indiana County, PA.** Project manager for the design of Refuse Pile No. 1, 2 and 3 for Tanoma deep mine complex including stability analysis, slope and berm design, foundation design, material and soil analysis, permit applications and cost estimates.
- **West Carroll Twp. Water and Sewer Authority, Water System Improvements, Cambria Co., PA.** Project principal for \$7 million water system improvement project including new Bakerton and St. Benedict, membrane filtration plants, St. Benedict water distribution system replacement, Sportsman's Road waterline extension and St. Benedict reservoir silt removal.
- **Berkeley County Public Water Service District, Potomac River Water Treatment Facility and 16"/30" Water Transmission Mains, Martinsburg, WV.** Project principal for \$40 million upgrade and improvements to the Potomac River Water Treatment Facility including submerged membrane filtration, solids handling facilities, rapid mix, coagulation and flocculation tanks, ultraviolet disinfection, coagulant chemical feed and storage systems and 150,000 L.F. of 12" - 30" water transmission mains, pump stations and PRV/metering vaults for suburban Martinsburg, WV service area.

THOMAS E. (TIM) BOLAND, P.E.
DESIGN OPERATIONS DIRECTOR/ENGINEERING MANAGER/
ASSISTANT SECRETARY-TREASURER

Assignment: Design Operations Director/Engineering Manager/
Assistant Secretary-Treasurer

Education: BS - Civil Engineering Technology (Capital Campus), Pennsylvania State University, 1973

Registration: Professional Engineer, Pennsylvania, 1980, P.E. - 029097-E
Professional Engineer, West Virginia, 2001, P.E. - 14536
Professional Engineer, Massachusetts, 1987 (inactive)

Affiliations: National Fire Protection Association (NFPA), Member, 2012
Association of State Dam Safety Officials (ASDSO), Member, 2012
International Code Council (ICC) Member, 2011
American Society of Civil Engineers (ASCE), Member, 1999
Construction Specifications Institute (CSI), Member, 1994
American Society of Testing Materials (ASTM), Member, 1993
ASTM Subcommittee on FRP Chimney Liner Design, Member, 1986
ASTM Subcommittee on Chemical Resistant Construction Units, Member, 1985

Professional Experience

Design Operations Director/Engineering Manager responsible for management of design engineering staff and overall technical support services coordination, including coordination of projects with the facilities planning director, construction management director and office services coordinator. Provides technical quality control review and advisement to project design teams.

Experience includes structural and architectural engineering, building design and construction, civil/site design for water and wastewater treatment facilities and water distributions and storage systems, industrial buildings, commercial buildings and institutional buildings; dams and structural rehabilitation.

Extensive capabilities in preparation of contract documents, specifications, construction management, cost estimating and coordination of all design disciplines from conceptual design through completion of construction. Serves as liaison between the firm and certain major clients.

Key Projects

HEAVY CIVIL/INFRASTRUCTURE PROJECTS

- **Berkeley County Public Water Service District, Potomac River Water Treatment Facility, Martinsburg, WV, 2005.** Design director for upgrade and improvements to the Potomac River Water Treatment Facility including membrane filtration, oxidation (ozonation), solids handling facilities, and chemical feed and storage systems. Total Project Cost: \$12 million.
- **ATK Tactical Propulsions and Controls, Allegheny Ballistics Laboratory, Surface Water Intake Structures and Water Treatment Facilities Project, Mineral Co., Rocket Center, WV, 2011.** Design operations director for a new Potomac River water intake, water treatment plant addition, raw water transmission main and new preliminary treatment system. Project elements include 90 ft. deep, 12 ft. diameter vertical wet-well, submerged river intake structure and piping, new filters, clearwell, chemical feed systems, pumping, sedimentation basin, site piping, site improvements, and pre-engineered metal building. Total Project Cost - \$5 million.

HEAVY CIVIL/INFRASTRUCTURE PROJECTS

- **Berkeley County Public Water Service District, Potomac River Water Treatment Facility and 16"/30" Water Transmission Mains, Martinsburg, WV, 2007.** Design operations director for \$30 million upgrade and improvements to the Potomac River Water Treatment Facility including submerged membrane filtration, solids handling facilities, rapid mix, coagulation and flocculation tanks, ultraviolet disinfection, coagulant chemical feed and storage systems and 50,000 L.F. of 12" - 30" water transmission mains, pump stations and PRV/metering vaults for suburban Martinsburg, WV service area.
- **City of Moundsville, Water Treatment Facility, Marshall County, WV, 2002.** Project Manager for new \$18 million, 3.5 MGD water treatment facility with ozonation, multi-media ABW filtration and membrane softening system. Responsible for overall project coordination and architectural/structural design, inter-agency coordination, permit applications and construction administration.
- **Moshannon Valley School District, Athletic Field and Multipurpose Buildings, Clearfield County, Houtzdale, PA, 2005.** Design director for upgrade and improvements to Hilltop Stadium and Athletic Field complex including new locker rooms, visitor/home bleachers, concession, ticket booth, slope stability, additional parking and related work. Project also includes a multipurpose gymnasium building at the high school. Total Project Cost: \$2,000,000.
- **Blair County Commissioners, Valley View Home Renovations and 120-Bed Nursing Home Addition, Altoona, Blair County, PA, 1996.** Project manager for \$8.3 million nursing home addition and renovations to existing facility in association with consultant John C. Haas, Architects. Work scope includes full scale application of ground source (geothermal) heat pump system.
- **West Carroll Township Water and Sewer Authority, Water System Improvements, Cambria Co., PA., 2010.** Design operations director for water system improvement project including new Bakerton and St. Benedict, membrane filtration plants, St. Benedict water distribution system replacement, Sportsman's Road waterline extension and St. Benedict reservoir silt removal. Total Project Cost - \$7,000,000.
- **XTO Energy Corporation, Storage Tank Replacement, Indiana Co., Warrendale, PA.** Engineering manager for design of brine storage tank replacement/expansion and site development for natural gas production by-product storage tank facility.
- **Northeastern ITS, LLC, Ridgeland, MS, 2009-2011.** Engineering Manager for assisting this large fiber optic utility developer with obtaining PennDOT highway occupancy permits, city and township right-of-way permits, private easements, and property acquisition for a new underground/overhead fiber optic line from Chicago to New York. GD&F provided services for the entire Pennsylvania traverse, approximately 340 miles. This included coordination with five PennDOT Districts; thirteen counties, and three cities. Seventy separate permit applications were processed. The project included preparation of 1,600 plan and profile drawings with various railroad and highway bridge attachments. GDF provided field reconnaissance, meeting coordination, and field instrument survey and mapping services.

CHRISTOPHER M. ECKENRODE, P.E., PROJECT ENGINEER

Assignment: Project Engineer
Education: Pennsylvania State University, University Park, PA (2005)
BS - Civil Engineering (Construction Management Emphasis)
Registration: Professional Engineer, Pennsylvania, 2011 License # PE079451
Affiliations: American Concrete Institute (ACI) Member
Association of State Dam Safety Officials (ASDSO) Member
Deep Foundations Institute (DFI) Member
Portland Cement Association (PCA)
Computer Skills: AutoCAD, SurvCAD, Microsoft Word, Excel, PowerPoint, Primavera, Bid-2-Win, Prolog, Insight, GSTABL7 with STEDwin (Stability Program)

Professional Experience

Six (6) years of design experience including general civil engineering and site design, architectural layout, structural concrete mix designs, pump design, mechanical piping layout, chemical feed and UV systems, preparation of contract documents and specifications, coordination of design tasks, cost estimating and writing sequences of controls for water treatment plants. Construction administration experience includes conducting progress meetings, performing field inspections, administering design drawing review, implementing shop drawing review, answering RFI's, conducting quantity take-offs, coordination of scheduling and negotiating construction alterations with contractor/Owner. Experience in all aspects of civil engineering and project management, with an emphasis in soils and concrete. Thorough working knowledge of contract documents including advertising, bidding, agreements, General Conditions and all detailed technical specifications.

Key Projects

ABANDONED MINE RECLAMATION/ACID MINE DRAINAGE ABATEMENT

- **Pennsylvania Department of Environmental Protection, Bureau of Abandoned Mine Reclamation - Cambria District Office, Ebensburg, PA, 2002-5.** Junior staff engineer in support of BAMR Cambria District office including survey crew member on the department's construction unit, operated prism pole in topographic, drill hole, roadway and final grade surveys, estimated construction performance by the contractor, established all prescribed job requirements, assisted engineers in preparing abstracts, change orders and progress reports and performed earthwork computations for AML reclamation projects. Specific project experience includes:
 - a. Passive Wetland Treatment Facility and Sedimentation Ponds, Kittanning Area, Armstrong County, PA
 - b. Abandoned Mine Land Reclamation, Highwall Backfilling, Hastings Area, Cambria County, PA
 - c. Sinkhole Investigation (Abandoned Deep Mine), Freedom Area, Beaver County, PA
 - d. Sinkhole Investigation (Abandoned Deep Mine), Houtzdale Area, Cambria County, PA
 - e. Refuse Pile Reclamation, Bakerton Area, Cambria County, PA
 - f. Abandoned Mine Land Reclamation, Highwall Backfilling, Beaver Falls, Beaver County, PA

INFRASTRUCTURE/HEAVY CIVIL PROJECTS

- **ATK Tactical Propulsions and Controls, Allegany Ballistics Laboratory, New Surface Water Intake and WTF Upgrade, Rocket Center, WV, 2011.** Design engineer and project manager of a 2 MGD river intake and water treatment plant that featured a "tee" screen stream intake structure and an automatic air burst system with submersible turbine pumps, new clarifier/filter units, rapid mix, flocculation and sedimentation with chain and scrapers, UV disinfection, chemical feed systems, UV disinfection and softening system (ion exchange) feed pumps, new clearwell, finished water pumps, 2 lagoons and a new plant SCADA system with associated instrumentation and controls. Total project cost: \$7 million.
- **Alexandria Borough - Porter Township Joint Sewer Authority, Wastewater Treatment Facility, BNR Improvements, Huntingdon County, PA, 2011.** Design engineer and project manager of a new 1 MGD BNR wastewater treatment facility which featured a new raw water pump station, fine-mechanical bar screen with washer/compactor, new aeration/clarifier treatment unit, new RAS/WAS sludge pumps, new PD blowers, UV disinfection, converted digesters, new rotary press and new liquid chemical feed systems. Total project cost: \$5.5 million.

INFRASTRUCTURE/HEAVY CIVIL PROJECTS

- **Brookville Municipal Authority, North Fork Creek Water Treatment Facility, Jefferson County, PA, 2009-Present.** Project engineer/manager for the design and construction of a new \$12 million, 2.0 MGD membrane filtration water treatment facility which features a powdered activated carbon and soda ash feed system, liquid chemical feed stations, flocculation, chain and scraper sludge collectors, microfiltration, Ultraviolet disinfection, clearwell, waste tank, control building, sludge drying beds, stormwater pond, infiltration wetland, a new river intake system, well pumps, relocated generator, various process pumping/piping equipment and instrumentation. Designed the carbon and soda ash feed systems, well pumps and vertical turbine raw and finished water pumps including drawings and specifications. Performed stability analysis of proposed earth fill embankment using the computer program GSTABL7 with STEDwin. Performed a value engineering review. Responsible for project coordination and construction administration. Duties included: conducted progress meetings, prepared engineering reports, performed field inspections, coordinated scheduling, reviewed and approved pay applications, issued change orders, answered RFI's, reviewed all equipment and material submittals and worked with Owner and Contractors to achieve all project goals. Developed a written sequence of controls for the overall plant SCADA System. Performed successful start-up and debugging of the facility. Trained operators how to properly run and maintain facility.
- **Berkeley County Public Service Water District – Potomac River Water Treatment Facility Upgrade and Expansion, Berkeley County, WV, 2007-9.** Project manager for the construction of a new \$16 million, 8.0 MGD water treatment facility which features a powdered activated carbon system, gas chlorination, rapid mix and flocculation, chain and scraper sludge collectors, submerged hollow fiber automatic backwashing membrane filtration, Ultraviolet disinfection, instrumentation and distribution piping. Responsible for project coordination, construction administration, SCADA programming controls integration and start-up assistance of the facility. Duties included: conducted progress meetings, performed field inspections, issued change orders, executed contractor payment applications, reviewed submittals/schedules, trained plant operators and worked with Owner and Contractor to achieve all project goals to reach Final Completion.
- **City of Moundsville, Water Treatment Facility, Marshall County, WV, 2006-7.** Assistant to project manager with construction of new \$18 million, 3.5 MGD water treatment facility that featured ozonation, rapid mix/flocculation, multi-media ABW filtration, nanofiltration membrane softening, chemical feed systems and vertical turbine high service pumping. Responsible for project coordination, construction administration and start-up assistance of the project. Duties included: conducted progress meetings, performed field inspections, issued change orders, answered RFI's, prepared punchlists, performed start-up and debugging of the plant (including SCADA System) and aided plant operators in commissioning the plant.
- **Lake Mokoma Association, Lake Mokoma Dam Repairs, Sullivan County, PA, 2008-2011.** Gathered historical information to determine the existing condition of the dam outlet structure and dam embankment. Performed stability and hydraulic analysis of existing dam using the computer program GSTABL7 with STEDwin and via flow nets and prepared engineers report. Designed a new outlet system featuring a new 36" pipe, valve, valve vault and a downstream perforated toe drain system to meet current PA-DEP standards. Prepared a feasibility study for dam sediment removal. Designed an interlocking articulated concrete block overtopping protection system for the entire dam width. Designed new spillway retaining walls, floor slabs, bridge abutments and underdrains. Acted as project manager while performing all necessary construction administration activities while working with Owner and Contractor to meet all current PADEP Division of Dam Safety requirements. Total project cost: \$2 million.
- **PA DGS - State Correctional Institution at Cresson, New Water Storage Tank, Cambria County, PA, 2007.** Project engineer for the design of a new 750,000 gallon, elevated, water storage tank including site work and piping. Project also involved repainting of an existing 250,000 gallon elevated tank (with lead abatement) and demolition of an existing 85,000 gallon elevated tank. Responsible for obtaining all required permits and approvals, conducting meetings with Owner to facilitate and evaluate design matters, investigating water demands, directing survey and test boring work and designing within the budget allocation. Total Project Cost: \$2 million.
- **Petersburg Borough Water Authority, Reed's Gap Dam Modifications, Huntingdon County, PA, 2006.** Project manager for the rehabilitation of a deteriorated existing stone filled wood cribbing and earthen dam. Project consisted of the design of a new concrete spillway, cut-off and retaining walls, new intake structure with aluminum access bridge, new rock stilling basin, earthwork and piping. Conducted project meetings, assisted Contractor and Inspector with construction questions and performed periodic onsite inspections for Contract Document conformance. Total Project Cost: \$1 million.

TRAVIS J. LONG, CEP, SENIOR ENVIRONMENTAL SCIENTIST/SR. ECOLOGIST

Assignment: Senior Environmental Scientist

Education: BS - Environmental Science and Ecology, Juniata College, 2000

Registration: Certified Environmental Professional, CEP - 11050458, 2011
Pennsylvania State Board of Certification of Waterworks Operators License - Class A, SubClass 1,6,8, - W18603

Continuing

Education: Watershed Academy, Principles of Watershed Management, PA DEP, 2000
Natural Stream Channel Restoration Concepts Levels I-IV, Greene County (NY) Conservation District, 2001
ArcView GIS (AVStrEAMS), ESRI, 2001
Wetland Hydrology and Soils Training, U.S. EPA, 2001
OSHA 40-hour Hazardous Waste Operations and Emergency Response - No. 193-66-1235-2167G, 2001
Mine Safety and Health Administration (MSHA) Surface Mine Training, 2002

Professional

Affiliations: Pennsylvania Association of Environmental Professionals, Member
National Association of Environmental Professionals, Member
Academy of Board Certified Environmental Professionals, Member
Pennsylvania Rural Water Association, Member
American Water Works Association, Member
Water Environment Federation, Member

Professional Experience

Environmental and engineering experience performing advanced technical tasks in drinking water, wastewater, stormwater, solid waste, hazardous waste, oil and gas, and environmental planning and assessments. Extensive experience in environmental assessments, environmental best management practices, water and wastewater facilities planning and process design. Complete project experience including planning, design, funding, construction administration and facility start-up and operations.

Key Projects

ENVIRONMENTAL SCIENCE/ACID MINE RECLAMATION/ACID MINE DRAINAGE PROJECTS

- **AMR Site, Fairmount City, Clarion County, PA.** PADEP Bureau of Abandoned Mine Reclamation (AMR). Environmental Specialist responsible for project coordination and document retrieval from the Pennsylvania Department of Transportation and the Pittsburgh and Shawmut Railway for reclamation of abandoned mine lands. Developed and performed a water quality monitoring program, conducted geotechnical investigations, assisted in the development of the reclamation plan, and prepared reports.
- **Acid Mine Drainage Passive Treatment, Red Bank Township, Fairmont City, Clarion Co., PA.** Fairmont City AMD Passive Treatment, Red Bank Township and the PADEP Bureau of Abandoned Mine Reclamation Environmental specialist responsible for performing site investigations, development of a water quality monitoring plan, bi-monthly monitoring, review of property ownership database, review of P&S Railway database, and assistance with base mapping.
- **Oak Hall Quarry, Surface Mining Permit Revisions, College Township, Centre County, PA.** Hanson Aggregates Environmental Specialist responsible for performing initial site investigations, wetland delineations, documenting stormwater control devices, and developing a water quality monitoring plan. Other tasks involve the composition of permit modules.

ENVIRONMENTAL SCIENCE/ACID MINE RECLAMATION/ACID MINE DRAINAGE PROJECTS

- **XTO Energy, Green Township, Indiana County, PA.** Project manager in charge of the planning, design, and permitting of a 100,000 gallon brine wastewater storage facility, complete with secondary containment structure, monitoring and controls devices, leak detection, and appurtenances.
- **Grove Property Surface Mine Permit, Marion and Spring Townships, Centre County, PA.** Hanson Aggregates Environmental Specialist responsible for performing initial site investigations, wetland delineations, documenting stormwater control devices and developing a water quality monitoring plan. Other task included composition of permit modules, water quality monitoring, topographic survey of monitoring wells and assistance with the development of the Highway Occupancy Permit.
- **North Spring Branch National Pollutant Discharge Elimination System Monitoring, Wyoming County, WV.** Georgia Pacific Corporation Environmental Specialist responsible for completing semi annual ground water monitoring for compliance with West Virginia NPDES North Spring Branch Landfill Permit
- **Bark Camp Mine Complex, Clearfield County, PA.** Consolidated Technologies, Inc. Environmental Specialist responsible for performing topography surveys of access roads and borrow areas for NPDES revisions.
- **Howard Quarry Large Industrial Minerals Mining Permit, Howard Township, Centre Co., PA.** Two Rock Stone Company. Environmental Specialist responsible for performing an initial site investigation, wetland delineations, documenting stormwater control devices, and developing a water monitoring plan. Also composed permit modules and documented location of local utilities. Additional tasks included topographic surveys of constructed stormwater detention/sediment basins and completing the necessary tasks required to perform pond certifications.
- **Forest Operation and Indigo Operation, Clearfield County, PA.** King Coal Sales, Inc. Environmental Specialist responsible for performing soil sampling and site investigations for a revegetation analysis to satisfy PADEP environmental monitoring requirements for reclamation of surface-mined lands.
- **Wetland Identification and Delineation, Clearfield County, PA.** Forcey Coal Company. Environmental Specialist responsible for development of a water quality monitoring plan and monthly monitoring. Other project tasks included wetland investigations and delineations, drill hole elevation surveys, and development and composition of surface mining permit modules. Assisted in conducting geologic and hydrogeologic investigations of the proposed Ecklund Operation and in preparing the Small Operators Assistance Program (SOAP) report to be filed with PADEP.
- **Acid Mine Drainage Passive Treatment, Elk County, PA.** Dents Run Site 3893, U.S. Army Corps of Engineers Environmental specialist responsible for performing site investigations, topographic survey of project area, and preparation of the General National Pollutant Discharge Elimination System permit application.
- **Watershed Assessment, Cameron County, PA.** Sterling Run Watershed, Cameron County Conservation District. Environmental Specialist responsible for performing site investigations, monitoring and analyzing water quality, installing in-stream monitoring stations and flumes, and developing a monitoring program. In addition to project management and administrative duties, tasks included planning and preliminary conceptual designing for restoration to the Sterling Run Watershed. Provided training to field personnel.
- **Lost Run Survey, Clearfield County, PA.** Waters Edge Hydrology Environmental Specialist responsible for performing stream survey, pebble counts, wetlands mapping, and topographic survey of the proposed acid rain abatement treatment area.

ENVIRONMENTAL SCIENCE/ACID MINE RECLAMATION/ACID MINE DRAINAGE PROJECTS

- **FGM Stream Assessment and Conceptual Design, Cameron County, PA.** Clear Creek, Cameron County Conservation District. Environmental Specialist responsible for performing site investigations, implementation of fluvial geomorphology (FGM) stream assessment principles, digital and planimetric stream surveys, pebble counts, Level 2-3 calculations, and preliminary conceptual design for the Venture and the Schatz project sites, as well as preparing the Joint 105/404 Water Obstruction and Encroachment permits for each project.
- **Watershed Assessment and Stream Stabilization Project, Cameron, Clearfield, and Elk Counties, PA.** Bennett Branch Watershed Association. Environmental Specialist responsible for designing the riparian buffer corridor for the natural stream bank stabilization project and performing as-built surveys on the reconstructed reach. Tasks included construction inspection of monitoring devices, assistance in the development of a water quality monitoring program, performance of water quality analyses, and report preparation.
- **Kettle Creek Growing Greener, Abandoned Mine Land Bio-Capping, Clinton County, PA.** Kettle Creek Watershed Association/Trout Unlimited. Environmental Specialist assisting in development of reclamation planting plans for an abandoned surface mine site. Tasks included composing the erosion and sedimentation control plans and preparing the necessary permits.
- **Mosquito Creek Acid Rain Abatement Project, Girard Township, Clearfield County, PA.** Mosquito Creek Sportsman's Association. Environmental Specialist responsible for assisting volunteer monitors with quarterly water sampling for a watershed-based program to remediate acid rain impacts to Mosquito Creek and associated trout fisheries. Performed topographic surveys and wetland delineations for the Duck Marsh and Pebble Run acid abatement design projects. Also prepared water encroachment permit applications and erosion and sedimentation control plans for these projects.
- **Elk Run Stream Relocation, Gaines Township, Tioga County, PA.** Gaines Township Supervisors. Environmental Specialist responsible for performing an as-built survey of the riparian corridor and designing the corridor restoration during this phase of the stream relocation project intended to stabilize the streambank.

JAMES L. BALLIET, DIRECTOR OF FACILITIES PLANNING, SENIOR PROJECT MANAGER, HUMAN RESOURCES DIRECTOR, CORPORATE SECRETARY

Assignment: Senior Project Manager

Education: BS - Environmental Resource Management, Pennsylvania State University, 1988
MS - Water Resources, Pennsylvania State University, 1990

Publications/ Presentations: "Strategies to meet the Chesapeake Bay Nutrient Limits", 2011 Annual Conference, PA Rural Water Association, State College, PA

"Nutrient Removal Strategies to Comply with the Chesapeake Bay Requirements", 2010 Annual Conference, PA Municipal Authorities Association, Pittsburgh, PA

"The Use of Membranes for Water and Wastewater Systems", 2010 Annual Conference, PA Rural Water Association, State College, PA

"Membrane Filtration for Water and Wastewater Systems", 2007/2008 PRWA Pro Operator Training Series, Statewide Training, Eight Locations, PA

Certifications: Pennsylvania State Board of Certification of Waterworks Operators License - Class A, E - SubClass 1-14, 40-Hour Health and Safety Training Certification

Affiliations: American Waterworks Association, Member
Waterworks Operator Association, Member
PA Rural Water Association, Member
West Virginia Rural Water Association, Member
PA Water Environment Association - Central Section, Member

Professional Experience

Environmental engineering experience in wastewater, drinking water, stormwater, solid waste, hazardous waste and environmental assessments. Extensive experience in water and wastewater facilities planning and process design. Complete project experience including planning, design, funding, construction administration and facility start-up and operation. Capital project experience exceeds \$500 million in value over last twenty-one (21) years.

Key Projects

- **Moundsville Water System, City of Moundsville, WV.** Completed pilot study program, funding applications, process design, permitting and construction of a 5.0 MGD ozonation and nanofiltration treatment facility.
- **Tanoma Mining Company Refuse Site, Indiana County, PA.** Project engineer for various sites throughout Rayne Township for potential mining spoil refuse sites.
- **Oven Run AMD Abatement, Westmoreland County, PA.** Evaluated existing acid mine drainage discharge and designed passive wetland treatment system.
- **Berkeley County Public Service Water District, Potomac River Water Treatment Facility, Martinsburg, WV.** Conducted pilot study, design, permitting and construction of 12.0 MGD water treatment facility using conventional clarification, membrane filtration, and UV/Chlorine disinfection.
- **Broad Top City Water System, Huntingdon County, PA.** Performed design and provided construction administration for storage tank improvements, distribution system replacement and groundwater source development. Provided ongoing operational assistance with water filtration facility.

- **Brookville Municipal Authority , North Fork Creek Water Treatment Facility, Jefferson Co., PA.** Completed planning, design, permitting and construction administration of a 2.25 MGD membrane filtration facility including additional groundwater source development and new surface water intake.
- **Clearfield Municipal Authority, Moose Creek Water Treatment Facility, Clearfield County, PA.** Developed groundwater source and design, permitting and construction of well interconnection and 1.5 MG treated water storage tank. Conducted membrane filtration pilot study and designed and permitted 1.0 MGD water treatment facility using pre-oxidation, membrane filtration and UV disinfection.
- **Mansfield University, Water System, Tioga County, PA.** Completed pilot study, design and permitting of a 300,000 GPD membrane filtration facility with pre-clarification and UV disinfection.
- **Mountaintop Regional Water Authority, Centre County, PA.** Provided operational assistance for a regional water authority serving 1,200 customers in three municipalities. Completed the planning design, permitting and construction administration of various water system improvements.
- **Altoona City Authority, Wastewater Residuals Soils Land Application Disposal Project, Altoona, Blair County, PA.** Prepared sludge management plan for the Authority's wastewater system. Obtained DER approval of report and assisted authority in plan implementation. Developed work plan to conduct environmental investigation of sewage sludge lagoons at both the Easterly and Westerly wastewater treatment facilities. Obtained DER approval of work plan and assisted EPA in preliminary site investigation. Prepared permit applications for the land application of sewage sludge on agricultural lands. Identified and screened numerous agricultural areas throughout Blair County and developed an agricultural utilization program.
- **American Eagle Paper Mill, Tyrone, Blair County, PA.** Conducted extensive wastewater characterization study and performed alternatives evaluation for BOD reduction to achieve NPDES permit compliance with the Tyrone Borough wastewater treatment facility.
- **Delta Quarries Disposal, Stotler Landfill Leachate Treatment Evaluation, Blair County, PA.** Evaluated site characterization information associated with groundwater extraction system to determine feasibility of treating landfill leachate contaminated groundwater within the Altoona City Authority's Easterly wastewater treatment facility.
- **North East Waste Services, Clearfield County, PA.** Prepared leachate treatment feasibility study to treat Leachate from the proposed Royal Oak landfill in Chest Township at the Westover Borough wastewater treatment facility.
- **Altoona City Authority, Hazardous Waste Site Assessment, Altoona, Blair County, PA.** Project manager for hazardous waste investigation at wastewater treatment facility construction project. Performed subsurface soil and groundwater investigations for site characterization. Designed and installed groundwater extraction and treatment system using GAC treatment. Prepared contaminated soil excavation plan and received DER approval. Conducted contaminated soil excavation project and received site approval from DER.
- **Huntingdon County Business and Industry, Industrial Park, Mount Union, Huntingdon Co., PA.** Conducted wetland delineation within 300 acre agricultural tract in Huntingdon Co. for proposed industrial park development. Identified jurisdictional wetlands, redesigned development pattern to avoid encroachment and prepared general permit applications.
- **Pennsylvania Department of Corrections, Clearfield County State Correctional Institution, Houtzdale, Clearfield County, PA.** Performed wetland delineation for PA Department of General Services within a 300 acre wooded area for the development of the Clearfield Co. Medium Security Prison. Identified and mapped jurisdictional wetlands and prepared joint permit applications.

MATTHEW R. ORNER, SENIOR PROJECT MANAGER

Assignment: Senior Project Manager

Education: BS - Civil Engineering Technology, University of Pittsburgh, 1998

Continuing Education: Cambria County Conservation District - NPDES Phase II Stormwater Workshop, Johnstown, PA, August, 2005
Blair County Conservation District and PADEP - NPDES Phase II Stormwater Workshop, Altoona, PA, April 2002, January 2003, September 2003, November 2004
AWWA - Case Study for Water Utilities Risk Assessment Methodology (RAM-W™), Harrisburg, PA, September, 2003
American Water Works Association - Steel Tank Inspection and Maintenance, State College, PA, July, 2001
Association of State Dam Safety Officials - Evaluation of Concrete Dam Stability, Atlantic City, NJ, July, 2000

Affiliations: American Society of Civil Engineers, ASCE - Member
Association of State Dam Safety Officials, ASDSO - Affiliate Company Employee Member
American Water Works Association, AWWA - Member

Publications: ASDSO - "Tipton/Blair Gap Dam Rehabilitation", 2005

Professional Experience

Education and experience includes water and wastewater system design, sitework and site drainage design, stormwater design, surface water hydrology, project inspection and project management. Computer experience involves familiarity with Word, Excel, HEC-RAS, HEC-HMS, DAMBRK, COE-HMS, TR-55 and VTPSUHM hydrological modeling programs.

Key Projects

PA DEP BUREAU OF ABANDONED MINE RECLAMATION

- **Pennsylvania Department of Environmental Protection, Abandoned Mine Land Reclamation Project - Glen Campbell North, Banks Township, Indiana County, PA.** Civil Project Manager responsible for design of an abandoned mine reclamation project. Responsibilities included regrading a 20 acre strip mine, sediment pond design and preparation of technical specifications, E&S plans and project related permits (NPDES).
- **Saxton Borough Municipal Authority, Kenrock Waterline Replacement, Saxton, Bedford County, PA.** Civil Project Manager responsible for design and construction phase administrative related duties for the replacement of 3,000 L.F. of 6" diameter PVC waterline, stream bank stabilization and weir reconstruction for the FEMA/PEMA funded Hurricane Ivan disaster program.
- **Jefferson County Commissioners, Corsica Water Main Replacement, Corsica, Jefferson County, PA.** Civil Project Manager responsible for design and construction phase administration related duties for the replacement of 3,000 L.F. of 8" diameter PVC waterline. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, erosion and sedimentation control plan, PADOT Highway Occupancy Permit and PADEP General Permit GP-5 for Utility Line Stream Crossing.

PA DEP BUREAU OF ABANDONED MINE RECLAMATION

- **Jefferson County Commissioners, Reynoldsville Waterline Extension, Winslow Township, Jefferson County, PA.** Civil Project Manager responsible for design and construction phase administration related duties for the extension of 3,000 L.F. of 8" ductile iron waterline. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, erosion and sedimentation control plan, PADOT Highway Occupancy Permit and PA DEP General Permit GP-5 for Utility Line Stream Crossing.
- **Jefferson County Commissioners, Sykesville Borough Waterline Replacement, Sykesville, Jefferson County, PA.** Civil Project Manager responsible for design and construction phase administration related duties for the replacement of 2,500 L.F. of 6" diameter PVC waterline. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, erosion and sedimentation control plan and PADOT Highway Occupancy Permit.
- **Altoona City Authority, Annual Dam Inspections, Breach Analyses and Emergency Action Plan Preparation, Altoona, Blair County, PA.** Project Manager responsible for conducting state-mandated annual dam inspections of eleven (11) water supply reservoirs for the Altoona Water System (1998-2003). Performed breaching analyses using DAMBRK software for each dam and prepared corresponding downstream inundation maps and emergency action plans as required by the Pennsylvania Dam Safety and Encroachments Act.
- **Altoona City Authority, Oakton and Prospect Water Storage Tanks, Altoona, Blair County, PA.** Civil Project Manager responsible for design and construction phase administration of three (3) water storage tanks (totaling over 12 million gallons), pumping station and telemetry control building for the Altoona City Authority water system. Responsibilities included preparation of construction plans, permits, specifications, bidding documents, PennVEST funding application, PennVEST Loan Closing, and request for proposals for core borings. Design duties included tank and waterline layouts, site grading and drainage, pump station and telemetry building design and project coordination.
- **Sandy Township Municipal Authority, West Sandy Water System Extension, Sandy Township, Clearfield County, PA.** Senior Project Manager responsible for design and construction phase administration duties for the installation of 50,000 L.F. of 6"-12" diameter watermain, 250,000 gallon water storage tank and water booster station. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, Erosion and Sedimentation Control Plan, PennDOT Highway Occupancy Permit, PADEP GP-5 General Permit for Utility Line Stream Crossing, PADEP (PWS) Public Water Supply Permit, Water Allocation Permit revision and PADEP NPDES Permit for Stormwater Discharges Associated with Construction Activities.
- **State College Borough Water Authority, Beaver Avenue Waterline Replacement (Phase I and II), Centre County, PA.** Senior Project Manager responsible for design and construction phase administration related duties for the installation of 9,000 L.F. of 12" diameter ductile iron watermain. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, Erosion and Sedimentation Control Plan, PennDOT Highway Occupancy Permit and Traffic Control Plans.
- **State College Borough Water Authority, College Avenue Waterline Replacement (Phase I and II), Centre County, PA.** Senior Project Manager responsible for design and construction phase administration related duties for the installation of 5,500 L.F. of 12" diameter ductile iron watermain. Responsibilities included plan and profile construction drawings, bidding documents, technical specifications, Erosion and Sedimentation Control Plan, PennDOT Highway Occupancy Permit and Traffic Control Plans.

ENVIRONMENTAL SCIENCE/ACID MINE RECLAMATION/ACID MINE DRAINAGE PROJECTS

- **FGM Stream Assessment and Conceptual Design, Cameron County, PA.** *Clear Creek, Cameron County Conservation District.* Environmental Specialist responsible for performing site investigations, implementation of fluvial geomorphology (FGM) stream assessment principles, digital and planimetric stream surveys, pebble counts, Level 2-3 calculations, and preliminary conceptual design for the Venture and the Schatz project sites, as well as preparing the Joint 105/404 Water Obstruction and Encroachment permits for each project.
- **Watershed Assessment and Stream Stabilization Project, Cameron, Clearfield, and Elk Counties, PA.** *Bennett Branch Watershed Association.* Environmental Specialist responsible for designing the riparian buffer corridor for the natural stream bank stabilization project and performing as-built surveys on the reconstructed reach. Tasks included construction inspection of monitoring devices, assistance in the development of a water quality monitoring program, performance of water quality analyses, and report preparation.
- **Kettle Creek Growing Greener, Abandoned Mine Land Bio-Capping, Clinton County, PA.** *Kettle Creek Watershed Association/Trout Unlimited.* Environmental Specialist assisting in development of reclamation planting plans for an abandoned surface mine site. Tasks included composing the erosion and sedimentation control plans and preparing the necessary permits.
- **Mosquito Creek Acid Rain Abatement Project, Girard Township, Clearfield County, PA.** *Mosquito Creek Sportsman's Association.* Environmental Specialist responsible for assisting volunteer monitors with quarterly water sampling for a watershed-based program to remediate acid rain impacts to Mosquito Creek and associated trout fisheries. Performed topographic surveys and wetland delineations for the Duck Marsh and Pebble Run acid abatement design projects. Also prepared water encroachment permit applications and erosion and sedimentation control plans for these projects.
- **Elk Run Stream Relocation, Gaines Township, Tioga County, PA.** *Gaines Township Supervisors.* Environmental Specialist responsible for performing an as-built survey of the riparian corridor and designing the corridor restoration during this phase of the stream relocation project intended to stabilize the streambank.

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE**

Attachment "B"

PROJECT NAME Waitman - Barbe Highway #1 Design Requisition DEP 15612		DATE (DAY, MONTH, YEAR) February 20, 2012	FEIN 25-1209285
1. FIRM NAME Gwin, Dobson & Foreman, Inc.	2. HOME OFFICE BUSINESS ADDRESS 3121 Fairway Drive, Altoona, PA 16602		3. FORMER FIRM NAME Gwin Engineers, Inc. Lewis L. Gwin, Consulting Engineers
4. HOME OFFICE TELEPHONE (814) 943-5214	5. ESTABLISHED (YEAR) 1954	6. TYPE OWNERSHIP Individual Corporation <input checked="" type="checkbox"/> Partnership Joint-Venture	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
7. PRIMARY AML DESIGN OFFICE: ADDRESS/TELEPHONE/PERSON IN CHARGE/NO. AML DESIGN PERSONNEL EACH OFFICE 3121 Fairway Drive, Altoona, PA 16602, Telephone: (814) 943-5214, Mark Glenn, P.E., President, No. of Employees - 58			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Mark Glenn, P.E. - President James L. Balliet, MS - Vice President		8a. NAME, TITLE & TELEPHONE NUMBER - OTHER PRINCIPALS Andrew H. Johnson, P.E. - Treasurer Thomas E. Boland, P.E. - Asst. Secretary-Treasurer (814-943-5214)	
9. PERSONNEL BY DISCIPLINE	1 ECOLOGISTS 1 ECONOMISTS 2 ELECTRICAL ENGINEERS 1 ENVIRONMENTALISTS ESTIMATORS 1 GEOLOGISTS HISTORIANS 1 HYDROLOGISTS	LANDSCAPE ARCHITECTS 2 MECHANICAL ENGINEERS MINING ENGINEERS PHOTOGRAMMETRISTS PLANNERS: URBAN/REGIONAL 5 SANITARY ENGINEERS SOILS ENGINEERS SPECIFICATION WRITERS	2 STRUCTURAL ENGINEERS 6 SURVEYORS TRAFFIC ENGINEERS OTHER 57 TOTAL PERSONNEL
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 2 *RPES other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.			
10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? N/A YES <input type="checkbox"/> NO <input type="checkbox"/>			

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Qualification Questionnaire"

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes ____ No ____

12.	A.	Is your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?
YES	<input checked="" type="checkbox"/>	Description and number of Projects: GD&F is considered one of the leading AMR/AMO engineering consultants in Pennsylvania. GD&F is a leader in the design of strip mine reclamation, refuse pile remediation, shaft and deep mine sealing, AMD treatment (physical-chemical treatment and SAP wetlands, etc.), revegetation/wildlife habitat and wetland remediation projects. See attached listing of projects.
NO		
	B.	Is your firm experienced in Soil Analysis?
YES	<input checked="" type="checkbox"/>	Description and number of Projects: GD&F has fully qualified engineers experienced in soil sampling, soil test interpretation, geotechnical and geological reconnaissance reports, soil morphology/soil science and soil geochemistry, etc. Each of the GD&F AMR/AMD projects required soil analysis as part of the project. See AMD/AMR project listing.
NO		
	C.	Is your firm experienced in hydrology and hydraulics?
YES	<input checked="" type="checkbox"/>	Description and number of Projects: GD&F has a significant background in hydrology and hydraulics. GD&F uses HEC-RAS and Bentley software for hydraulic sizing of channels and hydraulic structures. We also use HEC-HMS, HEC-RAS and HEC-1 software for development of hydrologic elements such as hydrographs and peak runoff data. We have performed numerous H&H reports for associated projects. Please refer to attached listing.
NO		
	D.	Does your firm produce its own Aerial Photography and Develop Contour Mapping?
YES		Description and number of Projects: GD&F has two fully equipped survey field crews who perform topographic surveys for project sites up to 75 acres. GD&F utilizes aerial photography and mapping for sites larger than 75 acres. GD&F surveyors uses the latest in GPS, total station and robotic technology.
NO	<input checked="" type="checkbox"/>	
	E.	Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)
YES	<input checked="" type="checkbox"/>	Description and number of Projects: GD&F has considerable experience in waterlines and water distribution systems having designed hundreds of similar projects over the last 58 years. See attached project listing.
NO		
	F.	Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?
YES	<input checked="" type="checkbox"/>	Description and number of Projects: A leader in AMD evaluation and abatement, GD&F has completed numerous mine drainage abatement projects throughout Ohio and Pennsylvania including mine sealing by bulkhead/grout curtain methods (insitu and remote), low head clay sealing, outcrop barrier restoration (clay trenches, slurry trench, grout curtain), physical-chemical treatment systems, preoxidation (ozone, chlorine, dioxide, $KMnO_4$, etc.), watershed and stream evaluations and AMD abatement plans. See attached project list.
NO		

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TOTAL (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Glenn, Mark	35	35	35

Brief Explanation of Responsibilities

President of 60-person consulting engineering firm. Project Engineer and Design Engineer-of-Record for numerous abandoned mine land and acid mine drainage projects. Responsible for project analysis and assessment, development of project engineering direction, quality management and assurance, contract administration. Has overseen more than 30 AML/AMD projects over the last 35 years.

EDUCATION (Degree, Year, Specialization)

BSCET, 1977, University of Pittsburgh, Civil Engineering
MSCE, 2014 (Est.), New Jersey Institute of Technology, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

WEF	ASCE	AAEE	ACI	DFI
AWWA	ASD SO	USSD	ASHE	

REGISTRATION (Type, Year, State)

Civil, 1997, WV (No. 13375)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TOTAL (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Boland, Thomas E.	10	10	21

Brief Explanation of Responsibilities

Engineering Manager and Design Operations Director for all projects. Responsibilities including oversight of design, development, engineering analysis, preparation of construction documents, plans, specifications and cost estimates, managing project budgets. Engineering manager for several large AML/AMD related projects including Moundsville (WV) water treatment facility, Oven Run (PA), AMR/AMD Abatement and Glen Campbell (PA) AMR.

EDUCATION (Degree, Year, Specialization)

BSCET, 1973, Penn State University, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

ASCE	ASTM	DFI
NFPA	CSI	

REGISTRATION (Type, Year, State)

Civil, 2001, WV (No. 14536)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TOTAL (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Orner, Matthew R.	10	10	14
Brief Explanation of Responsibilities			
Senior Project Manager for design of civil engineering and infrastructure related projects. Duties include engineering and design, hydrology and hydraulics, water system supply and distribution system design, plans and specifications and construction administration. AML experience includes the design of a 20-acre AML site in Indiana County, PA.			
EDUCATION (Degree, Year, Specialization)			
BSCET, 1998, University of Pittsburgh, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
ASCE ASDSO	AWWA	N/A	
13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)			
NAME & TOTAL (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Balliet, James L.	18	22	22
Brief Explanation of Responsibilities			
Facilities planning director responsible for planning and design of environmental science projects and related engineering facilities projects. AMD experience includes process treatment design of mine drainage for potable and stream release purposes including successively alkalinity producing AMD wetlands, treatment, ozonation for preoxidation of iron-manganese, physical-chemical treatment of AMD, softening of AMD water via nanofiltration and reverse osmosis evaluation of dissolved solids reduction.			
EDUCATION (Degree, Year, Specialization)			
BS - Environmental Resource Management; 1988/MS-Water Resources, 1990, Penn State, AMD Evaluation and Treatment			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
AWWA	PRWA	WVWRA WEF	N/A

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TOTAL (Last, First, Middle Int.)	YEARS OF EXPERIENCE		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	
Long, Travis J.	12	12	8

Brief Explanation of Responsibilities

Senior Environmental Scientist specializing in the design of environmental projects including wetland delineation and mitigation, soil sampling and analysis, stream restoration design, water quality monitoring and evaluations, physical-chemical process treatment and permitting. AMR/AMD experience includes passive wetland AMD treatment, mine reclamation plans, surface remining permits, NPDES permits, stormwater control design, soil sampling and revegetation analysis, reclamation planting, habitat plans and membrane water treatment systems.

EDUCATION (Degree, Year, Specialization)

BS - Environmental Science and Ecology, Juniata College, 2000, Wetland Science, Stream Ecology, Physical - Chemical Treatment

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
MSHA Certified, PAEP, AWWA, WEF, PRWA	Certified Environmental Professional (CEP)-11050458, 2011 Academy of Board Certified Environmental Professionals

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TOTAL (Last, First, Middle Int.)	YEARS OF EXPERIENCE		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	
Eckenrode, Christopher M.	7	7	7

Brief Explanation of Responsibilities

Project engineer responsible for the design and construction administration of water treatment facilities and utility infrastructure systems. Projects include design of membrane filtration plants, nanofiltration AMD softening systems, waterlines and storage tanks, hydraulic structures and dam spillway/embankment design. As a former PADER Bureau of Abandoned Mine Reclamation employee, performed AMR earthwork surveys/comps, E&S plans and inspection of treatment ponds and wetlands.

EDUCATION (Degree, Year, Specialization)	
BSCE, 2005 - Penn State, Civil Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	
DFI	ACI PCA ASDSO
REGISTRATION (Type, Year, State)	
Civil, 2011, PA (No. 079451)	

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

Computer Office Survey Software

- Server - Microsoft Windows 2008 Dell Server PEI800 Intel(R) Xeon(TM) CPU 3.00 GHz 2.99 GHz, 4.00 GB of RAM
- Base CAD System - AutoCad 2012®, AutoCAD Civil 3D 2012®, Microstation Version 8® and ArcView GIS 9.02, Bentley SewerCAD, WaterCAD, HydroCAD, SewerGEMS, Inroads, MATHCAD
- Raster Imaging Software - AutoCad 2012®
- Scanner - Vidar® Full Size (42" Wide Flatbed Type) Document Scanner
- Three Dimensional (3D) Modeling Platform - 3D Studio Viz®
- Laser Plotters - HP LaserJet 8000 (4 Ea), HP LaserJet 9040, HP DesignJet 800 Large Format Color Plotter, HP LaserJet 5000, HP Deskjet (20 Ea.), HP Color LaserJet 4700 D.N.
- Electrostatic Plotters - KIP 3000, KIP 3100 with Scanning Capabilities
- E-Mail System - Microsoft Outlook®
- E-Mail Address/Website Address - mail@gdfengineers.com/www.gdfengineers.com
- Data Collector Conversion Software - Carlson SurvCE, SMI ver. 8
- CAD Conversion Software - Autocad Civil 3D Land Desktop 2012, Carlson
- Miscellaneous Office Software
- Copiers/Scanners - Konica Minolta BizHub C452 Color Printer/Copier/Scanner, BizHub Pro 920 Copier/Scanner
- Fax Machines - Brother Intellifax 2820, Brother Intellifax 4100E
- a. Spreadsheets Programs - Quattro Pro®, Microsoft Excel®
- c. Operating Platform - Windows XP Pro/VISTA/WINDOWS 7
- e. Internet Connections - Wireless High Speed Throughput and
- Dialout Backup System, Microsoft Explorer®, Netscape Navigator®
- g. HECRAS/HMS/HEC-1

h. Databases - Microsoft Access

Laboratory, Sampling and Testing Equipment

- In-House, Fully Equipped Analytical Laboratory
- V-Notch Weirs, Bubbler Flow Monitors, Pipe Velocity Meters, Stevens® Stream Gaging Equipment, Marsh-McBirney® Current Velocity Meter, Global Water Flow Probes, Pitot Tubes, Pressure Recorders, Rotometers, Venturi Meters, Streaming Current Meters, PlantPro Fire Hydrant Gauges
- Field Analytical Testing for Conductivity, pH, Secondary Contaminants (Fe, Mn, Mg, Na, Al, etc.)
- Water Well Sampling and Water Level Measuring Equipment, Bailers/Pumps
- Rain Gauges (WeatherMeasure®), Fluorimeter Dye Dilution Testing, Zeta Potential Meter, Residual Chlorine/Turbidity Monitors, Sewer Smoke Blowers (Liquid Type), Hand held and Lab Spectrophotometers, Dissolved Oxygen Meters, Soil and Sludge Probes/Samplers (Sludge Judge®)
- Pilot Testing Equipment-Ozone and Oxygen Generators, Sand Filter (w/backwash), IMI Chemical Feed Systems, Lead/Copper Corrosion Testing, Computer Monitoring/Control, Trailers
- Hazardous Material Sampling and Protection Equipment (Asbestos/Lead Paint)
- Delam 2000® Concrete Ultrasound Device
- Electrical Test Devices - Amp/Ohm/Volt Meters, Calibration Equipment, Motor Vibration Meters, Handheld Temperature Sensors, Telemetry Radio Locator (UHF/VHF), Hand held GPS Locators (with Topo Software)
- HVAC Digital Psychrometer

Survey Field Equipment

- Sokkia SRX Robotic Total Station
- Topcon GPT 3002 Total Stations - 3 Each
- Sokkia Radian RTK Global Positioning System (GPS) Equipment
 - a. Radian RTK Rovers (Mobile) - 1 Each
 - b. 8100 RTK Controllers (GPS Data Collectors) - 1 Each
 - c. Allegro-GPS CTR - 1 Each
 - d. Radian Base Unit - 1 Each
- Sokkia (formerly Lietz) Total Stations (EDM) - 3 Each
- Sokkia SDR 33 Data Collectors - 3 Each/Sokkia
- Carlson Explorer 600+ Data Collector & RTK Controller - 1 Each
- Allegro Data Collectors with SMI and Carlson Software - 3 Each
- Zeiss Automatic Levels - 1 Each
- Topcon Automatic Levels - 2 Each
- Sokkia (formerly Lietz) + Topcon Levels - 2 Each, Automatic Levels - 2 Each
- Corps Vehicles - 3 Each
- Miscellaneous Equipment
- a. Fathometer
- d. Schonstedt Magnetic Locator - 3 Each
- e. Hewlett Packard Handheld Calculators
- f. Cell Phones and Motorola Walkie-Talkies
- g. Tripods - 9 Each
- h. Tribrachs, Adapter & Prism Setups-9 Each
- i. Quick Stick, Adjustable Rod with Prism-3 Each
- c. Ultrasonic Depth Finder

prop/2012/WV-AML-DEP15612.doc

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Berkeley County Water Transmission Mains Project, Martinsburg, WV	Berkeley County Public Service District 83 Monroe Street Martinsburg, PA 25404	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$4,600,000	Design Complete
Glen Haven and Cavaland Water System Replacement, Jefferson County, WV	Jefferson County Public Service District 340 Edmond Road Kearneysville, WV 25430	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$1,500,000	Design Underway
N. Br. Potomac River Intake Tower and Water Treatment Plant Improvements, Mineral Co., WV	Alleghany Ballistics Laboratory Aliant Techsystems, Inc. 210 State Rt. 956 Rocket Center, WV 26726	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$11,400,000	1%
Altoona (PA) Wastewater Treatment Facilities - Biological Nutrient Removal, Blair County, PA	Altoona Water Authority 900 Chestnut Street Altoona, PA 16601	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$59,000,000	80%
PA State Correctional Institution Improvements (SCI-Dallas, SCI-Muncy, SCI-Cresson, SCI-Smithfield)	PA Department of General Services 18th & Herr Streets Harrisburg, PA 17110	Engineering, Design, Plans, Specs, Permits and Construction Administration Support	\$11,900,000	Design Complete Bid Phase Pending
Cooper Township Route 11 Water and Wastewater System Project, Danville, PA	Cooper Township 19 Steltz Road Danville, PA 17821	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$6,500,000	Design Complete Bid Phase Pending
College Avenue 12" Water Main Replacement State College, PA	State College Borough Water Authority 1201 West Branch Road State College, PA 15801	Engineering, Surveying, Design, Plans, Specs, Permits, Construction Administration & Inspection	\$3,500,000	Design Complete Bid Phase Pending
TOTAL NUMBER OF PROJECTS:	35	TOTAL ESTIMATED CONSTRUCTION COSTS: \$ 100,000,000		

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD					
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)	
OSM 32 (3327) 101.1 Glen Campbell North Abandoned Mine Reclamation Banks Township, Indiana, PA	PA Department of Environmental Protection Bureau of AMR, RCSOB Market Street, Harrisburg, PA	\$256,000	2007	YES	
Ohio River Water Treatment Plant Marshall County, WV	City of Moundsville Water Department 819 Lafayette Avenue Moundsville, WV 26041-2223	\$16,000,000	2008	YES	
Potomac River Water Treatment Plant Berkeley County, WV	Berkeley County Public Service Water District 83 Monroe Street Martinsburg, WV 25404	\$17,165,000	2010	YES	
Water Transmission Mains (16" - 30") Berkeley County, WV	Berkeley County Public Service Water District 83 Monroe Street Martinsburg, WV 25404	\$10,000,000	2010	YES	
Village of Soldier Water Distribution and Wastewater Collection System Jefferson County, PA	Winslow Township Supervisors 1277 Yellow Brick Road Reynoldsville, PA 15851	\$2,500,000	2011	YES	
Broad Top City Replacement Water System and New Well Source Development Huntingdon County, PA	Broad Top City Water Authority P.O. 125 Broad Top, PA 16621	\$2,300,000	2011	YES	
Lake Mokoma Dam Modifications Sullivan County, PA	Lake Mokoma Association P.O. Box 132 Laporte, PA 18626	\$2,300,000	2011	YES	
West Sandy Water Distribution System Extension Clearfield County, PA	Sandy Township Municipal Authority 1094 Chestnut Avenue DuBois, PA 15801	\$4,300,000	2011	YES	

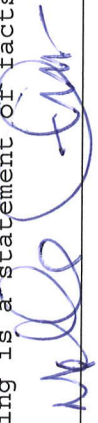
18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS
(INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
Statewide Fiber Optic (UG) System Design (320 miles) State of Pennsylvania	Northeastern IFS, LLC 800 Woodlands Parkway Ridgeland, MS 39157	\$75,000,000	2020	YES	Infrasource/ Williams Communication

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

Over the last 45 years, Gwin, Dobson & Foreman, Inc. has successfully designed more AMR/AMD projects than any other engineer in PA. we wish to offer our expertise and experience to the WV AML Program for the referenced project.

20. The foregoing is a statement of facts.

Signature:  Title: President Date: February 28, 2012

Printed Name: Mark Glenn

AML and RELATED PROJECT EXPERIENCE MATRIX														PRIMARY STAFF PARTICIPATION/ CAPACITY *** M=Management P=Professional						
PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info. Provided in Section(s) **	PROJECT EXPERIENCE REQUIREMENTS												Mark Glenn, P.E.	Thomas Boland, P.E.	James Baillet, MS	Travis Long, CIP	Chrs Eckenrode, P.E.	Matthew Orner
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design Evaluation	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection Management	Water Treatment						
						X					X	X	X							
Moundsville (WV) Water Treatment Plant (AMD Affected)	C	7-12F										X					M	P	P	P
PADEP Oven Run AML Reclamation	C	7-12A	X		X	X		X		X					X	X	P	P		P
PADEP Oven Run AMD Passive Wetlands Treatment	C	7-12F				X			X	X		X	X	X	X	X	P	P		P
PADEP Glen Campbell North AML Reclamation	C	7-12A	X			X	X	X	X	X				X	X	X	P	P	P	P
Hampton (PA) Deep Mine Discharge Reverse Osmosis Study	C	7-12F				X					X	X	X	X			P		P	P
Tanoma Coal Co. (PA) Refuse Pile Design (No. 1, 2 & 3)	C	7-12A	X					X	X			X				X	P	P	P	
OSM Glen White Run (PA) AMD Wetland Treatment	C	7-12F	X	X	X				X					X			P			
Island Cr. Coal-Bird No. 2 Deep Mine Sealing, Windber, PA	C	7-12A															P			
PADEP Clarion Co. AMD Abatement Plan (3 Watersheds)	C	7-12C	X	X	X	X	X	X	X			X		X	X		P	P	P	
ODNR Lake Hope (OH) AMD Deep Mine Sealing	C	7-12	X	X	X	X	X	X	X								P			
ODNR Lake Hope (OH) AML Reclamation	C	7-12A	X					X	X					X	X		P			
PADEP Cresson Shaft Closure & Refuse Pile Reclamation	C	7-12A	X	X	X			X	X			X		X	X	X	P			
PADEP Clearfield Co. AML Reclamation (5 sites)	C	7-12A	X			X			X					X	X	X	P			
PADEP Highland Fuel Slurry Trench Mine Sealing	C	7-12A	X	X	X	X	X	X	X					X	X	X	P			
OSM W. Goshen Church (PA) Waterline (AMD Affected)	C	7-12E				X											P	P		P
OSM Graham Twp. (PA) Waterline (AMD Affected)	C	7-12E				X											M	P	P	P
OSM W. Carroll Twp. (PA) Waterline (AMD Affected)	C	7-12E				X											M	P	P	P
Village of Soldier (PA) Water System (AMD Affected)	C	7-12E				X											M	P	P	P
Broad Top City (PA) Water System (AMD Affected)	C	7-12E				X											M	P	P	P
PADEP Slippery Rock AMD Abatement Projects (10 projects)	C	7-12A	X	X	X	X	X	X	X						X	X	P			
Altoona (PA) Water Treatment Plant (AMD Affected)	C	7-12F				X						X	X	X	X		M	P	P	P
Glenn Brothers Quarry Mining Permit, Jefferson Co., PA	C	7-12A	X			X	X	X	X								P	P	P	P

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

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SECTION 12A - ABANDONED MINE REMEDIATION/MINE RECLAMATION

No. of Projects: 15

Description of Projects:

1. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 17 (1530) 101.2: Victor-Gearhartville Area Abandoned Mine Reclamation Design
Clearfield County, PA, Project Cost: \$100,000
2. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 32 (2425) 101.2: Laurel Run Area Abandoned Mine Reclamation
Indiana County, PA, Project Cost: \$80,000
3. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 17 (0097) 101.2: Kellytown Area Abandoned Mine Reclamation
Clearfield County, PA, Project Cost: \$125,000
4. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 17 (2576) 101.2: Newtown Area Abandoned Mine Reclamation
Clearfield County, PA, Project Cost: \$300,000
5. **PA DEP Bureau of Abandoned Mine Reclamation**
PADEP SL 193-1-101.1: Deer Creek Area Abandoned Mine Reclamation
Clarion County, PA, Project Cost: \$50,000
6. **PA DEP Bureau of Abandoned Mine Reclamation**
PADEP SL 110-4-102.1: Highland Fuel Complex Abandoned Mine and Refuse Pile Reclamation
Wolf Creek Township, Mercer County, PA, Project Cost: \$200,000
7. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 32 (3327) 101.1: Glen Campbell North Area Abandoned Mine Reclamation
Glen Campbell Area, Indiana County, PA, Project Cost: \$256,182
8. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 17 (0875) 101.1: Pine Run Area Abandoned Mine Reclamation Design
Clearfield County, PA, Project Cost: \$200,000
9. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 56 (2524) 101.1: Koontztown Abandoned Mine Reclamation
Stoystown Area, Somerset County, PA, Project Cost: \$738,000
10. **PA DEP Bureau of Abandoned Mine Reclamation**
OSM 11 (2724) 101.1: Cresson Shaft Closure and Refuse Pile Reclamation
Cresson, Cambria County, PA, Project Cost: \$280,000
11. **Pennsylvania Mines Corporation**
Rushton Mine Complex Refuse Pile Reclamation
Decatur Township, Centre County, PA, Project Cost: \$100,000

SECTION 12A - ABANDONED MINE REMEDIATION/MINE RECLAMATION (Continued)...

- 12. Pennsylvania Mines Corporation**
Lady Jane Collieries Refuse Pile Reclamation
Huston Township, Clearfield County, PA, Project Cost: \$50,000
- 13. Pennsylvania Mines Corporation**
Greenwich Collieries Refuse Pile Reclamation
Cambria and Indiana Counties, PA, Project Cost: \$250,000
- 14. Tanoma Mining Company (Division of Barnes & Tucker Coal Co.)**
Tanoma Mine Complex – Design of Refuse Piles 1, 2 and 3
Rayne Township, Indiana Co., PA, Project Cost: \$3.5 million
- 15. Ohio Department of Natural Resources,**
Lake Hope Abandoned Mine Reclamation
Vinton County, OH, Project Cost: \$150,000

SECTION 12B - SOIL ANALYSIS

No. of Projects: 15

Description of Projects: (See descriptions for Section 12A projects in which Soil Analysis was performed)

SECTION 12C - HYDROLOGY AND HYDRAULICS DESIGN

No. of Projects: 13

Description of Projects:

- 1. Altoona Water Authority**
Mill Run Dam Hydrologic-Hydraulic Evaluation and Feasibility Study
(Spillway studies using HEC-HMS modeling and ogee-weir, labyrinth and RCC)
Blair County, PA
- 2. Altoona Water Authority**
Bellwood Dam Hydrologic-Hydraulic Evaluation and Feasibility Study
(Spillway studies using HEC-HMS modeling and ogee-weir, labyrinth and RCC)
Blair County, PA
- 3. Clearfield Municipal Authority**
Montgomery Run Dam Hydrologic-Hydraulic Evaluation and Feasibility Study
(Spillway studies using HEC-1 and HEC-RAS modeling and uncontrolled overflow and RCC)
Clearfield County, PA
- 4. Jefferson County Public Service District**
Glen Haven and Cavaland Water Distribution System Evaluation
(Water distribution system hydraulic modeling evaluation using Bentley WaterCAD)
Jefferson County, WV
- 5. Brookville Municipal Authority**
Corsica Water Distribution Evaluation
(Water distribution system hydraulic modeling evaluation using Bentley WaterCAD)
Jefferson County, PA

SECTION 12C - HYDROLOGY AND HYDRAULICS DESIGN (Continued)...

6. **Jefferson County Commissioners**
Gilbert Road Bridge Replacement over Clear Run - Waterway Opening Evaluation
(Hydrologic and hydraulic evaluation of required bridge waterway opening using HEC-RAS)
Jefferson County, PA
7. **PennDOT Engineering District 9-0**
Glendale Lake Culverts - Design Evaluation
(Hydrologic and hydraulic design of culverts using HEC-RAS)
White Township, Cambria County, PA
8. **Jefferson County Commissioners**
Sulgar Road Bridge Replacement over Mill Run - Waterway Opening Evaluation
(Hydrologic and hydraulic evaluation of required bridge waterway opening using HEC-RAS)
Jefferson County, PA
9. **Altoona Water Authority**
Reservoir System Safe Yield and Drought Emergency Action Plan
(Hydrologic evaluation using Corps of Engineers RES-SIM simulation to determine reservoir safe yield for a 65-year period of simulation)
Jefferson County, PA
10. **West Carroll Township Water Authority**
New Water Treatment Plant Storm Sewers, Conveyance Channels and Detention Ponds
(Hydrologic and hydraulic design of conveyance channels and detention ponds using Bentley FlowMaster and HydroCAD software)
Elmora, Cambria County, PA
11. **Clearfield Municipal Authority**
New Water Treatment Plant Storm Sewers, Conveyance Channels and Detention Ponds
(Hydrologic and hydraulic design of conveyance channels and detention ponds using Bentley FlowMaster and HydroCAD software)
Lawrence Township, Clearfield County, PA
12. **Altoona Water Authority**
Beaverdam Branch – Juniata River Floodplain Study
(Floodplain study using HEC-RAS modeling to determine flood boundaries, 100-yr flood elevations and levee impacts)
Allegheny Township, Blair County, PA
13. **Kunzler & Company**
Little Juniata River Floodplain Study
(Floodplain study using HEC-RAS modeling to determine flood boundaries, 100-yr flood elevations and levee impacts, FEMA approved revised flood map elevations)
Borough of Tyrone, Blair County, PA

SECTION 12D - AERIAL PHOTOGRAPHY AND DEVELOP CONTOUR MAPPING

No. of Projects: N/A

Description of Projects: GD&F does not have Aerial Photography capability but does develop Contour Mapping from topographic data generated by GD&F's field instrument survey crews.

SECTION 12E - DOMESTIC WATERLINE DESIGN/AQUIFER DEGRADATION DUE TO MINING

No. of Projects: 17

Description of Projects:

1. **Graham Township Supervisors**
BAMR Pinchey Road Waterline Extension (6,750 LF – 8" Waterline)
Graham Township, Clearfield County, PA, Project Cost: \$250,000
2. **West Carroll Township Water Authority**
BAMR Sportsman Road Waterline Extension (5,000 LF – 8" Waterline)
Graham Township, Clearfield County, PA, Project Cost: \$175,000
3. **Winslow Township Supervisors**
Village of Soldier Water System Improvements (25,000 LF – 6-8 In. Waterline for AMD Affected Community)
Winslow Township, Jefferson County, PA, Project Cost: \$1,850,000
4. **Broad Top City Water Authority**
Broad Top City Water System Improvements (Water System for AMD Affected Community)
Broad Top City Borough, Huntingdon County, PA, Project Cost: \$3,100,000
5. **Clearfield Municipal Authority**
BAMR Baney Settlement-Goshen Church West Waterline Extension (26,500 LF – 8" Waterline)
Broad Top City Borough, Huntingdon County, PA, Project Cost: \$3,100,000
6. **Sandy Township Municipal Authority**
West Sandy Waterline Extension (50,000 LF 6-12 In. Waterline)
Sandy Township, Clearfield County, PA, Project Cost: \$5,300,000
7. **Borough of Hyndman**
Waterline Replacement (10,000 LF 8-in. - Waterline)
Hyndman Borough, Bedford County, PA, Project Cost: \$700,000
8. **PA-American Water Company**
4th and 5th Streets Waterline Replacement (5,000 LF – 12-inch Waterline)
Borough of Philipsburg, Centre County, PA, Project Cost: \$550,000
9. **PA-American Water Company**
Pine Street and Washington Avenue Waterline Replacement (2,150 LF - 8-inch Waterline)
Borough of Philipsburg, Centre County, PA, Project Cost: \$200,000
10. **Reynoldsville Water Authority**
Broadway Street Waterline Replacement
Borough of Reynoldsville, Jefferson County, PA, Project Cost: \$130,000

SECTION 12E - DOMESTIC WATERLINE DESIGN/AQUIFER DEGRADATION DUE TO MINING (Continued)...

11. **Brockway Borough Municipal Authority**
Kearney Road Waterline Replacement
Borough of Brockway, Jefferson County, PA, Project Cost: \$200,000
12. **Henderson Township Municipal Authority**
Stump Creek Waterline Replacement
Henderson Township, Jefferson County, PA, Project Cost: \$275,000
13. **Borough of Sharpsville**
Water Distribution System Replacement (65,000 LF 8-12-In. Waterline)
Borough of Sharpsville, Mercer County, PA, Project Cost: \$5,500,000
14. **Perry Township Water Authority**
Market Street Waterline Replacement
Mt. Pleasant Mills, Snyder County, PA, Project Cost: \$600,000
15. **Sykesville Borough Water Department**
South Park and W. Liberty Streets Waterline Replacement
Borough of Sykesville, Jefferson County, PA, Project Cost: \$230,000
16. **Reynoldsville Water Authority**
Winslow Township Waterline Replacement
Borough of Reynoldsville, Jefferson County, PA, Project Cost: \$230,000
17. **Corsica, Rose and Union Municipal Authority**
East Main Street Waterline Replacement
Borough of Corsica, Jefferson County, PA, Project Cost: \$150,000

SECTION 12F - ACID MINE DRAINAGE EVALUATION/ACID ABATEMENT DESIGN

No. of Projects - 12

Description of Projects:

1. **PADEP Bureau of Abandoned Mine Reclamation**
Oven Run Area Successive Alkalinity Producing (SAP) Wetland Treatment Facility
Somerset County, PA, Project Cost: \$951,954
2. **City of Moundsville Water Department**
Advanced Water Treatment/Softening Facility (Alexander Deep Mine Pool)
Marshall County, PA, Project Cost: \$17,500,000
3. **Hampton Township Water Authority**
Wildwood Mine Stream Release (Reverse Osmosis)/Potable Water Treatment Plant Study
Allegheny County, PA
4. **PADEP Bureau of Mine Drainage Abatement**
City of Altoona Potable Water Treatment Plant (7.5 MGD Sedimentation, Recarbonation and Multimedia Filtration) and Burgoon Run Stream Release Treatment (15 MGD Lime-Soda Ash)
Blair County, PA, Project Cost: \$7.5 Million

SECTION 12F - ACID MINE DRAINAGE EVALUATION/ACID ABATEMENT DESIGN (Continued)...

5. **Blair County Conservation District**
Glenwhite Run Successive Alkalinity Producing (SAP) Wetland Treatment Facility
Blair County, PA, Project Cost: \$800,000
6. **PADEP Bureau of Abandoned Mine Reclamation**
SL 192 – Piney Creek Watershed Acid Mine Drainage Abatement Plan
Clarion County, PA, Project Study Cost: \$175,000
7. **PADEP Bureau of Abandoned Mine Reclamation**
SL 191 – Toby Creek Watershed Acid Mine Drainage Abatement Plan
Clarion County, PA, Project Study Cost: \$200,000
8. **PADEP Bureau of Abandoned Mine Reclamation**
SL 193 – Deer Creek Watershed Acid Mine Drainage Abatement Plan
Clarion County, PA, Project Study Cost: \$125,000
9. **CONSOL Energy**
Harmer-Indianola Deep Mine Sealing (In-Situ) and Closure Plan
South Park, Allegheny County, PA, Project Cost: \$250,000
10. **Pennsylvania Mines Corporation**
Lady Jane Collieries Mine Sealing (In-Situ) and Closure Plan
Huston Township, Clearfield County, PA, Project Cost: \$3.5 million
11. **Pennsylvania Mines Corporation**
Rushton Deep Mine Complex Sealing (In-Situ) & Closure Plan
Decatur Township, Clearfield County, PA, Project Cost: \$1.5 million
12. **Island Creek Coal Co.**
Bird No. 1 and No. 2 Deep Mine Sealing (In-Situ) and Closure Plan
Windber Borough, Cambria Co., PA, Project Cost: \$1.5 Million