

STATE OF WEST VIRGINIA
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
CHARLESTON, WV

EXPRESSION OF INTEREST
REQUISITION DEP 15584

WEST COLUMBIA "B" DESIGN
MASON COUNTY, WV

OPENING DATE: MARCH 6, 2012; 1:30 PM

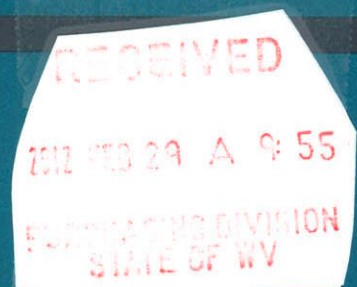
SUBMITTED BY:

GWIN, DOBSON & FOREMAN, INC.
3121 FAIRWAY DRIVE
ALTOONA, PA 16602

GD&F

GWIN
DOBSON &
FOREMAN

CONSULTING ENGINEERS



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ALTOONA, PA 16602**



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
DEP15584

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
GUY NISBET
304-558-8802

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

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

SHIP TO

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
01/30/2012				

BID OPENING DATE: **03/06/2012** 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)	
<p>WEST COLUMBIA "B" DESIGN</p> <p>EXPRESSION OF INTEREST</p> <p>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 WEST COLUMBIA "B" PROJECT IN MASON COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p> <p>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.</p> <p>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.</p>						

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'



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 Department of Administration
 Purchasing Division
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 Charleston, WV 25305-0130

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ADDRESS CORRESPONDENCE TO ATTENTION OF
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 304-558-8802**

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 3121 Fairway Drive
 Altoona, PA 16602

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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ DEP15584 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Kalle E...</i>	TELEPHONE 814-943-5214	DATE 02-27-12
TITLE President/CEO	FEIN 25-1685351	ADDRESS CHANGES TO BE NOTED ABOVE

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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 polluttional. 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.

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.

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.

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

- **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.

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.

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 West Columbia "B" Design Requisition DEP 15584		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 Andrew H. Johnson, P.E. - Treasurer Thomas E. Boland, P.E. - Asst. Secretary-Treasurer (814-943-5214)				
9. PERSONNEL BY DISCIPLINE				
5 ADMINISTRATIVE ARCHITECTS	1 ECOLOGISTS	2 LANDSCAPE ARCHITECTS	2 STRUCTURAL ENGINEERS	
1 BIOLOGIST	2 ECONOMISTS	2 MECHANICAL ENGINEERS	6 SURVEYORS	
5 CADD OPERATORS	2 ELECTRICAL ENGINEERS	MINING ENGINEERS	TRAFFIC ENGINEERS	
CHEMICAL ENGINEERS	1 ENVIRONMENTALISTS	PHOTOGRAMMETRISTS	OTHER	
10 CIVIL ENGINEERS	ESTIMATORS	PLANNERS: URBAN/REGIONAL		
14 CONSTRUCTION INSPECTORS	GEOLOGISTS	5 SANITARY ENGINEERS	57 TOTAL PERSONNEL	
2 DESIGNERS	HISTORIANS	SOILS ENGINEERS		
DRAFTSMEN	1 HYDROLOGISTS	SPECIFICATION WRITERS		
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 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 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 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

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 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 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 DOMESTIC WATERLINE DESIGN EXPERIENCE:
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED 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)
 BSCEIT, 1977, University of Pittsburgh, Civil Engineering
 MSCE, 2014 (Est.), New Jersey Institute of Technology, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

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 DOMESTIC WATERLINE DESIGN EXPERIENCE:
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED 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)
 BSCEIT, 1973, Penn State University, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)
Civil, 2001, WV (No. 14536)

ASCE ASTM DFI
 NFPA CSI

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 DOMESTIC WATERLINE DESIGN EXPERIENCE:
Orner, Matthew R.	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)
 BSCEIT, 1998, University of Pittsburgh, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS
 ASCE AWWA
 ASDSO 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 AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Balliet, James L.	18	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 WVRWA WEF
 N/A 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 AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Long, Travis J.	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 reining 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

MSHA Certified, PAEP, AWWA, WEF, PRWA

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 DOMESTIC WATERLINE DESIGN EXPERIENCE:
Eckenrode, Christopher M.	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 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 PE1800 Intel(R) Xeon(TM) CPU 3.00 GHz 2.99 GB, 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, MAPCAD
- 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
- CADD 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, Bubblers 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), LMI 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 CTLR - 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
 - b. Trimble Hand Held
 - 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

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	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRM'S RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
Moshannon Valley Wastewater Treatment Facility - Biological Nutrient Removal	Process Design and Engineering, Preparation of Plans and Specifications and Permit Applications	Moshannon Valley Joint Sewer Authority, Phillipsburg, PA 16866	2015	\$18,150,000	\$18,150,000

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: Mark Glenn

Printed Name: Mark Glenn

Title: President

Date: February 28, 2012

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 (Reserve 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