Canaan Valley Resort State Park
Ski Area Improvements

WV Division of Natural Resources

Charleston, West Virginia

Chapman Technical Group

Statement of Qualifications for A&E Services

RFQ: DNRB11059

March 22, 2011

RECEIVED
2011 MAR 21 PM 3:45
WV PURCHASING DIVISION

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	PAGE
DNRB11059	1

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

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
DIVISION OF NATURAL RESOURCES
PARKS & RECREATION SECTION

324 4TH AVENUE
SOUTH CHARLESTON, WV
25303-1228 304-558-3397

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
02/16/2011				

BID OPENING DATE: 03/22/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		906-00-00-001		

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

EXPRESSION OF INTEREST
(EOI)

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF NATURAL RESOURCES, IS SOLICITING EXPTRESSIONS OF INTEREST FOR ARCHITECTURAL AND ENGINEERING SERVICES FOR SKI AREA IMPROVEMENTS AT CANAAN VALLEY RESORT STATE PARK, TUCKER COUNTY, WV PER THE ATTACHED.

ALL TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING T FRANK WHITTAKER IN THE WV PURCHASING DIVISION VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV OR VIA FAX AT 304-558-4115. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 03/02/2011 AT 4:00 PM. ALL TECHNICAL QUESTIONS WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.

EXHIBIT 10

REQUISITION NO.: DNRB11059

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

State of West Virginia
Department of Administration
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Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER	PAGE
DNRB11059	2

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02/16/2011				

BID OPENING DATE: 03/22/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT

ADDENDUM NO.'S:

NO. 1 X

NO. 2 .....

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.

VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.

.....
SIGNATURE

Chapman Technical Group
.....
COMPANY

3/22/2011
.....
DATE

NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

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DNRB11059	3

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324 4TH AVENUE
SOUTH CHARLESTON, WV
25303-1228 304-558-3397

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02/16/2011				

BID OPENING DATE: 03/22/2011 BID OPENING TIME 01:30PM

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REV. 09/21/2009

NOTICE

A SIGNED BID MUST BE SUBMITTED TO:

DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
BUILDING 15
2019 WASHINGTON STREET, EAST
CHARLESTON, WV 25305-0130

THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:

SEALED BID

BUYER: 44

RFQ. NO.: DNRB11059

BID OPENING DATE: 03/22/2011

BID OPENING TIME: 1:30 PM

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:

304-727-5580

CONTACT PERSON (PLEASE PRINT CLEARLY): Joseph Bird

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

State of West Virginia
Department of Administration
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SOUTH CHARLESTON, WV
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****** THIS IS THE END OF RFQ DNRB11059 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

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

Chapman Technical Group

March 22, 2011

Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, West Virginia 25305-0130

Re: A/E Services for Canaan Valley Resort State Park Ski Area and Other Improvements
RFQ DNRB11059

Dear Selection Committee:

Chapman Technical Group is most interested in providing the engineering and landscape architectural services for the design of the ski area and other improvements at Canaan Valley Resort State Park. We have assembled a highly-qualified team including specialty consultants to meet the unique requirements of this project.

Chapman Technical Group has in-house registered architects, landscape architects and civil engineers who have proven their capabilities on several major West Virginia State Park projects. Joining our team to assist with the design of lift system is **Stevens Engineering**. With nearly 30 years experience, Stevens Engineering is recognized throughout North America for their lift planning and design expertise. **Sno.matic Controls and Engineering** specializes in the planning and design of resort snowmaking and will be a key player in the project. **Frank Brooke**, a native of Davis, West Virginia, is known for his general knowledge of the ski resort industry and will serve as a special consultant and advise on general operations issues. **Groundwater Science** has extensive experience in the design of groundwater supply systems and will assist Chapman Technical Group in determining the placement of wells and determining what kind of production we might expect. Because the electrical design for ski lifts is likely to be a significant part of the project, we have elected to work with **CMA Engineering,** an electrical and mechanical design firm with a proven track record of successfully completing large projects.

Having designed many projects for the WV State Parks, including the current cabin project at Blackwater Falls, we are familiar with State Parks' procedures, desires and goals. With every project we develop we continue to learn and we'll take our experiences from past projects to develop an even better project at Canaan Valley Resort.

All West Virginia State Parks are special places which are sometimes taken for granted by state residents. With the execution of this project, it is critical that the facilities be developed in such a way

200 Sixth Avenue
St. Albans, WV 25177
304.727.5501
FAX 304.727.5580
Buckhannon, WV
Martinsburg, WV
www.chaptech.com

SOUND APPROACH. SOLID DELIVERY. AIRPORT DESIGN / DEVELOPMENT ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT ENVIRONMENTAL ENGINEERING LANDSCAPE ARCHITECTURE SURVEYING

that minimizes the construction footprint and maximizes the natural beauty of the park. Chapman Technical Group's landscape architects, architects and engineers will work together to carefully craft the design package to accomplish these goals.

Our main office is in St. Albans and that is where the design work will be performed, but we also maintain a fully functioning office in Buckhannon. We have completed several projects for the Towns of Davis and Thomas and are constantly working in the area. You can be assured that we will be available at the project site on short notice and can be available to whatever extent is required during the critical construction phase.

You will find all of the requested information regarding our firm and our ability to execute the requirements of this project within this submittal. We would very much appreciate the opportunity to present our project team and further discuss your project. In the meantime, if you have any questions or need additional information, please contact me.

Sincerely,

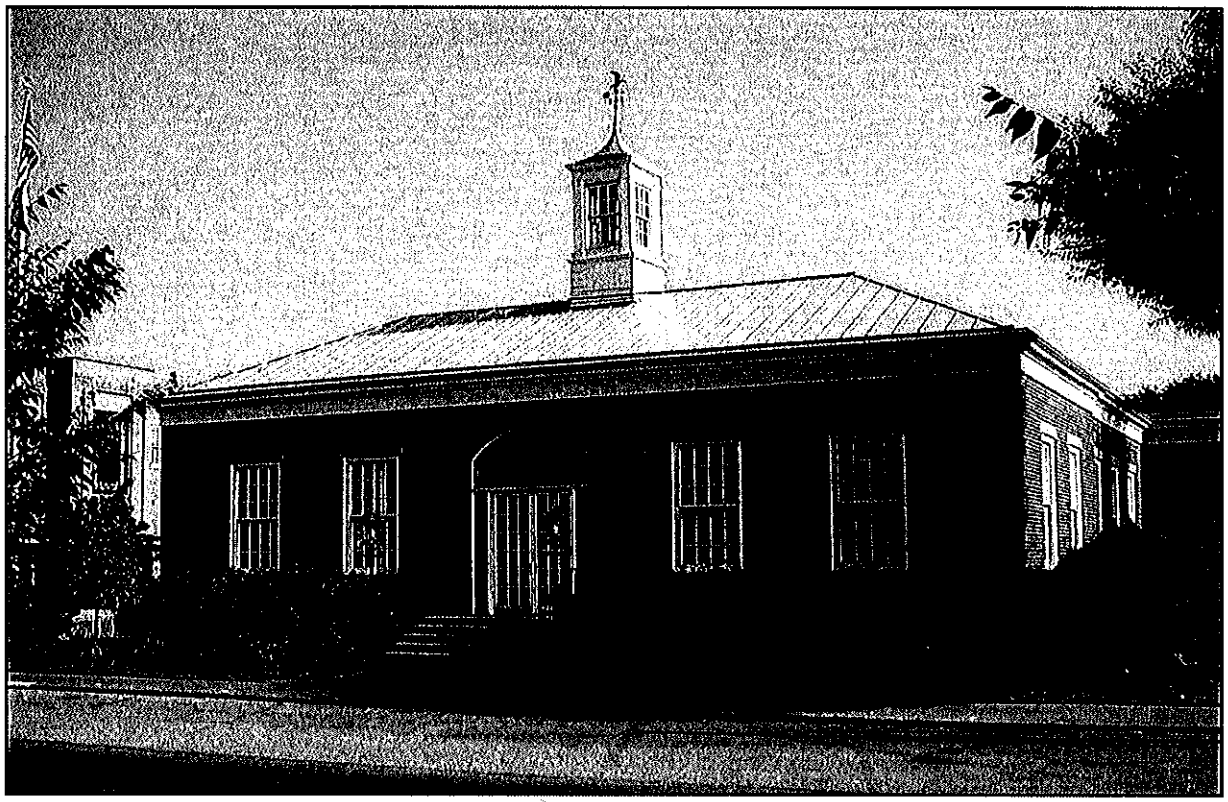
CHAPMAN TECHNICAL GROUP

Joseph E. Bird, ASLA
Vice President

SOUND APPROACH. SOLID DELIVERY. AIRPORT DESIGN / DEVELOPMENT ARCHITECTURE / INTERIOR DESIGN CIVIL ENGINEERING / SITE DEVELOPMENT ENVIRONMENTAL ENGINEERING LANDSCAPE ARCHITECTURE SURVEYING

Chapman Technical Group

Company Overview



Chapman Technical Group's St. Albans Office

Chapman Technical Group is a full-service consulting firm with offices in St. Albans, Buckhannon, and Martinsburg, West Virginia offering an extensive range of professional architectural, engineering, interior design and landscape architectural services. Established in 1984, Chapman Technical Group has steadily grown to a diverse firm of professionals, many of whom were educated in West Virginia colleges and universities. We have achieved an outstanding reputation for providing high-quality design projects, while meeting client schedules and budgets and have received numerous awards for our work.

Our facilities are both state-of-the-art and architecturally significant. Our St. Albans office is a former post office and is now on the National Register of Historic Places.

Chapman Technical Group offers a broad range of professional services.

- Airport Design
- Architecture
- Civil Engineering
- Fire Pumping & Protection
- Interior Design
- Landscape Architecture
- Recreational Facilities
- Roads, Highways, & Bridges
- Site Development
- Space Planning
- Surveying
- Water & Wastewater Systems

Awards

AMERICAN INSTITUTE OF ARCHITECTS - MERIT AWARD FOR EXCELLENCE IN ARCHITECTURE, 2009 - Interstate 79 Rest Areas.

AMERICAN SOCIETY OF CIVIL ENGINEERS - NATIONAL - SUPERIOR EMPLOYER AWARD, 2009, Support of Young Professionals in the Private Sector.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2009, Gold Award - Special Projects Category for the Mercer County Airport Runway Safety Area Project.

AMERICAN INSTITUTE OF ARCHITECTS - HONOR AWARD FOR EXCELLENCE IN ARCHITECTURE, 2008 - Upshur County Courthouse Restoration and Renovations.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2008, Bronze Award - Wastewater Category for the Spring Run State Fish Hatchery Improvements.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2007, Silver Award - Structures Category for the Mercer County Airport Runway Safety Area Project.

GARY KING COMMUNITY SERVICE AWARD, 2006.
GOOD SCOUT RECIPIENT, 2005.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 2003, Gold Award - Water Treatment Category for the City of Fairmont Water Treatment Plant Project.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD,
2002, Gold Award - Transportation Category for the Raleigh County Memorial Airport Runway Rehabilitation Project.

WINNER - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", 2000, The WVDOT - Division of Highways - Large Bridge Category for WV10 Buffalo Creek Bridge, Logan County, West Virginia.

FINALIST - "COMMISSIONER'S ENGINEERING ACHIEVEMENT AWARD", 1999, The WVDOT - Division of Highways - Large Roadway Category for WV10 Buffalo Creek - Taplin Project and 2000 for WV10 Buffalo Creek - Huff Junction Project, both in Logan County, West Virginia.

AMERICAN COUNCIL OF ENGINEERING COMPANIES-WV - ENGINEERING EXCELLENCE AWARD, 1999, Silver Award - Water and Wastewater Category, for the City of Beckley Piney Creek Wastewater Treatment Plant Project.

ENTREPRENEUR OF THE YEAR AWARD - FINALIST, 1999 and 2000, Sharon L. Chapman, President, was named one of twenty finalists in the West Virginia Area Entrepreneur of the Year Award. Sharon was recognized for leading Chapman Technical Group to become one of the most highly regarded engineering firms in the state after the death of her husband and company founder, Harvey R. Chapman.

"EXPECT THE BEST FROM WEST VIRGINIA AWARD", 1998, Charleston Regional Chamber of Commerce. The Expect the Best program was created to recognize West Virginia businesses and organizations that promote quality of life at home, work, and in the community so that individuals and organizations will implement quality principles and practices leading to unprecedented pride and economic growth in West Virginia.

HONOR AWARD, West Virginia Chapter of the American Society of Landscape Architects, 1994, Shrewsbury Street Area Redevelopment Plan, for excellence in planning and design projects. Joseph E. Bird, ASLA, Project Manager.

"GOVERNOR'S AWARD FOR ENGINEERING EXCELLENCE", 1990, The West Virginia Chapter of the American Public Works Association, in recognition of outstanding Public Works Engineering and Design of Projects within West Virginia.

DUNDEE CEMENT COMPANY ANNUAL DESIGN AWARD, 1988, Yeager Airport Taxiway Overlay Project. Harvey R. Chapman, P.E., Project Manager.

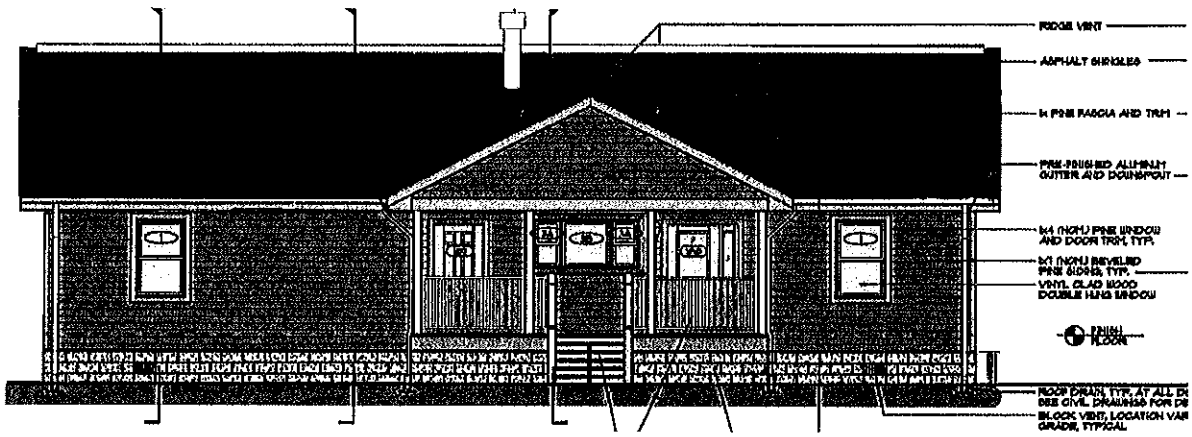
AUSTIN C. PALMER "OUTSTANDING FACILITY DESIGN AWARD", 1988, City of Bridgeport Swimming Pool Complex. Harvey R. Chapman, P.E., Project Manager.

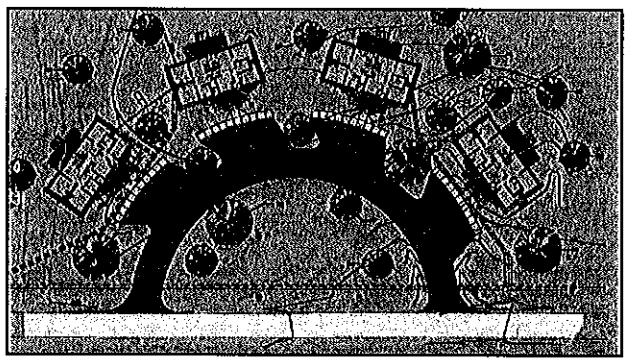
"GEORGE WARREN FULLER AWARD", Harvey R. Chapman, P.E., 1984, Robert G. Belcher, P.E., 2001, and Sharon L. Chapman, 2005, Jeffery D. Ekstrom, P.E., 2010, American Water Works Association, for distinguished service in the water supply field in the State of West Virginia.

Landscape Architecture

Blackwater Falls Cabins

07069





Blackwater Falls Cabins
WV DNR Parks and Recreation
Davis, West Virginia

Chapman Technical Group was selected to provide the architectural, civil engineering, and landscape architectural design to construct 13 new cabins in the environmentally-sensitive Blackwater Falls State Park, including site development and utility system upgrades.

Originally the Owner wanted to expand the existing cabin area in the park, but utility issues proved too costly at that location, so alternative sites were evaluated and a seldom used picnic area was determined to be the optimum site.

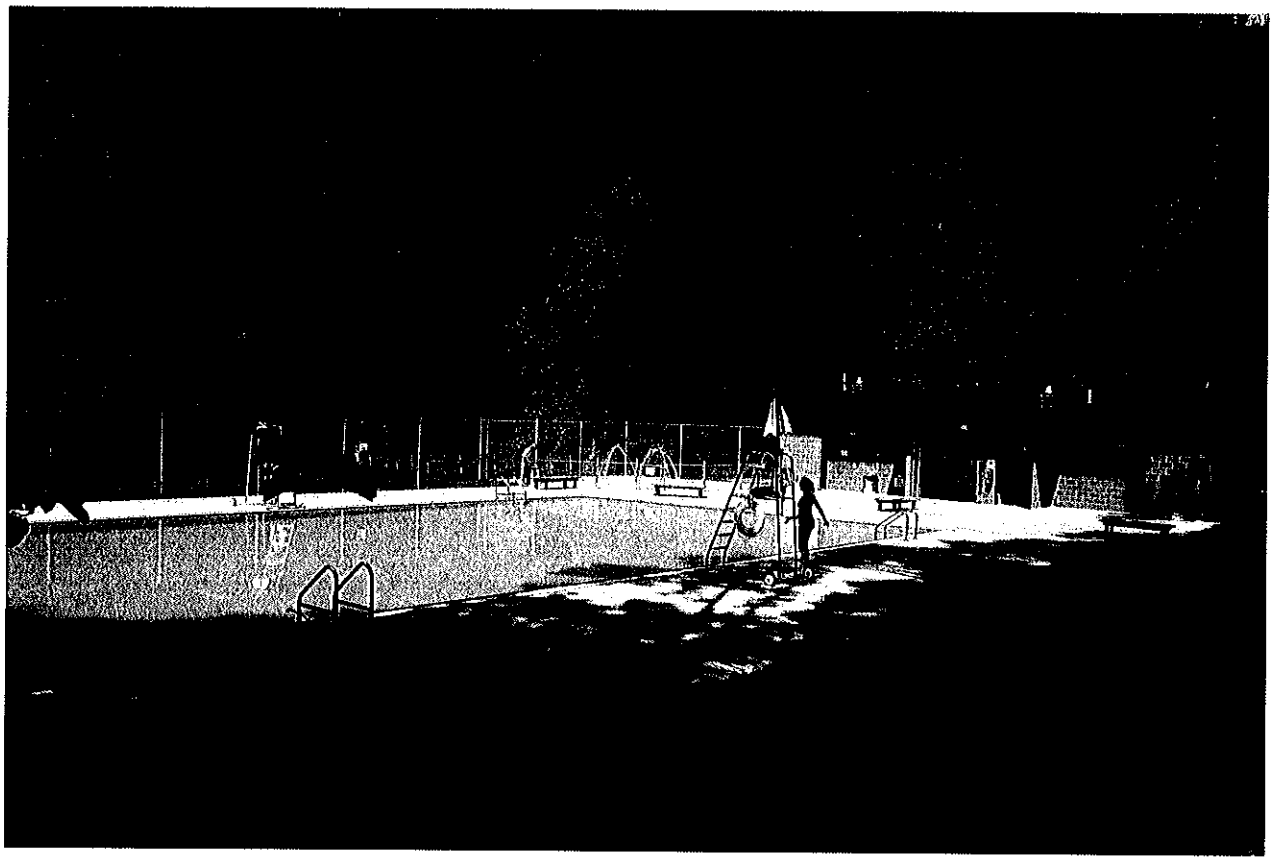
One of the goals in developing the project was to have as little environmental site impact as possible. The selection of the picnic area site meant that a new access road would not be required. A plan to cluster the cabins was developed that would further minimize the footprint of the cabin development. As much as possible, the existing grade remained unchanged to preserve the natural vegetation. A natural planting plan was developed using indigenous or naturalized plant species, with a special effort made to provide habitat vegetation for endangered animal species in the area. Ground water recharge was investigated but was deemed unfeasible due to clay soils and shallow bedrock.

As part of the project, a low-impact wastewater treatment plant was designed and will result in water clean enough to discharge into the natural waterways of the park. More than a mile of potable water line was also upgraded, which will benefit other areas of the park as well.

Construction should be complete in 2010.

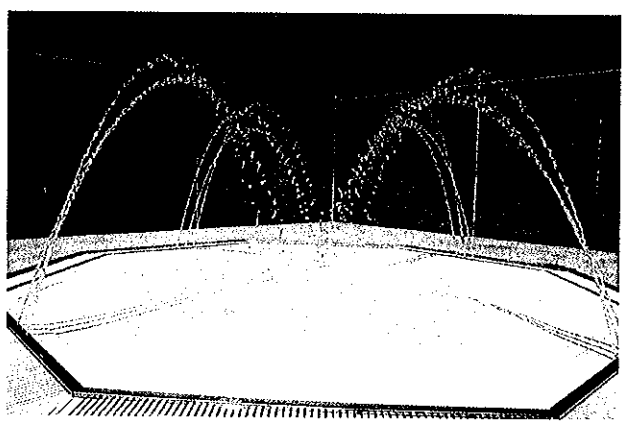
Landscape Architecture

Laurel Lake WMA Swimming Pool 08080



Laurel Lake WMA Swimming Pool
Mingo County, West Virginia

The West Virginia Division of Natural Resources swimming pool at the Laurel Lake Wildlife Management Area near Lenore, West Virginia had fallen into serious disrepair and had actually closed down. Chapman Technical Group designed a rehabilitation of the pool that included a new stainless steel gutter recirculation system, a membrane liner, a new interactive wading pool, and new concrete decks. After the demolition of the old bathhouse, a new bathhouse was built which also houses the filtration equipment for the wading pool. The project was completed in 2010 at a cost of $714,000.

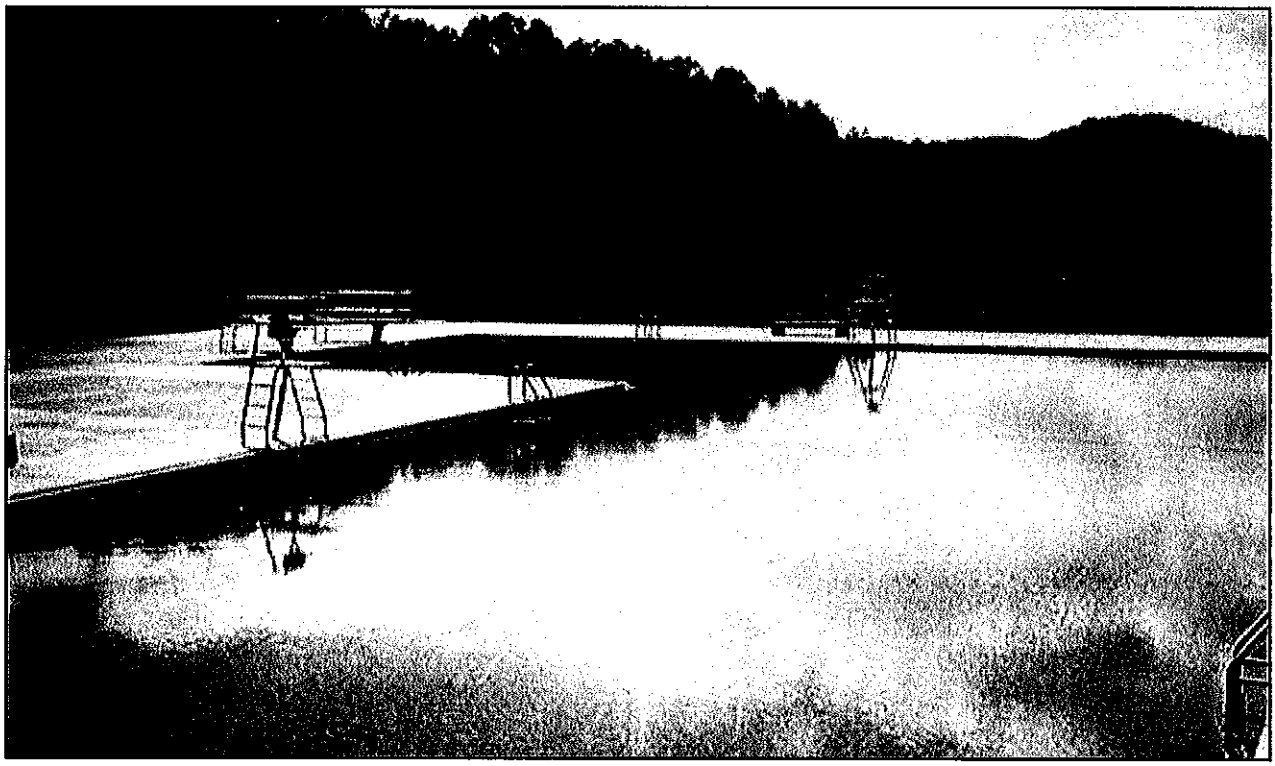


The swimming pool renovations included a new interactive wading pool.

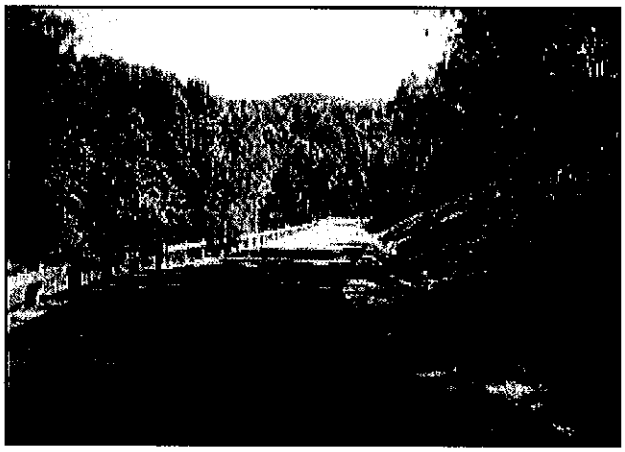
Landscape Architecture

Beech Fork State Park

97049



West Virginia Division of Natural Resources
State Capitol, Building 3, Room 669
1900 Kanawha Boulevard,
Charleston, West Virginia 25305

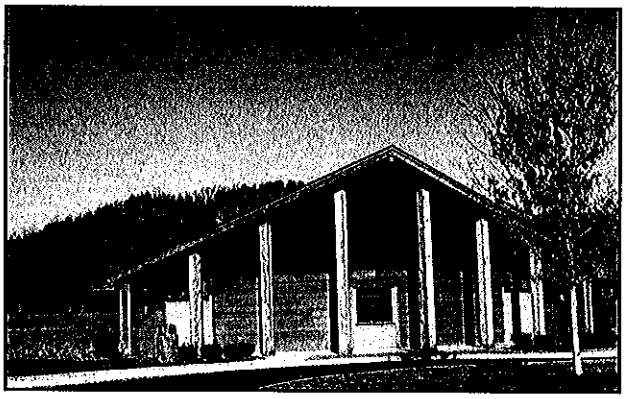


Chapman Technical Group designed $4.5 million worth of improvements at the state park near Barboursville including a 50-meter swimming pool, bathhouse, six modern cabins, and campground upgrades. The pool and bathhouse were constructed on 12 feet of fill, artfully designed by our landscape architects to blend naturally with the surrounding terrain. A one-half mile access road to the cabins was also designed by our landscape architects. They also provided the storm water management of the project, as well as all of the landscaping.

Landscape Architecture

Beech Fork State Park 97049

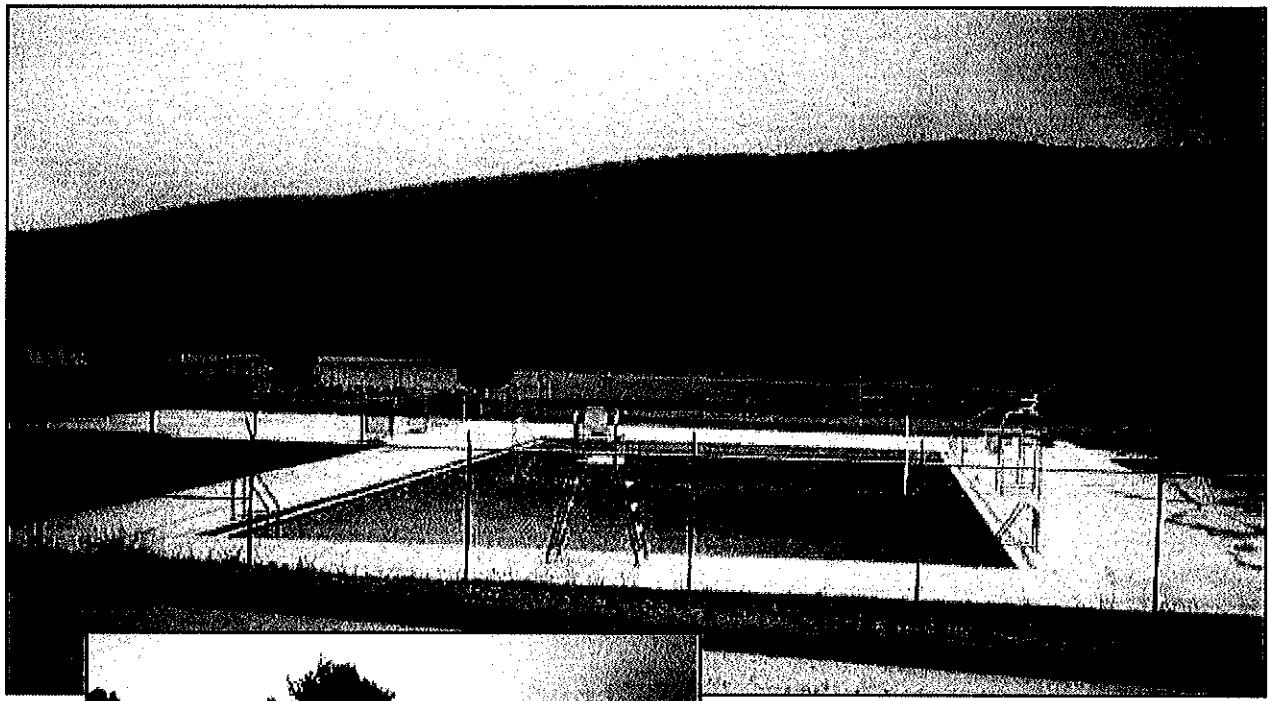
West Virginia Division of Natural Resources
State Capitol , Building 3, Room 669
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305



Chapman Technical Group designed $4.5 million worth of improvements at the state park near Barboursville including a 50-meter swimming pool, bathhouse, six modern cabins, and campground upgrades. With its distinctive high sloped roof, the bathhouse was designed as the architectural centerpiece of the Bowan Day Use area while complementing the architecture of the existing park structures. The cabins provide the warmth of natural materials such as wood and stone, yet are fully equipped with modern conveniences such as air conditioning and microwaves.

Landscape Architecture

Moncove Lake State Park Swimming Pool 97051



West Virginia Division of Natural Resources
State Capitol, Building 3, Room 669
1900 Kanawha Boulevard,
Charleston, West Virginia 25305

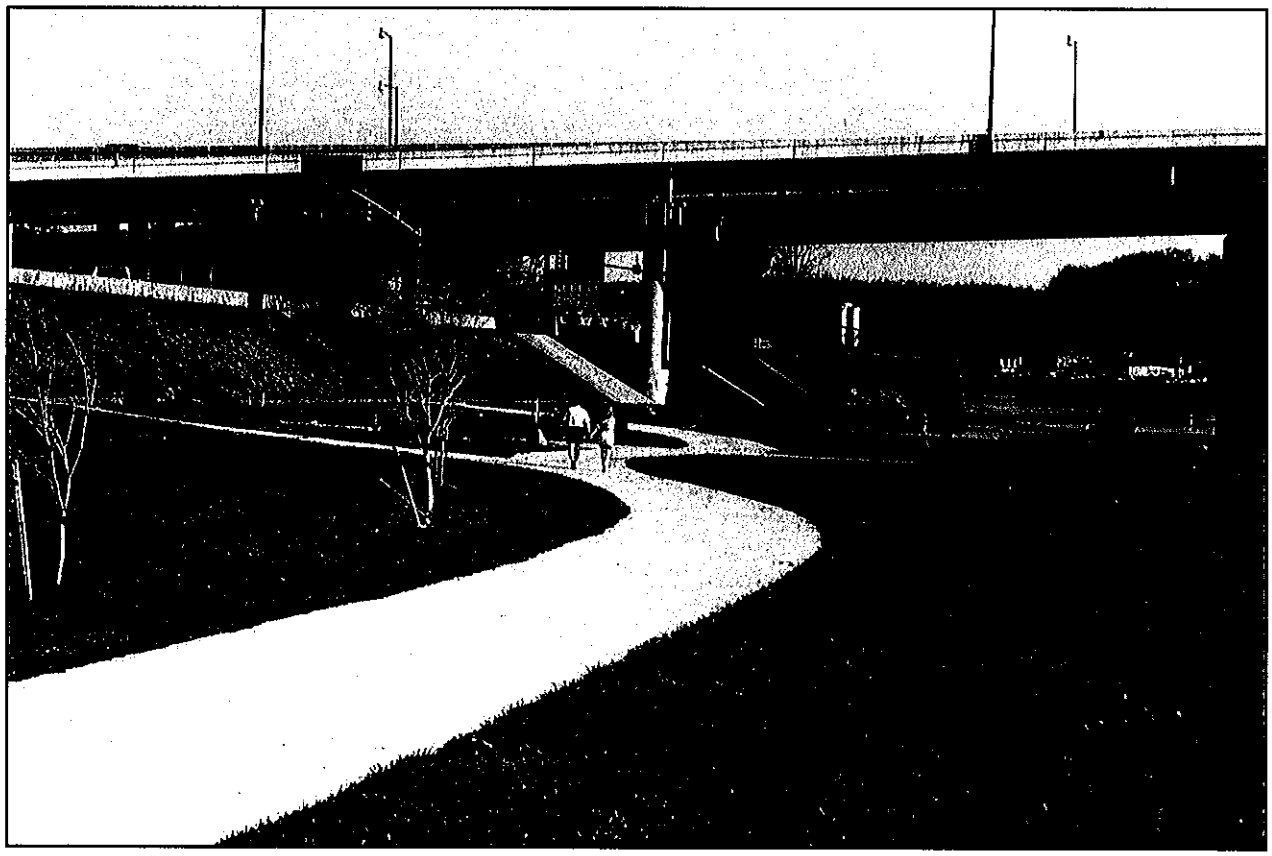
The new Moncove Lake State Park swimming pool opened for business on the Fourth of July weekend of 1999, one month ahead of schedule. Designed by Chapman Technical Group for the West Virginia Division of Natural Resources, the pool features a stainless steel gutter recirculation system and a wading pool surrounded by spraying jets of water. The 25 meter pool is a long-needed addition to the state park located south of Lewisburg.

In order to provide adequate water for the pool, not only was the construction of a pool filter room required, but the entire water system for the park had to be renovated. The water system design included a larger well pump, a larger green sand filter to remove iron, and upgraded water storage and filter backwash capabilities.

Landscape Architecture

Magic Island Park

90015



City of Charleston
501 Virginia Street, East
Charleston, West Virginia 25301

Magic Island was formerly an overgrown island along the banks of the Kanawha River in Charleston which was built up by the U.S. Army Corps of Engineers with dredged material from the Elk River. Chapman Technical Group developed a design to transform Magic Island into a public park featuring a boat dock, sand volleyball courts, concrete walkways, a restroom facility, an irrigation system and extensive landscaping.

Landscape Architecture

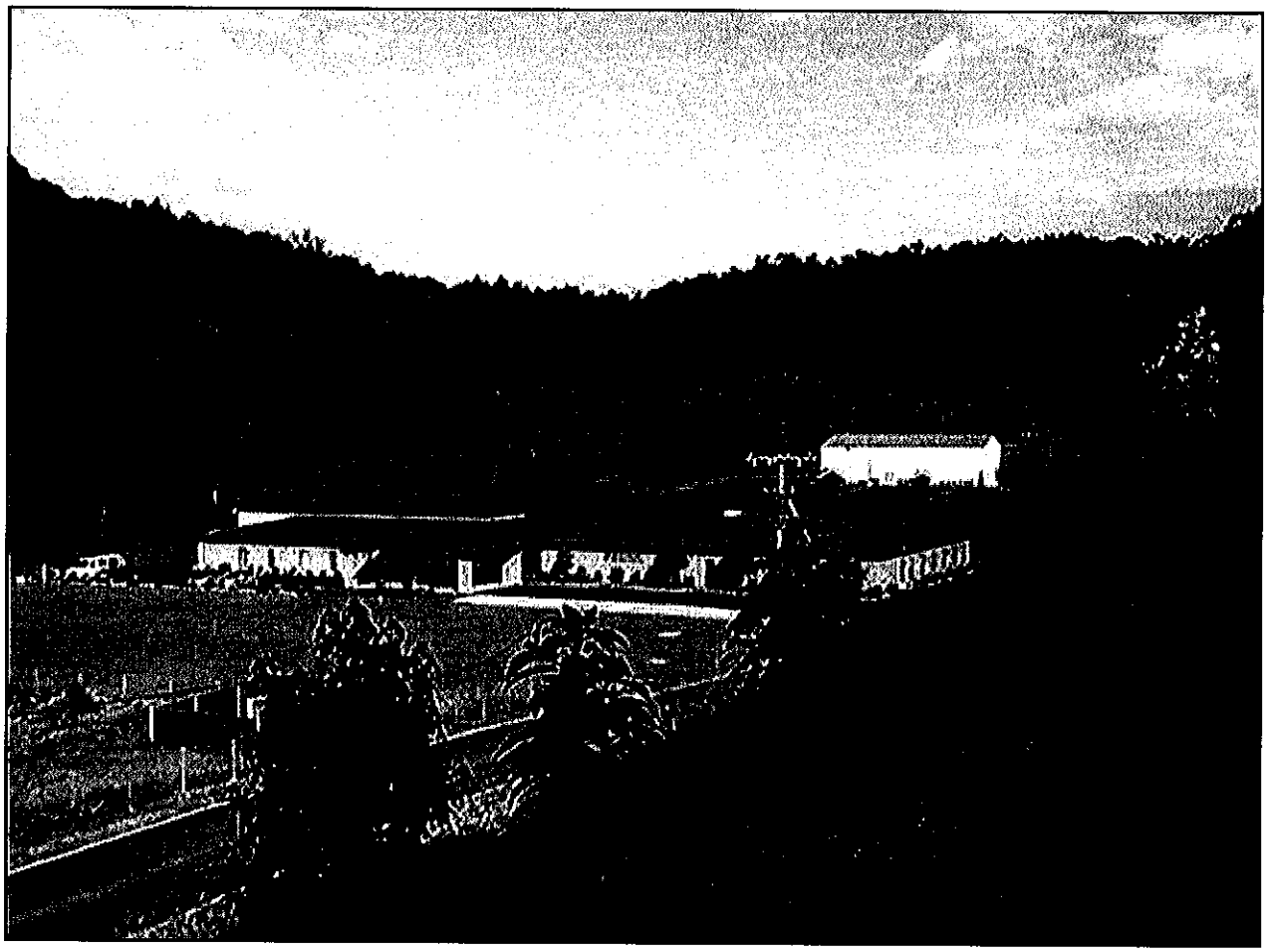
Seneca Rocks Visitor Center Site Development 93057

Seneca Rocks Visitors Center
Seneca Rocks, West Virginia
Construction Cost: $600,000 (sitework only)
Completion Date: 1997
Contact: Missy Maxwell (215) 985-4410

Working with architectural firm Susan Maxman Associates, Chapman Technical Group provided site development services for a new visitor's center that would provide visitors a unique experience of Seneca Rocks, a popular tourist attraction for the state. Pedestrian walkways and vehicular circulation were emphasized in the project as well as integration into the existing site. Susan Maxman Architects relied on Chapman Technical Group for site grading, drainage, utilities, and material selection. Visitors can walk existing trails and enter the new facility through a series of raised walkways, pedestrian bridges, and overlooks.

Landscape Architecture

King's River Worship Center Site Development 97001

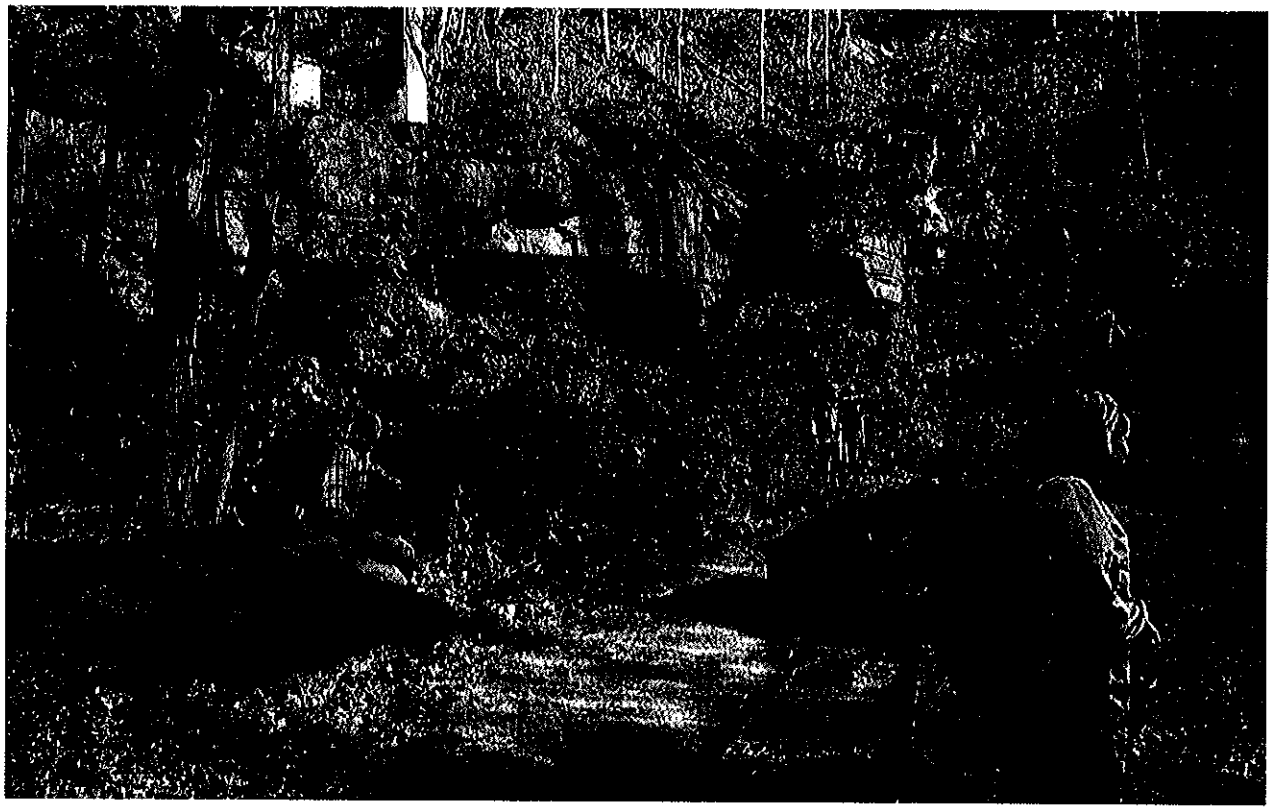


King's River Church
777 Mallory Lane
St. Albans, West Virginia 25177

Chapman Technical Group provided site design services for a new church for the King's River Worship Center (formerly the First Assembly of God). The project included building siting, parking layout, grading and drainage design, utility design, and design of erosion and sediment control. The project also included the analysis, relocation design and permit application for a stream tributary within the Kanawha River Basin.

Landscape Architecture

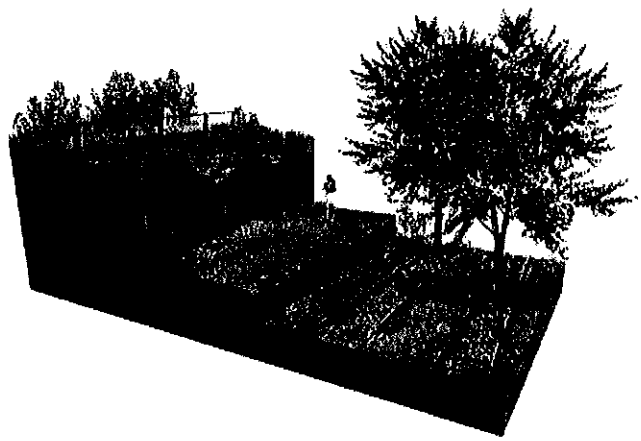
Nuttallburg Mine Complex Exhibit 10043



Concept sketch at mine head house.

Nuttallburg Mine Complex
New River Gorge, West Virginia

Nuttallburg was the site of an old coal town built around a mining complex in the New River Gorge National Park. As a National Park Service project, the area is being rehabilitated to allow visitors to explore the ruins of the town and mine operation. Although accommodations are being developed for the visitors, care is being taken to maintain as much of the site in the same condition as it might have been when the mine was still functioning. On-site materials will be used as much as possible and new materials will reflect the historic nature of the site. Chapman Technical Group is providing landscape architectural and site design services.



Concept sketch at coke oven trail.

Architecture

Burnsville Rest Areas

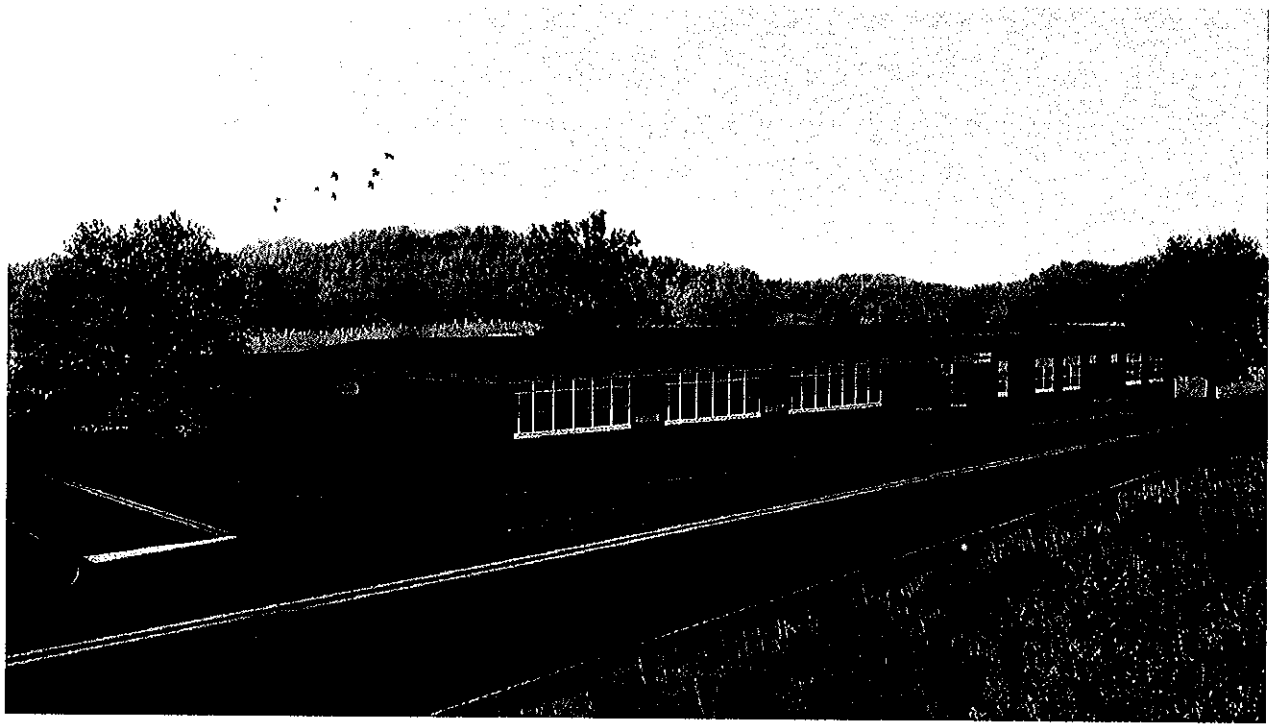
0003J

Burnsville Rest Areas
I-79, Mile Marker 86
West Virginia

The Burnsville Rest Areas are the first of the Standard Rest Areas to be built for the State of West Virginia. With dual sided men's and women's facilities, the structures are intended to meet the anticipated traffic load for twenty years from the date of design. They utilize materials native to the state, including smooth cut and rough stone, and a tern coated stainless steel roof system. A warm, but high-tech, Appalachain imagery greets the weary traveler, encouraging a more safe and rested trip. Low maintenance, but highly durable materials were used, including stone, stainless steel, glass, aluminum, wood, polished ground faced CMU, and epoxy terrazzo. Separate maintenance and vending buildings complement the main structures on the Northbound and Southbound sides.

Architecture

Smithville Elementary Renovation/Addition 08058



Ritchie County Schools
134 South Penn Avenue
Harrisville, WV 26362

The design goal for this project was to significantly improve the health, safety and welfare of the students and staff of Smithville Elementary School. The project began by demolishing two buildings in the existing four building complex and designing a new classroom wing and a new kitchen addition adjacent to the remaining buildings. The new additions were designed to join with the existing classroom wing and multipurpose building to create a single cohesive facility, under one roof.

The new school will provide access control and better security, new HVAC systems and better Indoor Air Quality, compliance with ADA/ABA requirements and the modern technology and amenities typical of today's schools. The renovations and additions to this school will have a direct impact on improving the learning environment for the students and improve the overall functionality of the school.

Architecture

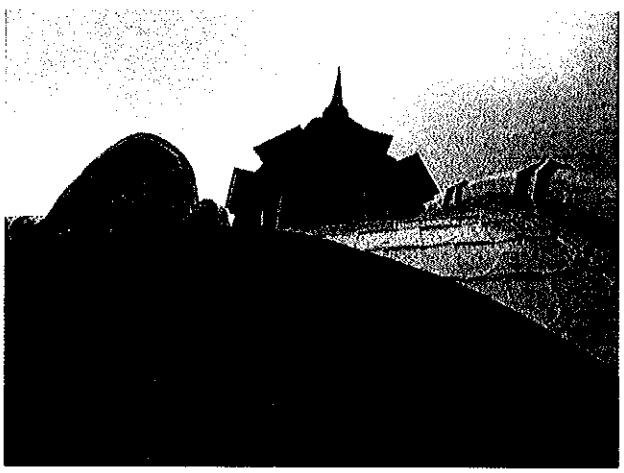
Upshur County Courthouse Renovations 04013

Upshur County Courthouse Complex

AIA Honor Award 2008

Upshur County Commission
38 West Main Street
Buckhannon, West Virginia 26201

Since the design and construction of the courthouse annex in 1995, Chapman Technical Group has been involved in several improvement and restoration projects at the Courthouse in Buckhannon. In 2005, a lift was installed and the plaza renovated to make the original courthouse accessible. In 2006, the Courthouse dome and clock tower were completely restored. In 2007, the Courthouse portico stonework was restored, and in 2008 the work was honored by the AIA/WV for Excellence in Archtitecture.

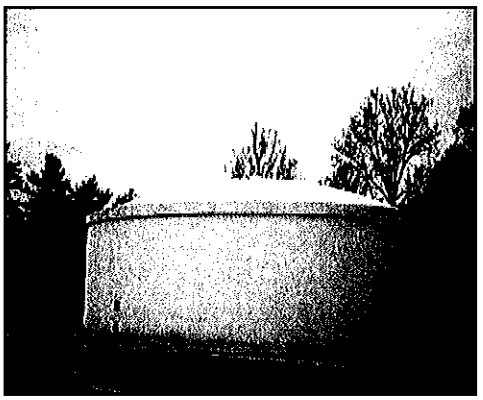


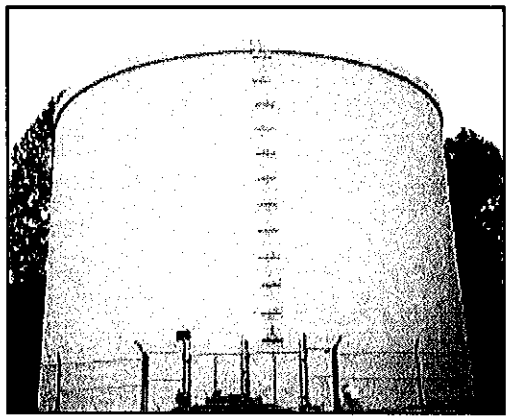
Dome Restoration Detail

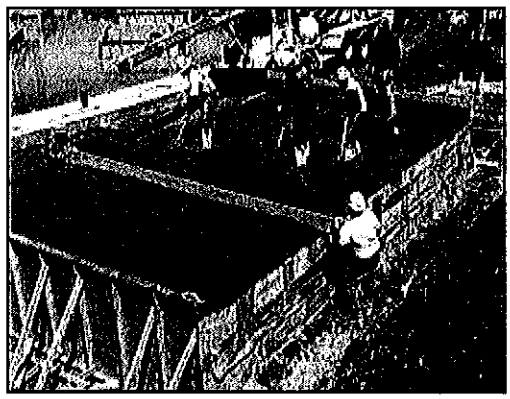
Water Storage and Distribution

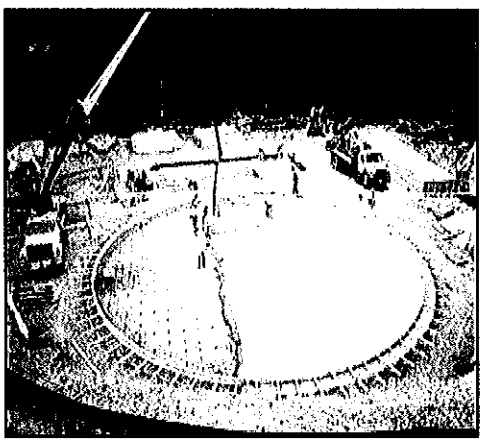
Fairmont Water System Improvements

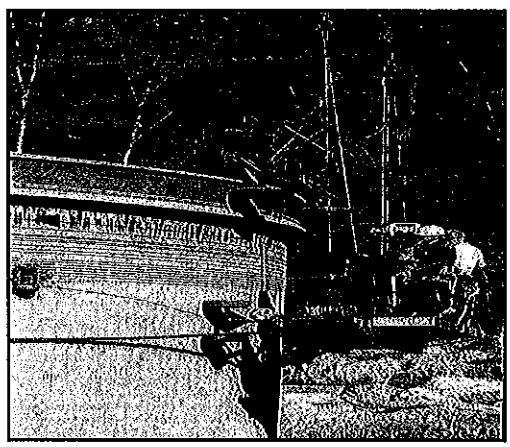
97024







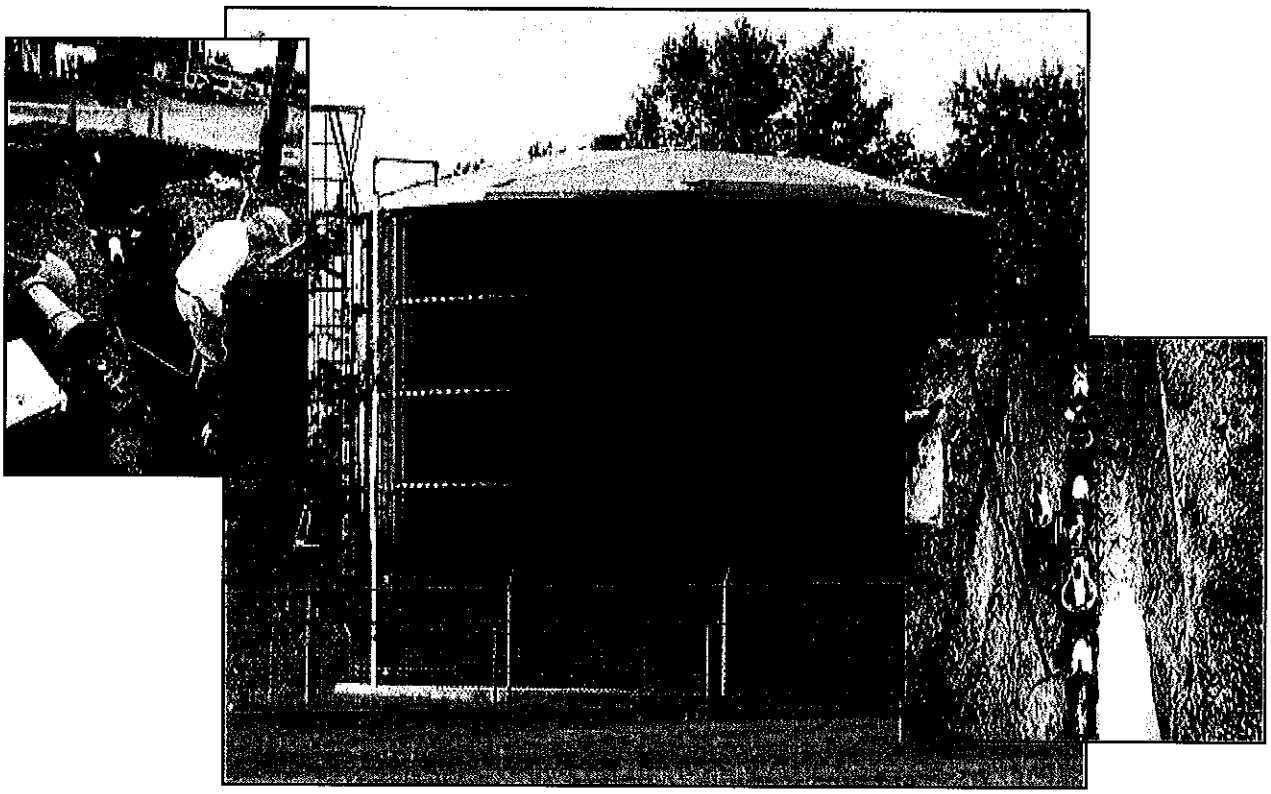




City of Fairmont
Post Office Box 1428
Fairmont, West Virginia 26555

Water Storage and Distribution

Thomas Water System Improvements 95087



City of Thomas
Post Office Box 248
Thomas, West Virginia 26250

Chapman Technical Group provided design and construction observation services for this water system improvements project. The water system improvements project consisted of improvements to the water distribution system, water storage tanks and water treatment plant. The project was undertaken in two distinct phases, namely Phase I and Phase II. Phase I improvements consists of upgrading undersized waterlines to increase fire protection, removal of existing fire hydrants on existing 4" waterlines and installation of new fire hydrants on new 6" and 8" waterlines, reducing unaccounted for water losses by replacing deteriorated waterlines, replacement of the City's main water storage tank with a new 157,000 gallon storage tank, and to improve water quality in the distribution system. Approximately 19,000 LF of 6", 8" and 10" waterlines were installed in the distribution system.

Phase II of this project consisted of the renovation of the City's existing 200 GPM package water treatment system with a new 200 GPM package pressure filter system featuring Macrolite ceramic media installed in pressure tanks. Phase II construction cost was $1.1 million.

Water Engineering Treatment

North Fork Hughes River Water System Improvements 94030

United States Department of Agriculture
Soil Conservation Service
75 High Street, Room 301
Morgantown, West Virginia 26505

Project included complete design services for a new 1,750 GPM (2.5 MGD) water treatment plant to serve the Towns of Harrisville, Pennsboro, Cairo, and North Bend State Park. The project also includes a 1.0 MG water storage tank, a 215,000 gallon water storage tank, one 500 gpm booster station, pressure reducing stations, and over 51,750 LF of 8" water distribution mains. The new plant utilizes a new flood control/recreational impoundment on the North Fork of Hughes River as the source of supply. An in-depth comprehensive hydraulic analysis of each of the three existing major systems was performed in order to integrate and combine all three municipal systems into a regional water supply system.

JOSEPH E. BIRD, ASLA
Senior Vice President
Project Manager

EDUCATION

West Virginia University, BSLA, 1978

REGISTRATION

Landscape Architect, West Virginia, 1981

PROFESSIONAL HISTORY

August 1985 to Present: Chapman Technical Group
Senior Vice President and Project Manager.

May 1978 to August 1985: Kelley, Gidley, Blair & Wolfe, Inc.
Landscape Architect and Project Manager.

Mr. Bird is a project manager and registered landscape architect. His experience ranges from large site development projects to the management of multi-discipline and architectural projects.

33 years professional experience.

PROJECT EXPERIENCE

Site Development: Site planning and project management for numerous projects throughout West Virginia ranging from small campus sites to large sites for commercial, government, industrial, and institutional development. Projects include military complexes, campuses, public housing developments and other public facilities.

Parks and Recreation: Projects include swimming pools, bathhouses, cabins and support facilities for the West Virginia Division of Natural Resources and similar facilities for county and municipal park systems. Also involved in the design of facilities such as softball fields, fishing access facilities, recreation facilities for prisons, as well as passive recreation areas for public and private clients.

Miscellaneous: Other project experience includes the urban planning and development, streetscape design, roadway and storm drainage projects, as well as the project management of numerous major architectural projects throughout West Virginia.

AFFILIATIONS

West Virginia Chapter of the American Society of Landscape Architects

AWARDS

Honor Award for Shrewsbury St. Redevelopment Plan
West Virginia Chapter of American Society of Landscape Architects

ROBERT G. BELCHER, P.E.
Senior Vice President, Engineering and Project Officer

EDUCATION

West Virginia Institute of Technology, BSCE, 1983

REGISTRATION

Civil Engineering, West Virginia, 1996
Civil Engineering, Ohio, 2006

PROFESSIONAL HISTORY

January 1987 to Present: Chapman Technical Group
Senior Vice President and Project Officer.

June 1984 to January 1987: Regional Intergovernmental Council
Planning and Development Council for West Virginia Region III - Metropolitan Planning Organization for Charleston, WV, MSA.

27 years professional experience.

PROJECT EXPERIENCE

Water Systems: Design and project management for numerous water systems for both public and private water companies. Projects include new water treatment plants as large as 10 MGD, improvements to existing plants, water mains and distribution systems. Water storage projects include glass-lined steel tanks, welded high-strength steel tanks, and elevated pedestal tanks.

Wastewater Systems: Design and project management for numerous wastewater systems throughout West Virginia. Projects include new, secondary and tertiary wastewater treatment plants as large as 4.5 MGD, improvements to existing plants, small-flow treatment plants, new and rehabilitation of wastewater collection systems, and facility plan updates.

Miscellaneous: Design and project management for large highway and bridge projects, airport improvements projects, large stormwater management projects, as well as potable water and wastewater system design for site development projects throughout West Virginia.

AFFILIATIONS

Water Environment Association - WV Section
Contractor's Association of West Virginia - Associate Member
American Water Works Association - WV Section
WV Society of Professional Engineers
American Council of Engineering Companies - ACEC/WV
WVUIT Civil Engineering Advisory Board
WV Qualifications Based Selection (QBS) Council

AWARDS

George Warren Fuller Award, 2001

STEPHEN M. JOHNSON, PE
Group Manager
Civil/Environmental Engineering

EDUCATION

West Virginia Institute of Technology, BSCE, 2004

REGISTRATION

Civil Engineering, West Virginia, 2009
Civil Engineering, North Carolina, 2008
Civil Engineering, Virginia, 2011

EXPERIENCE

January 2009 to Present: Chapman Technical Group
Civil Engineer

October 2006 to January 2009: McKim and Creed
Civil Engineer

May 2004 to October 2006: Chapman Technical Group
Civil Engineer

June 2001 to May 2004: Allegheny Power
Gas Support Technician/Intern

7 years professional experience.

PROJECT EXPERIENCE

Water Systems: Overall experience includes planning, design, bidding, and construction administration/management of various public and private water system projects throughout West Virginia, Virginia, and North Carolina. Specific project experience includes distribution systems, river crossings, horizontal directional drills, booster stations, treatment plants, ground and elevated water storage tanks, SCADA systems computer modeling, treatment process evaluation, and problem troubleshooting in existing systems.

Wastewater Systems: Overall experience includes comprehensive system master plans, design, bidding, construction administration/management of various public and private wastewater system projects throughout West Virginia, Virginia, and North Carolina. Specific project expreiance includes gravity and low-pressure collection systems, pump stations and force main transmission systems, treatment plant process evaluation and design, trenchless pipeline rehabilitation, bypass pump system design, odor and corrosion control, effluent infiltration ponds, decentralized and alternative on-site disposal systems, and SCADA systems.

Stormwater Systems: Overall experience includes comprehensive system master plans, design, bidding, construction administration/management of various public and private stormwater system projects throughout West Virginia, Virginia, and North Carolina. Specific project experience includes drainage basin hydraulic analysis, stormwater collection, detention and BMP system design, construction stormwater management plan preparation, and MS4 permit guidance.

ROBERT D. DINSMORE
Project Designer

EDUCATION

West Virginia University, BSLA, 2010

PROFESSIONAL HISTORY

June 2010 to Present: Chapman Technical Group
Project Designer.

Fall 2008 to Fall 2009: West Virginia University
Teaching Assistant, Intro to Landscape Architecture Graphics

Fall 2009 to Spring 2010: West Virginia University
Teaching Assistant, History of Landscape Architecture

Summer 2008: Austin Outdoor Landscape Professionals
Landscape Architecture Intern,

2006 to 2007: Austin Outdoor Landscape Professionals
Project Manager

1 year of professional experience. Mr. Dinsmore is responsible for the design and development of urban design projects, parks and recreation projects, and landscape design.

PROJECT EXPERIENCE

Urban Design: Designed and developed a master plan as part of his senior thesis for the Boston waterfront development.

Recreation Design: Developed master plans and designs for various facilities as part of scholastic studies.

Landscape Design: Designed and installed numerous landscape plans for high end residential and resort projects constructed in Florida.

AFFILIATIONS

Student Society of Landscape Architects (WVU Vice-President)
Sigma Lambda Alpha Landscape Architecture Honorary (WVU President)
G.E.R.M.A.N. Club of Virginia Tech
Sunnyside Up Campus Neighborhoods Revitalization Corporation (Volunteer)

AWARDS

ASLA Student Honor Award Winner 2010
ASLA Student Merit Award Nominee 2010

W. THOMAS CLOER, III, AIA, NCARB
Project Architect

EDUCATION

University of Tennessee, BArch, 2001

REGISTRATION

NCARB Registered Architect, 2009
IDP Program completed.

PROFESSIONAL HISTORY

October 2006 to Present: Chapman Technical Group
Project Architect and Architectural Designer

2001-2006: N Visions Architect
Architect Intern and Architectural Designer

10 years professional experience.

PROJECT EXPERIENCE

Experience ranges from drafting, detailing and design through project management and construction administration of building projects throughout West Virginia including the following project types:

Public School Facilities
Government Facilities
Office Buildings
Medical Office Facilities
Single Family Housing
Multi-family Housing
Recreational Facilities
ADA Assessments
Site Planning

AFFILIATIONS

American Institute of Architects
City of St. Albans Property and Maintenance Board, Member
City of St. Albans Historic District Committee, Member
Boy Scouts of America Troop 250 Committee Member

JASON E. BROWN, PS
Professional Surveyor

EDUCATION

West Virginia State College, General Studies, 1991 to 2002
West Virginia Institute of Technology, Paramedic Science, May 1994
Glenville State College, A.S. Land Surveying, 1997 to 2002

REGISTRATION

Professional Surveyor, West Virginia, 2009.

PROFESSIONAL HISTORY

January 2010 to Present: Chapman Technical Group
Professional Surveyor/Survey Project Manager.

January 2008 to January 2010: S&S Engineers
Surveyor Assistant/CADD Technician.

July 2005 to January 2008: Brown Drafting
Owner/Operator.

September 2003 to July 2005: Garcelon Surveying
Surveyor Assistant/CADD Technician.

May 2002 to September 2003: Triad Engineering
Survey Party Chief.

January 1995 to December 2001: Chapman Technical Group
Survey Technician/Junior Construction Representative.

16 years professional experience.

PROJECT EXPERIENCE

Highways: Established control, site surveying, topographic surveying, courthouse research, drawing production, Right-of-Way Questionnaires, bore hole stake out, and all surveying associated with the initial design of West Virginia highways for numerous highway projects throughout the state.

Site Development: All types of surveying associated with site development, to include control, topographic boundaries, research, and drawing production. Projects include military complexes, public housing, commercial development, industrial and institutional complexes, churches, resorts and public facilities throughout the state.

Parks and Recreation: Associated surveying for projects including swimming pools, bathhouses, cabins and support facilities for the West Virginia Division of Natural Resources and similar facilities for county and municipal park systems.

Water and Wastewater Systems: Associated surveying for the design of water systems, sewer systems and water and wastewater facilities for private and public water companies. Projects include water treatment plants, water mains and distribution systems, and collection systems throughout the state.

Airports: Associated surveying for the design of runways, airport facilities, lighting, and asphalt design for holding pads for small and large airport facilities throughout the state.

Boundary Surveys: Provided full boundary surveys and ALTA surveys for military complexes, private residences, prison facilities, commercial sites, and all boundaries associated with various engineering projects throughout the state.

Construction Observation: Provided construction observation, field engineering and testing for numerous water, wastewater and airport projects throughout the state.

AFFILIATIONS

West Virginia Society of Professional Surveyors.

ROGER J. KENNEDY, ASLA
Landscape Architect
and Project Manager

EDUCATION

West Virginia University, BSLA, 1990
Natural Stream Training Courses I - III, West Virginia University, 2000-2002.

REGISTRATION

Landscape Architect, West Virginia, 1993

PROFESSIONAL HISTORY

June 1990 to Present: Chapman Technical Group
Landscape Architect, Project Manager and Computer Network Manager.

May 1989 to May 1990: WVU and the National Park Service
Inventoried and analyzed abandoned mine sites along the New River Gorge National River utilizing PC ArcInfo.

22 years professional experience.

PROJECT EXPERIENCE

Site Development: Responsibilities include grading design, site planning and layout, analysis of existing features and services, storm water design and management, erosion control, as well as project management. Projects include prisons, landfills, military complexes, banks, airports, subdivisions, gas stations and other public facilities.

Bridge and Highway: Responsibilities include the design of horizontal and vertical road alignments, superelevation design, intersection layout, slope design and quality control review. Projects include several multi-lane highways and bridges throughout West Virginia.

Miscellaneous: Other experience includes the use of various civil design software packages for use in site development and road design, digital terrain modeling, hydraulic analysis and related computer aided design tools. Additional responibilities include the development and management of the computing resources of the company. This includes the management of software and hardware inventories, as well as the development and management of all local area networks in each office and the wide area network which links them.

AFFILIATIONS

Member of the West Virginia State Board of Landscape Architects
Member of the Sigma Lambda Alpha Honor Society of Landscape Architects
President of St. Albans Riverfest, Inc.

STEVENS ENGINEERING

Stevens Engineering is recognized throughout North America for responsive planning and engineering design. With nearly 30 years of service to its clients, Stevens Engineering is an accomplished source for passenger ropeway engineering, planning and design of lift and trail systems, snow tubing park design and mountain surveying.

Lift relocation engineering and the design of upgrades and modifications to existing lift installations are technical specialties at the core of the firms' capabilities. Stevens Engineering frequently assists lift manufacturers with the design of new installations, major lift upgrades and lift profile surveying. Ski area clients often seek out the technical expertise and the knowledge of governing standards and regulations Stevens Engineering has to offer for assistance in preparing comprehensive and result-oriented bid specifications for future lift purchases and for expert witness representation.

Contact: Ross Stevens, P.E. 215 Sargent Road New London, New Hampshire 03257
Ph: 603-526-2493 Fax: 603-526-2003 email: steveng@tds.net
www.stevens-engineering.com

STEVENS ENGINEERING

P.O. Box 1945 New London, NH 03257
Tele: (603) 526-2493 Fax: (603) 526-2003

PROFESSIONAL PROFILE

Ross A. Stevens, P.E., President, STEVENS ENGINEERING
215 Sargent Road
P.O. Box 1945
New London, NH 03257

SPECIALIZED PROFESSIONAL COMPETENCE

Passenger Ropeways:	Planning, Engineering Design, Analysis, Inspection,
Aerial Ropeways	Relocation Engineering, Upgrades, Modifications,
Surface Lifts	Due Diligence Surveys, Dynamic Testing,
Conveyors	Maintenance Consulting, Accident Investigation,
	Profile Surveying, Construction Engineering
Snow Tubing Parks:	Planning & Engineering Design, Terrain Dynamics Evaluation
Civil Engineering:	Site Planning, Engineering Design, Surveying, Permitting
Structural Engineering:	Engineering Design, Analysis, Inspection

PROFESSIONAL BACKGROUND

Registered Professional Engineer and Qualified Tramway Engineer in: Maine, Maryland New Hampshire, Vermont, Connecticut, Massachusetts, New York, Pennsylvania, Michigan, Utah, Wisconsin, New Jersey, Colorado, Idaho, Iowa, Tennessee, West Virginia, Wisconsin, Ontario, New Brunswick

Bachelor of Science Degree in Civil Engineering University of Massachusetts, Amherst - 1974

Entered Profession in 1974

AFFILIATIONS

NATIONAL TRAMWAY STANDARDS BOARD – Member from 2000 - 2006

AMERICAN NATIONAL STANDARDS INSTITUTE - ASC B77 Accredited Standards Committee - American National Standard for Passenger Tramways, Committee Member

OITAF-NACS - International Organization for Transportation by Rope, North American Continental Section, Member

NSAA - National Ski Areas Association, Member

OSRA - Ontario Ski Resorts Association, TSSA/OSRA Technical Advisory Committee

SENH - Structural Engineers of New Hampshire, Member

State of New Hampshire, Governor's Office of Emergency Management - ACT-20 Post-Earthquake Building Safety Evaluation Engineer

steveng@tds.net
www.stevens-engineering.com

STEVENS ENGINEERING

SELECTED CLIENTS FOR THE MOUNTAIN RESORT INDUSTRY

Squaw Valley – CA
CNL Lifestyles, LLC – FLA
Arrowhead Ski Area – NH
Mount Isenglass Snow Park - NH
Attitash - NH
Cannon Mtn. - NH
Crotched Mountain, Francistown, NH
Dartmouth Skiway, NH
Gunstock, NH
Willis of New Hampshire
Kaser North America – Grantham, NH
Mount Cranmore - North Conway, NH
Mount Sunapee State Park, NH
Star Lifts, Sunapee, NH
State of NH - Dept. of Parks and Recreation
Proctor Academy, NH
Rowell Hill - NH
Moose Mountain - NH
Ragged Mountain - NH
Whaleback - Lebanon, NH
Bretton Woods - NH
Waterville Valley - Waterville Valley, NH
King Ridge - New London, NH
Snow Hill at Eastman - NH
Sno-engineering, Inc. - Littleton, NH
Poma of America - West Lebanon, NH
Ragged Mountain, NH
Tenney Mountain - New Hampshire
Mountain Creek – NJ
Hidden Valley - NJ
Ober Gatlinberg, TN
Burke Mtn. - VT
Round Top, VT
Bolton Valley, VT
Stratton Mountain - VT
Mount Snow – VT
Smugglers Resort - VT
Haystack, VT
Mount Mansfield Resort - Stowe, VT
Round Top, VT
Sugarbush Resort - Warren, VT
Mad River Glen - Fayston, VT
Magic Mountain, VT
Jay Peak Resort - Jay, VT
Middlebury Snow Bowl - Middlebury, VT
Bear Creek - VT
Wachusett Mountain - Princeton, MA
Otis Ridge - MA
Ski Bradford - MA

Nashoba Valley - MA
Amesbury Sports Park - Amesbury, MA
Blue Hills Ski Area - Canton, MA
Conservation Tourism, LTD - MA
Aon-Reed Stenhouse – ON
Searchmont – ON
Horseshoe Valley - ON
Craigleith Ski Club - ON
Cassels Brock & Blackwell - ON
Dale Intermediaries Ltd. - Toronto, ON
Hidden Valley Highlands Ski Club - ON
Hughes, Amys - Toronto, ON
Zurich Canada - Toronto, ON
Snow Valley - Barrie, ON
Berthoud Pass, CO
Breckenridge, CO
Howelson Hill, CO
Jenlynn International, Inc. - Boulder, CO
Stadeli USA - Boulder, CO
Doppelmayr USA - Golden, CO
Poma of America - CO
Ski Snowstar - Ill
Sun Valley Company - Idaho
Mt. Crescent – Iowa
Sleepy Hollow Sports Park – Iowa
Norway Mountain – MI
Ski Brule - MI
Mt. Bohemia, MI
Porcupine Mountain - MI
U.S. Gypsum, MI
Whiteface - Olympic Regional Development Authority - Wilmington, NY
Catamount - NY
Mount Peter, NY
Gore Mountain - NY
Partek Enterprises, Inc. - Pine Island, NY
USMA, West Point - NY
Big Tupper – NY
Snow Park Niagara – NY
Scotch Valley, NY
Hunt Hollow, NY
Ski Windham – NY
Royal Mtn. - NY
Belleayre Ski Center - NY
Whitetail Ski Company - Mercersberg, PA
Laurel Mountain State Park - PA
Boyce Park Ski Area - Pittsburg, PA
Willowbrook - PA
Ski Big Bear - PA

steveng@tds.net
stevens-engineering.com

STEVENS ENGINEERING

SELECTED CLIENTS
FOR THE
MOUNTAIN RESORT INDUSTRY

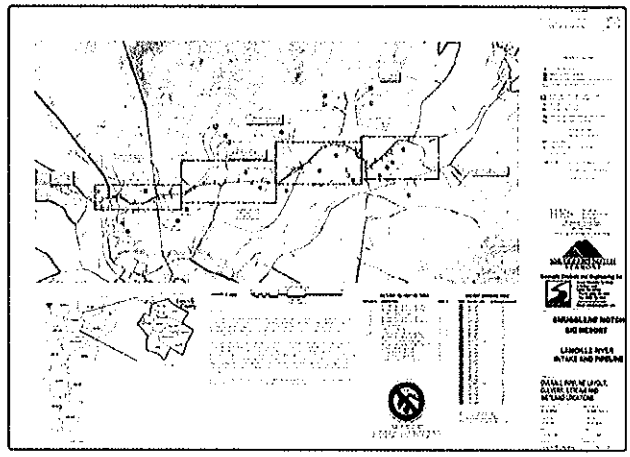
Framar, Inc., PA
Montage Ski Area - PA
Pinecrest Resorts – PA
Framar, Inc – PA
Ski Roundtop – PA
Rustler Lodge - Alta, Utah

Bruckschlogl GES.M.B.H - Austria
Winter Park - Wisconsin
Ri b Mountain – Wisconsin
Hermon Mountain – Maine
Oxford Plains Snowtubing, Maine
Sugarloaf USA – Maine
Camden Snow Bowl - Maine
Mars Hill – Maine
Shawnee Peak - Maine
Saddleback – Maine
Sports Parks of Maine
Shawnee Peak - Maine
Sunday River - Maine
Eaton Mountain – Maine
Stone Mountain Park - GA
Ober Gatlinburg - TN
Garaventa, CTEC – Utah
Division of Parks and Recreation - Commonwealth of WV
Canaan Valley – WV
Oglebay Family Resort - WV
Snowshoe Mountain Resort - WV
Mount Ashwabay - WI
Dosel, S.A. – Costa Rica
Rain Forest Trams – Costa Rica
Rain Forest Trams, LTD – Dominica
Poley Mountain – New Brunswick
Mount Southington – CT
Yawgoo Valley - CT
Brandywine - Ohio

steveng@tds.net
stevens-engineering.com

SNO.MATIC CONTROLS AND ENGINEERING, INC.

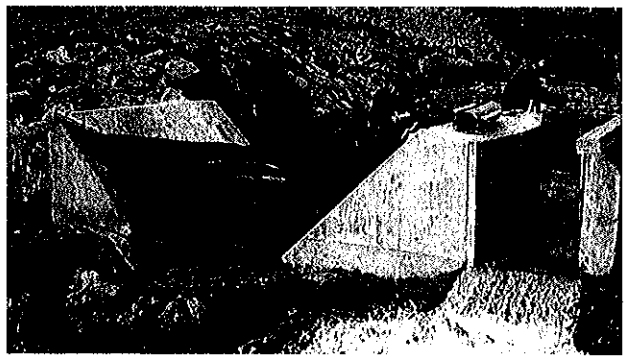
SNOWMAKING EXPANSION PLANS AND PERMIT DESIGN



Independent analysis of snowmaking expansion alternatives for master plans and permit submittals. Services include:

- Weather and snow production analysis
- Piping network design
- Water and Power Supply investigation
- Pump and Compressor Expansion
- Energy Efficiency audits/rebates
- Budgets and Scheduling

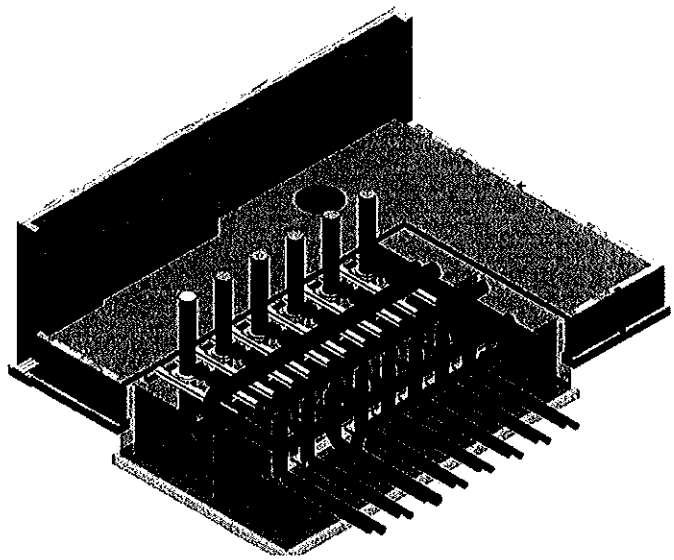
WATER DEMAND, STORAGE, AND INTAKE DESIGN



Analysis of water demands, river flows, and storage requirements. Services include:

- Hydrological modeling
- Storage design
- Intake and Flume Design
- Inflatable Dams
- State/ Federal regulatory coordination

PROFESSIONAL ENGINEERING DESIGN



Professional Engineering Services on pumphouses, compressor stations, valve stations, water intakes and impoundments, and control systems. Scope includes specifications for competitive bidding on components and construction contracts. Design process extends through construction review, start-up and operating manuals. Extensive experience in

- Pump and Compressor Stations
- Mountain Piping and Valving
- Siphon Systems
- Cooling Tower Design
- Heat Recovery

PLANNING, DESIGN AND CONTROL SERVICES

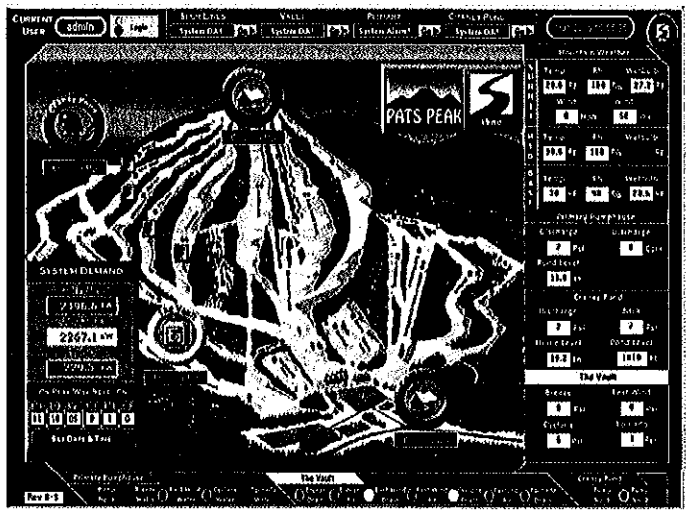
603.795.2900 (PHONE)
603.795.2910 (FAX)

INFO@SNOMATIC.COM
WWW.SNOMATIC.COM

Control Systems

Monitoring and control systems to promote safe, reliable, and efficient operation.

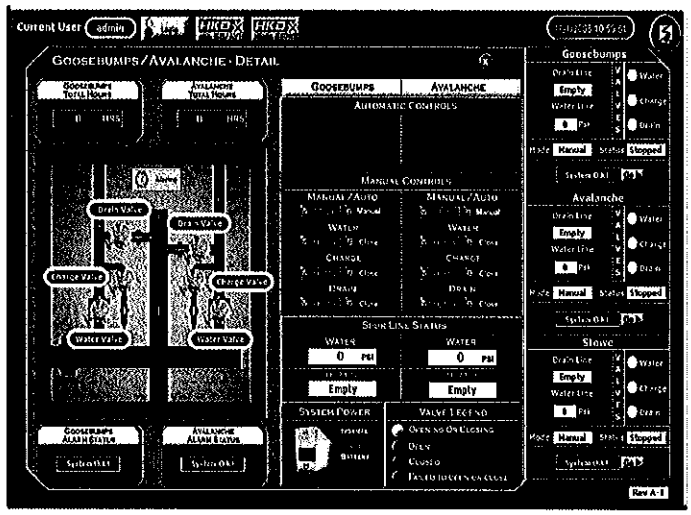
- Specialists in PLC control for pump, compressor, valve operations
- Simplifying pump/compressor operations through sequencing, VFD's and pressure control.
- Systems range from low cost touchscreens to full computer systems.
- Full service and support



Weather and Power Monitoring

Remote systems to monitor, log, and control weather and power usage

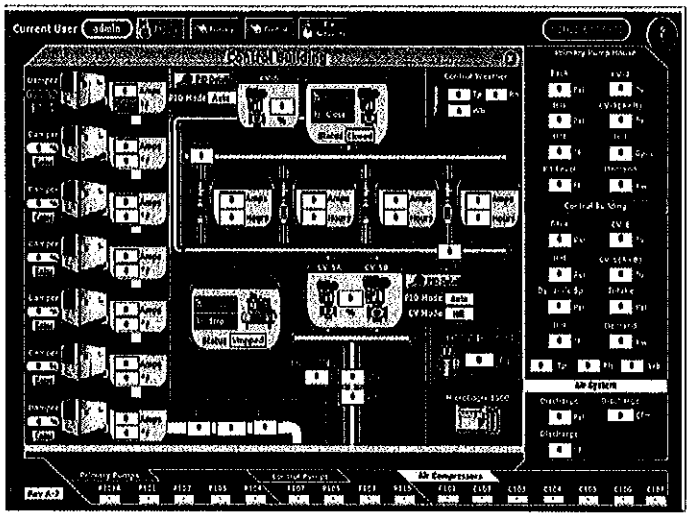
- Solar or powered weather stations
- Radio, fiber, or hardwire communication
- Power monitoring for resort and utility substations for interruptible contracts



Web based Graphics, Reports, and Logging

Flexible graphic and reporting systems using standard MS Access for data logging and analysis. Unique web based architecture offers:

- Multiple operating stations
- Secure internet access
- Powerful reporting and data analysis
- Supplying resort web services with weather information, snowmaking, grooming status



Automation

Automation of pump and compressor stations, snowguns and valves. Includes:

- Flooded spur line automation
- Valve station automation for OSHA compliance
- Integration of fan gun and air/water tower automation systems
- Open architecture web based interface

SNO.MATIC

Planning, Design and Control Services

603.795.2900 (phone)
603.795.2910 (fax)

info@snomatic.com
www.snomatic.com

Statement of Qualifications

Sno.matic Controls and Engineering, Inc. is the premier North American snowmaking design company, with installations throughout the US, Canada, South America, and Asia. Sno.matic specializes in providing evaluations, master plans, permit assistance, design and control system integration on snowmaking systems. Sno.matic does not manufacture or represent any snowguns, pumps, compressors, or other mechanical equipment. As a result, system design and control integration is customized to the specific objectives and requirements of the site rather than to the profit incentives of equipment sales.

Sno.matic provides a full range of services, including review of existing snowmaking facilities, defining the optimal design concept for snowmaking installations or expansions, permitting, detailed design, construction, controls/automation and operations support.

Sno.matic History

Sno.matic Controls and Engineering is an offshoot of Sno.engineering, the world's leading ski resort planning and design consultants. Sno.matic operated from 1984-1994 as a division of Sno.engineering. Sno.matic was split off from Sno.engineering in 1994 in order to concentrate on the development and marketing of snowmaking automation and control integration along with overall snowmaking system evaluation, planning, and design.

Sno.matic Scope of Services

Sno.matic provides the following services in engineering design and controls/automation:

- Snowmaking System Master Plans
- Efficiency Studies
- Concept Designs
- Pump house Design
- Compressor Design
- Water Storage Analysis
- Water Intake Design
- Specifications
- Snowmaking System Controls
- Plant and Gun Automation
- Cooling Tower System Design/Control
- Start-up/Training
- Energy Analysis
- Heat Recovery Systems
- Substation and Power Monitoring

Key Personnel

Scott Barthold, PE President

Scott Barthold specializes in the design and specification of snowmaking systems for the ski resort industry. His expertise ranges from system planning through detailed design and operations, with extensive experience in energy analysis, heat recovery design, control system development, and snowmaking design alternatives. Mr. Barthold's consulting experience also includes the development of new snowmaking technologies, as well as the application of industrial process management techniques to the snowmaking industry. Mr. Barthold's experience spans 30 years with projects throughout North America, Europe and Asia.

Jeff Wilkinson Design Engineer

Jeff Wilkinson provides design and CAD support for snowmaking system designs, with more than 15 years of snowmaking design experiance. Jeff was previously stationed at the US Army's Cold Regions Research and Engineering Lab as an Engineering Officer. His strengths include CAD design, ice control, mechanical design, and software support.

Lance Anderson Director, Controls Technology

Lance Anderson provides technical and software assistance for both the engineering and control activities of Sno.matic. Lance has more than 15 years experience in snowmaking controls, including SCADA system development and implementation, PLC design and programming, software development for browser based industrial monitoring/control, and system installation/troubleshooting.. Lance has supervised the installation, operation and troubleshooting of automated and non-automated snowmaking control systems throughout North America, Asia, and South America.

Sno.matic Controls and Engineering, Inc.
2009-2010 Client Reference List

Client	State	Description	Contact	Phone
Alta	UT	Preliminary Storage Pond design, Concept plan for piping integration, Control Services	Buck Boley	(801) 359-1078
Burke Mountain	VT	Snowmaking Efficiency Analysis for Efficiency VT	Dick Andross	(802) 626-1363
Breckenridge	CO	Compressor Sequencing Program, Control System Support	Ray Weller	(970) 453-5000
Camelback	PA	Snowmaking Expansion Master Plan	Charles Blier	(570) 629-1661
Camden Snow Bowl	ME	Snowmaking Master Plan	Bill Fitzcharles	(207) 236-3438
Canada Winter Games	NS	Snowmaking Planning and Expansion for Ski Wentworth and Ski Martock	Gary Furlong	(902) 490-3935
Cochrans Ski Area	VT	Design and Controls services for snowmaking expansion	Jeff Dunham	(802) 496-2195
CNL Income Corp.	FL	Diligence Reports reviewing equipment and piping infrastructure, water availibilty, control systems, Expansion/Upgrade options for multiple North American Resorts	Matt Ragsdale	(407) 650-1000
Champlain Water District	VT	Efficiency Analysis for pumping, treatment, and transmission systems	Tim Perrin	(802) 488-7658
Crabbe Mountain	NB	Concept Plan and Detailed design of snowmaking system upgrade	Jason Crawford	(506) 463-8311
Crested Butte	CO	Control System Integration, System Review and Analysis	Mark Vogeli	(970) 349-4442
Dartmouth Skiway	NH	Snowmaking Installation Permit Assistance, Efficiency Upgrade Recommendations, Pump Diagnostic Services, Generator Heat Recovery Design, Monitoring/Control	Doug Holler	(603) 795-2143
Efficiency Vermont	VT	Efficiency Analysis for 2 Vermont Ski Resorts	George Lawrence	(802) 860-4095
Gunstock	NH	Master Plan Update, Piping Design Assistance and Control System Upgrade	Greg Goddard	(603) 293-4341
Heavenly Valley	CA	Master Plan for Snowmaking Expansion, Ongoing Process Control System Implementation	Blaise Carrig	(775) 586-2311
Jay Peak	VT	Master Plan for Snowmaking Expansion, Control System Upgrade, Permit Assistance, and iSno Software configuration	Dave Heath	(802) 327-1280
Jiminy Peak	MA	Concept Plan, Piping/Pressure Analysis, Pumphouse Design and Control, Weather System	Brian Fairbank	(413) 738-5500
Killington	VT	Control System Upgrade with Ethernet Communication	Jeff Temple	(802) 422-6219
Kings Hill Tubing	ONT	Tubing Park snowmaking system design	Carl Whittier	(905) 584-9345
Mountain High	CA	Master Plan and Efficiency Analysis	Karl Kapuscinski	(760) 249-5808

Sno.matic Controls and Engineering, Inc.
2009-2010 Client Reference List

Client	State	Description	Contact	Phone
Mt Cranmore	NH	Master Plan and Weather Monitoring System	Ben Wilcox	(603) 356-5543
Mt. Sunapee	NH	Ongoing Computer Control System Enhancements	Jay Gamble	(603) 763-2356
Northstar	CA	Master Planning, Expansion Design, Permit Assistance and Control System Upgrade	Tim Stansell	(530) 550-8360
Okemo	VT	Control System Installation and Support	Barry Tucker	(802) 228-1685
Pat's Peak	NH	Ongoing Process Control System Improvements	Kris Blomback	(603) 428-3245
Saddleback	ME	Snowmaking System Review and Design Assistance	Warren Cook	(207) 864-5671
Ski Martock	NS	Snowmaking Master Plan, Design Assistance, Control System Installation and Commissioning	Jim Boylan	(902) 798-9501
Ski Wentworth	NS	Snowmaking Master Plan, Design Assistance, Control System Installation and Commissioning	Leslie Wilson	(902) 896-1246
Smugglers Notch	VT	Control System support, Design of major transmission pipeline, New River withdrawal, Compressor Building Design	Mark Delaney	(802) 644-1168
Snowshoe Resort	WV	Control System support, System Analysis	Tex Ritter	(304) 572-1000
Steamboat Springs	CO	Snowmaking Master Plan and Design Assistance on Pump Station Modifications	Doug Allen	(970) 871-5319
Stowe Mt Resort	VT	Control System Support/Expansion, Efficiency Analysis	Scott Reeves	(802) 253-3610
Sugarbush	VT	Process Control Support, Weather Monitoring System, VFD Integration	Hardy Merrill	(802) 583-6570
Waterville Valley	NH	Siphon pipeline design, Control System upgrade and support	Keith Sutherland	(603) 236-8311

Frank Brooke

Canaan Valley, WV 26260
Phone: 304-866-4913 E-Mail: frbrooke@aol.com

Experience

Snowboard Director 2001-2002

- **Snowbasin Ski Resort**, Home of the 2002 Winter Olympics, Ogden, Utah.

  Ski & Snowboard Instructor, Level 3 certified.

  Top Tier Instructor with over 90% of private lessons requested, also providing instructor supervision, training and coordination as needed. Assigned lesson according to ability and personality match with clients.

Ski / Snowboard Instructor 1983-2010

- **The Canyons Ski Resort**, Park City, UT. Ski & Snowboard Instructor, Level 3 certified. 20+ years experience.

  Top Tier Instructor with over 80% of private lessons requested, also providing instructor supervision, training and coordination as needed.

- **Park City Mountain Resort**, Park City, Utah. Ski & Snowboard Instructor, Level 3 certified.
- **Timberline Ski Resort**, Canaan Valley, WV. Ski Instructor, Level 3 certified.
- **Canaan Valley State Park Ski Resort**, Canaan Valley, WV. Ski Instructor, Level 2 certified.

  Golf course worker, starter, golf cart mechanic and retail associate.

Ski / Snowboard Director 2002-2006

- **Montel Williams** New York City, Los Angeles, California and Park City, Utah.

  Ski/Snowboard Director, Coordinator and Trainer

  Traveled to all ski resorts in the United States and Canada. South American travel to Peru, Chile, and Argentina. Traveled with family, friends and business associates year round to ski resorts to accommodate 5 to 30 people per trip. Provided ski or snowboard equipment for guests, as well as ski and snowboard lessons for many high profile guests. Managed and supervised a staff of 15 Instructors.

Timberline Ski Resort, Canaan Valley, West Virginia. Sales Manager and Trainer. 2009

Responsible for establishing quality control for the merchandise, products and inventory control system.

Daily operations manager for ski and snowboard retail and rental shops.

Buyer for ski and snowboard retail and rental shops.

Interviewed, hired, scheduled and managed over 50 employees. Managed all international employees, following guidelines from the international employers visa, regarding scheduling, responsibilities, and documentation.

Increased sales 200% from previous year, updated logistics process, enabling employees to help customers more efficiently. Strategic buying practices to accommodate yearly trends in clothing and accessories.

Education

1992

West Virginia University. School of Business and Economics. Morgantown, West Virginia.

Bachelors of Science Degree in Business Finance.

Statement of Qualifications with Example Projects and Service Information

October 2010

Smith-Comeskey Ground Water Science LLC

295 S. Lawn Ave.
Bluffton, OH 45817
Tel: 419/358-0528 • e-mail:
info@groundwaterscience.com

www.groundwaterscience.com

Ground Water Science

Science and Planning for Earth's Most Critical Resource

Ground Water Science Capability Statement

Company Summary

Smith-Comeskey Ground Water Science has been providing a broad range of scientific and training services in hydrogeology and well and drain maintenance and rehabilitation since 1986.

Unique among comparable hydrogeologic consulting firms, we take a "total systems" approach to designing ground water source systems, and solving and preventing the problems that impair their performance. We link hydrogeologic analysis to a wide range of information needed for a complete ground water information package.

Unique among consultants on well and pressure relief system performance problems and maintenance and improvement, we are not commercially tied to specific chemical or technical solutions and can serve our clients without bias.

Professional Services

- Hydrogeologic field testing
- Hydrogeologic modeling with experience in complex fracture-flow, quasi-porous media fracture flow, layered unconsolidated, and glacial-alluvial in bedrock settings
- Environmental microbiology (including biofouling and biocorrosion-related) and geochemical field sampling and analysis for both water and solid matrices.
- Providing specifications, site supervision, and verification testing and documentation for well construction and well rehabilitation projects – also the capability to provide these as turn-key services
- Forensic analysis and troubleshooting for biofouling and biocorrosion of ground water and pressure relief system problems and microbiological well contamination
- Ground water system and pressure relief system maintenance planning and implementation
- Training in problem prevention and performance maintenance.

Experienced Staff

The Ground Water Science partners, Stuart Smith and Allen Comeskey, are certified and licensed geologists and ground water professionals with advanced degrees. Each contributes over 30 years of varied, quality, hands-on professional experience to the firm. The partners are both published and Smith has contributed to several landmark drilling, well construction, biofouling analysis and well rehabilitation publications. The integrated understanding of hydrogeologic, biogeochemical, and well performance problems that this experience brings is available on each project, large or small.

With us, it's personal. **One or both partners are always actively engaged in your project.**

- **We don't just show up at sales meetings and "sign off" at the end.**
- **We stay active in and volunteer with industry and professional organizations and learning.**

Facilities and Equipment

- All equipment to perform well and pump performance testing (1 to 2000 gpm). Borehole and surface geophysics and video available.
- All equipment to perform on-site sampling and analysis of basic chemical-physical and biofouling and biocorrosion parameters. Packaged to be easily transportable.
- Hydrologic modeling (both semi-analytical and numerical) and graphical software on high-capacity workstations and laptops for flexible use.
- GIS, contouring, LIDAR/fracture trace mapping, and three-dimensional log and profile capacity to import, manipulate, manage, and display a wide range of information in a spatial context.
- Biofouling, biocorrosion, and other microbiological analysis by microscopy, cultural and biochemical methods. We supply these services to major full-service laboratories.
- Training packages and presentation technology for improving the capabilities of others.

Primary Clients

Ground Water Science command of rock hydrogeology is second to none regionally, and our expertise in ground water system biofouling, maintenance, and rehabilitation is recognized and sought out across North America and beyond. We have solved problems for everything from small private systems to some of the nation's biggest ground water projects.

- **National Ground Water Association:** Training, research on well problems and solutions, and manual production.
- **Quality firms e.g., Hull & Associates, Greeley & Hansen; Earth Tech; CH2M Hill; Fanning/Howey; DLZ Indiana; GEO Consultants.** Testing and plans for ground water system maintenance and rehabilitation, hydrogeology, WHPP.
- **AWWA Research (Water Research) Foundation:** Landmark biofouling and well maintenance and rehabilitation research.
- **Agencies such as U.S. Army Corps of Engineers (via contractors), State of West Virginia:** Wellfield maintenance guidance manuals, well testing, evaluation, cleaning plans.
- **Bureau of Reclamation Technical Services Center.** Biofouling analysis, research, and comprehensive maintenance planning for large wellfields and dam pressure relief systems.
- **Municipal clients including Hamilton, Ohio, Tate-Monroe Water Association (Ohio), Elkhart, Indiana, Muscatine, Iowa, and Metropolitan Water, Tucson, Arizona.** Well construction and well maintenance and rehabilitation analysis and planning.
- **Angus (Kidde), Cablerie d'Eupen, (Belgium) and Boreline (South Africa):** Consultant, well maintenance related products.

- **Our informative and widely linked web site www.groundwaterscience.com has more information on our experience and qualifications, plus a newsletter and informative pages oriented toward ground water topics.**
- **We urge you to stay active in associations, volunteer, and contribute to safe drinking water worldwide.**

Company Designations

Dun & Bradstreet no. 794593327

Cage code: 1WRP2

Corporate status: Small business, no additional designations

Limited liability company

NAICS Codes

Ground Water Science offers services under the following listed NAICS codes:

Primary:
541690 – Other scientific and technical consulting services
541712 – R&D physical, engineering, life sciences
541990 – All other professional, technical, and scientific services
611430 – Professional and management development training

Secondary (subcontracted):
541330 – Engineering services
541360 – Geophysical surveying and mapping

PSC Codes

Primary:
AJ32 – R&D Environmental Science
AJ34 – Environmental Science Engr. Development
AJ52 – Life Sciences, Applied & Exploratory
AJ54 – Life Sciences Engr. Development
B504 – Chemical/Biological Studies
B517 – Geological Studies
B525 – Natural Resources Studies
B533 – Water Quality Studies
F103 – Water Quality Support Services
H332 – Inspection Services, Water Pur. Equipment
H999 – Misc. Inspection and Testing Services

Secondary:
AJ42 – Engineering, Applied & Exploratory
B518 – Geophysical Studies
F015 – Well Drilling/Exploratory Services

Contact Information

Stuart Smith, CGWP, partner, e-mail stuart@groundwaterscience.com, tel: 419.235.4955
Allen Comeskey, CPG, partner, e-mail allen@groundwaterscience.com, tel: 419.358.0528.

Smith-Comeskey Ground Water Science Technical Capabilities

- **Principals are certified (CGWP, CPG) and licensed (currently in Pennsylvania, Indiana, and Kentucky and reciprocating ASBOG states and on federal projects) hydrogeologists, each with over 30 years experience in a broad range of hydrogeologic settings and project conditions, with extensive knowledge of aquifer-scale hydrogeology, well hydraulics, well and wellfield design and equipment, and ground water quality/hydrogeochemistry.**

- **A leading (and "field practical") ground water microbiologist with local, national and international experience focusing on the problems of well and ground water system performance and ground-water quality decline.**

- **All equipment to perform high-quality well and pump performance testing (1 to 2000 gpm) and on-site testing of basic chemical-physical parameters and biofouling and biocorrosion indicators. We also provide additional onsite analyses and sampling for off-site analysis as needed.**

- **Capacity to analyze and graphically display results of a wide range of pumping test and other analytical results in various hydrogeologic settings, including step tests, constant-rate tests, and slug tests for single and multiple wells, and biological and chemical data.**

- **Hydrologic modeling capacity (both semi-analytical and numerical) with experience in complex fracture-flow, quasi-porous media fracture flow, layered unconsolidated, and glacial-alluvial in bedrock settings.**

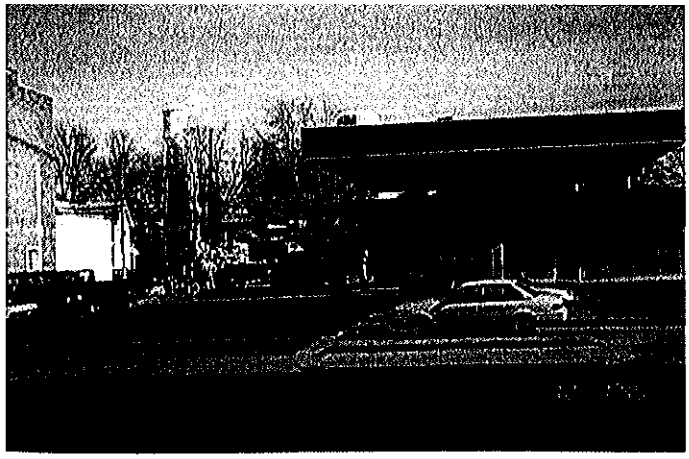
- **Geographical information system, profiling and three-dimensional log and profile capacity to import, manipulate, manage, and display a wide range of information in a spatial context, including accurate projection of hydrologic and geologic features on surficial feature maps and photographs, and development of cross-sections, head maps, and fence diagrams.**

- **Capacity to analyze for biofouling microbiological parameters by microscopy and culturing and biochemical methods, provide chemical (including significant on-site), corrosion, and mineralogical analysis, and to provide detailed predictions and analyses. We supply these services to major full-service laboratories and multi-state engineering consultants, working with our associates at Biosolutions Laboratories LLC, as well as on a consulting basis and can conduct them under primitive field conditions.**

Some Representative Wellfield Planning and Wellhead Protection Projects (1997-present):

The following are some of our projects (of the ones we can discuss) to provide an idea of the type and scope of projects we have conducted. One feature is the long-term and repeat nature of our work with our clients.

Village of Ada, Ohio -- First fully endorsed wellhead protection plan in northwest Ohio and further implementation of the plan. Jim Meyer, Village Administrator, 419/634-4045.



Back before source water protection planning became a paper exercise in Ohio, there was real hydrogeology done. The Village of Ada began its wellhead protection planning in 1990, before final Ohio Wellhead Protection Program requirements were in place due to concern about the vulnerability of its high-capacity carbonate-aquifer wells. Ground Water Science predecessor S.A.Smith Consulting Services worked with the village in adapting to changing requirements, developing a wellhead protection team, and gathering crucial hydrogeologic information (including detailed geophysical data provided by the University of Toledo), with the assistance of faculty and students at Ohio Northern University. The delineation submitted was one of the first in northwestern Ohio and was a test-bed for acceptance of MODFLOW-MODPATH delineation in the carbonate aquifer (building on existing Ohio State University experience). The PPSI was relatively detailed due to the long industrial history and numerous glacial layer perforations in the vicinity of the wellfield. The MEP was the first endorsed in northwest Ohio, and was endorsed with little request for modification by the Ohio EPA. Copies of it have been frequently requested as a model. Work was conducted within budget.

Dunkirk, Ohio -- To date: Well upgrades, fully endorsed wellhead protection plan, quarry impact assessment. Paul Cramer, W/WW Superintendent, 419/759-2102.

(1) WHPP: Dunkirk is the smallest northwest Ohio community committed to full-scale WHPP. Also with a vulnerable (shallow-bedrock) wellfield near rail lines, Dunkirk began the process when S.A.Smith supervised well upgrades to be designated "ground water" under the Surface Water Treatment Rule. The PPSI relied heavily on recruiting local knowledge of past land-use activities. The delineation was completed in 1996, PPSI in 1997, and management plan in 1999. All quickly endorsed by Ohio EPA. The entire project was completed under budget. (2) Advising the village on potential impacts from a quarry property being developed and expected to pump 1 MGD, including data collection, MODFLOW modeling, and interacting with other parties (Fall 2000-2003). 3) Revise source water protection plan (2007-present). 4) Corrosion consultation, distribution system valves (2009) 5) Planning new replacement well.

Forest, Ohio -- To date: Delineation endorsed, FPS Inc. (now ARCADIS), engineering. Charles Brunkhart, Village Administrator, 419/273-2505.

Forest has wells that are less vulnerable to surface influences, but the area is gaining several large industrial agriculture operations, which could affect both ground water use and quality. The delineation was completed in early 1997 with modifications requested by Ohio EPA. Smith-Comeskey successfully defended a technically accurate and rigorous approach to modeling this aquifer setting (heavily vertical fracturing in the carbonate matrix) using MODFLOW and further demonstrated its statistical validity. Work completed under budget.

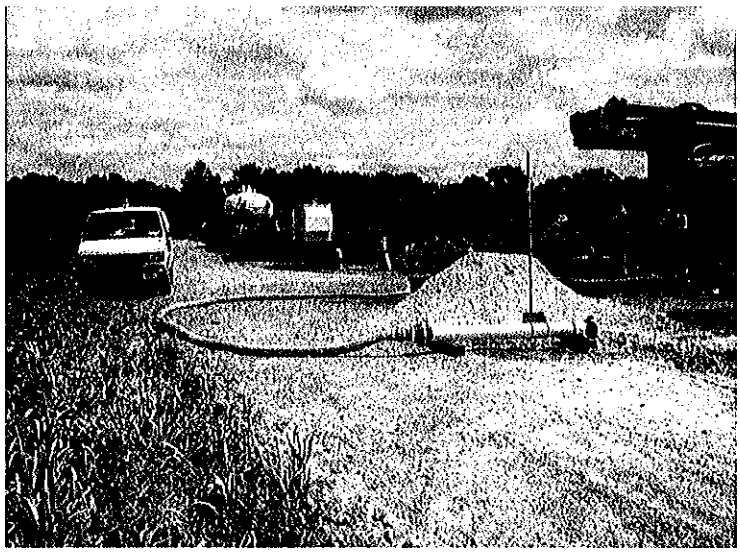
Spencerville, Ohio -- To date: Delineation completed and endorsed. Testing and modeling for strategic water planning under way. Shawn Chapman, VA, 419/647-6263.

Spencerville has a high-capacity carbonate-aquifer wellfield in a politically and technically sensitive aquifer setting (a designated sole-source aquifer) in which both public water suppliers and private-well owners maintain marginal ground water supplies. Ground Water Science has advised Spencerville on the likely impacts of both nearby development and the village's expansion plans. This included analysis of studies by other consultants in the area and technical liaison with the state and neighboring communities. Ground Water Science's initial delineation of Spencerville's WHPA was based on existing information, and the model was used for future wellfield scenario-testing. WHP work was completed under budget. Well capacity testing has been completed, with existing village wells tested to make accurate projections of capacity. Pumps equipped for a total of 1500 gpm and supplying 230,000 gpd are easily capable of supplying 500 to 1000 gpm each and over 2 MGD in total. Aquifer-scale testing was conducted in 2001 to determine impacts of planned well yields on the region, and to update the numerical model of the wellfield. Interacting with Ohio and federal EPA over discovered fuel oil plume in the WHPA. 2001- 2007.

Village of Convoy, Ohio -- WHPA endorsed. W/WW Supt., 419/749-2923.

Convoy also has a carbonate-aquifer wellfield with a high-capacity potential in a technically sensitive aquifer setting. They first worked with us to solve well clogging and quality problems in the 1980s. The village is very interested in knowing how much water they can reasonably pump, and what effect that would have on the many nearby private-well owners. Ground Water Science has advised Convoy on the likely impacts of the village's expansion plans. Ground Water Science's WHPA delineation was based on existing information, including fracture studies to better inform anisotropy estimates, and the model will be used for future wellfield scenario-testing. Work completed under budget. Source water protection planning is under way.

Village of Coldwater, OH: The entire tool kit: detailed delineation and (using the model) optimizing wellfield use as an adjunct to wellfield maintenance. Eric Thomas, Village Administrator, 419/678-4881 (early part of project under Brian Wilcox, now V.A. of Ansonia, 937/337-5741).



Coldwater, Ohio, has a carbonate-aquifer wellfield with 13 relatively low-capacity wells that have experienced repeated and severe maintenance problems. (1) Smith-Comeskey reviewed the wellfield management, supervised and tested well rehabilitation work to improve performance, and made recommendations for better use of existing wells. (2) A large and highly detailed MODFLOW-MODPATH model was developed for the village, designed to serve both to delineate a WHPA and to plan better well use. We were able to demonstrate that pumping fewer wells on a more rational schedule and pumping rate would improve performance. Results were presented at the AWWA Ohio Section Conference in 1997. Work was completed under budget despite time-consuming crisis management with well-cleaning contractors in the 1996-1997 phase. (3) Further well cleaning planning, supervision and testing and well siting was conducted since 1997, with significant improvements in well efficiency and specific capacity, and two wells were constructed and tested in 2004 for the new water treatment plant.

City of Oxford, OH: detailed alluvial valley WHPA delineation and management planning. WHPA endorsed. 1997. Hueston Woods project hydrogeologic support (completed). New well planning (in progress). Dave Weihrauch, Chief Water Plant Operator, 513/523-1753.

Oxford, Ohio manages a 2-MGD water supply developed in two glacial-fluvial valleys in Butler County. Ground Water Science performed the WHPA delineation for the eastern Seven-Mile wellfield, which is also a politically sensitive resource. This aquifer is a complex two-layer confined unit with multiple clay lens units. Background information was both extensive and in some ways misinterpreted in past work. We gathered detailed and useful data on the confining unit and potentiometric surface. Testing work included confirmation of aquifer-stream interactions and analysis included reinterpretation of past test results. Modeling involved accounting for both aquifer units, the virtually continuous aquitard between, the aquiclude valley geometry, and stream interactions. We were able to show that flow is vertical down into the lower unit pumped by the production wells and downgradient along the valley. Work on this complex project was completed under budget. Notification of endorsement by the Southwest District Office occurred within two weeks of submittal. Oxford also intends to use the model for future planning and community interaction. Hueston Woods proved to be an economically nonviable development. Adding additional well capacity is taking the form of enlarging existing well capacity.

Village of Ottoville, Ohio: New well siting, old well plugging and wellhead protection. 1997-2002. Steve Wittler, W/WW Supt., 419/453-3147.

Ottoville maintains a ground-water supply system in southern Putnam County in a tight, high-sulfide portion of the carbonate aquifer. Existing wells had corroded and become unusable. Smith-Comeskey conducted site planning for a new well, wrote specifications for a deep well to avoid the highest sulfide ground water, and successfully brought the well to production, meeting project objectives. Existing corroded wells were securely sealed. WHPA delineation completed and submitted to Ohio EPA for endorsement. New well siting and testing in 2002 included interacting with new high school site architects over 180 geothermal bores being installed within the wellfield capture zone. New well in the planning phases.

Village of Willshire, Ohio: New well siting replacing quarry water source, and wellhead protection. 1997-99. WHPA endorsed. Jim Myers, P.E., Kohli & Kaliher Associates, Lima, Ohio, 419/227-1135.

Willshire has established a new ground-water supply system in western Van Wert County to replace an existing degraded and antiquated quarry supply and water plant. The new plant includes two wells feeding the first PWS iron filtration-nanofiltration treatment system in Ohio, just brought online in November 1998. Wells were completed and tested by S.A.Smith in 1995, with the remainder of the project awaiting Ohio EPA approval of the nanofiltration concept. S.A. Smith conducted site planning for a new well, wrote specifications for wells, and successfully brought the wells to production, meeting project objectives. . The WHPA delineation was completed on a fast track and endorsed, along with a potential pollution source inventory, in 1999. A draft management plan is being reviewed by the village and state SWAP personnel.

City of Hamilton, Ohio -- Well and wellfield capacity testing and modeling support of an application for increased withdrawal. Darla Crum, tel: 513/785-7211.

(1) The city had an interest in testing its wells to determine their pumping and production capabilities. Testing being conducted under contract by Jackson & Sons was analyzed by Ground Water Science (2000). (2) Conducting information review, analysis and modeling of the impacts of current and projected multi-MGD impacts from ground water pumping on the Miami River Valley aquifer. Project includes acquiring well information and withdrawal rates, using these to update and correct the existing regionally constructed MODFLOW model of the aquifer, and projecting output in

GIS to provide detailed visual representation of impacts on known geographical locations, plus technical assistance in liaison with Ohio EPA and other regional entities. Model inputs and upgrades of the complex model (a virtual redoing of antiquated MODFLOW files) and outputs with report conducted in two months on schedule. 2000-2001. Further valley-scale model analysis is being planned to improve understanding of the regional water resource. (3) New multiple-1000-gpm wells have been developed for the city power plant facility and water treatment plant, a project including modeling of proposed withdrawals, interaction with PRPs of a Superfund site, a test drilling program (including sonic methods in deep, coarse glacial material), design and installation of a monitoring array, and well design, construction supervision and testing. Ground Water Science inspected and documented all construction. Part of the site exploration phase was provided turnkey by a team lead by Ground Water Science.

Village of Bloomdale, Ohio -- Increasing current well capacity and planning new wellfield. Joe Simon, Village Administrator, 419/454-6500.

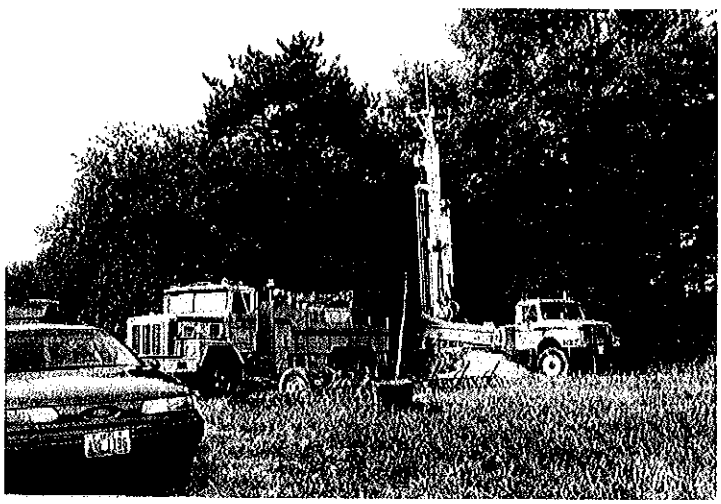
The village has a long-term problem with inadequate yield in current wells, resulting in periodic water crises. (1) Well rehabilitation options to increase water capacity were tested and evaluated in summer 2000, resulting in a successful doubling of wellfield capacity. More work to clean additional wells (with good results) was completed in 2001 with plans to deepen a well (2003). (2) Wellfield expansion planning is in progress, and will involve hydrogeologic evaluation of a selected site, well siting, and support of engineering tasks (2010-out).

Village of McGuffey, Ohio -- New well siting and wellfield capacity testing. Jim Meyer, Village Administrator, Ada, Ohio, technical advisor to McGuffey, 419/634-4045.

The village planned and completed the construction of new water wells as part of a water treatment system upgrade. 1) Ground Water Science developed specifications for testing drilling, selected sites, and conducted hydrogeologic testing of two new 500-gpm wells. A SWAP delineation has been endorsed and SWPP drafted. 2000-2004. 2) Ground Water Science is advising the village in responding to the potential siting of a large dairy operation southwest of the village SWPA. 2004-2007.

Village of Alger, Ohio. Village Offices 419/757-4321

The village of Alger developed a new water plant to replace the last of the old plant design type in the state of Ohio. As part of the demolition process, a productive water well was damaged. Ground Water Science advocated on behalf of the village for rehabilitating this well, but when this was denied by Ohio EPA on isolation radius grounds, we wrote specifications for, supervised construction of and tested two new water wells for the village on the new water plant site. We worked closely with the well contractor, G.H. Bierly, to assure a quality and productive construction, especially on the second well, which was extended into a more productive unit of the aquifer. A well maintenance plan was also drafted in light of the evident loss of production in the first new well after one year. 2003-2005.



Industrial facility, Kalsec, Inc. Kalamazoo, MI -- Conducting test drilling to quantify aquifer capacity to supply water and to site a new well to replace well capacity lost to offsite VOC contamination, and establish a maintenance plan for the new well.

Ground Water Science was retained to provide complete supervision of a test drilling, aquifer yield analysis and well siting program in the deeper of two glacial outwash sand-and-gravel aquifer units. Well sites identified by the client were evaluated by drilling, testing for VOCs in cuttings, and testing water quality and yield of test wells. Capacity for 1000-gpm wells in the VOC-free zone was identified at two sites using 1/2 of the projected construction budget, and the site geologic profile updated. A new 1000-gpm well has been constructed and tested, and placed in

service. A maintenance plan to prevent loss of production due to iron biofouling was drafted for facility implementation. A changing well environment (going to an iron sulfide condition) tested the plan and resulted in the need for recommending changes in the cleaning program and equipment to meet the new conditions in cooperation with the well contractor. 2000-2003. A revised well maintenance system is being planned and evaluated. 2003-ongoing.

Muscatine, Iowa – Conducting test drilling to confirm and characterize the nature of contamination from ethanol spills, the effect on aquifer water quality, and plans for management of the problem.

Ground Water Science teamed with environmental remediation service provider Philip Services, Columbia, IL (Dale Markley, CGWP, 618/281-1540), on a winning proposal to perform these services, using Geoprobe to sample aquifer media, and a combination of physical-chemical and biological analyses to define the current conditions in the aquifer. Based on information gathered, an emphasis on improving and managing the performance of the wells, rather than a focus on ground water quality remediation, was recommended. Recommendations are made for further action, treatment, and wellfield improvements to improve yield and quality. Completed in September 2001, on schedule. Further well rehabilitation planning and interaction with PRP was in progress.

Village of Carey, Ohio. Source water protection planning and wellfield resource optimization. Roy Johnson, Village Administrator (419/396-7681)

Carey has a wellfield developed in Silurian dolomite, but affected by nearby very large quarries and shallow upper Silurian to Devonian karstic "ridge" carbonates vulnerable to surface effects. The village requested that we develop a wellhead protection area delineation based on hydrogeologic analysis, and an associated management plan (2002-ongoing), rather than having the OEPA do it for "free". Data were collected for a water table map spanning the variety in heads and output flows in the region (including the 100-ft drop into quarries), an aquifer test conducted at the wellfield without disrupting water production operations, fractures were delineated to define the geometry of the flow field and to refine regional transmissivity values. Information was integrated with CAD and electronic topo maps from several sources in our GIS system with SURFER, and modeling conducted using a MODFLOW-MODPATH package integrated with ArcView and SURFER. A WHPA delineation report has been submitted for endorsement and a SWPP developed. A final WHPA was endorsed incorporating OEPA's views of hydrogeologic parameters determined from 80 miles away. Future work planned includes assessments of well performance and developing options to reduce seasonally detectable nitrate (sub-MCL), and planning in relation to extended quarry operations.

Village of Mt. Victory, Ohio. Wellhead protection area delineation. Charles Mowery, W/WW Supt. (937/354-2001)

Mt. Victory is a small village also situated on the Silurian carbonate, but in a "tighter" location than Ada or Kenton to the north, with wells prone to clogging. Mt. Victory has had significant well construction and some competent hydrogeologic testing. Ground Water Science is conducting a dual project to systematize this information to help them proceed in a more-planned manner. A WHPA has been delineated. 2002-2003. A source water protection plan has been drafted and submitted to Ohio EPA for endorsement. Additional well work is planned.

City of Elkhart, IN – Wellfield performance improvements

(1) With Panterra Corp, Dayton, Ohio, for Greeley-Hansen Engineers: Analysis of biofouling problems, South Wellfield, Elkhart, IN, with specifications for rehabilitation, rehabilitation supervision, and analyses with recommendations. February - October 1998. (2) As an extension of prior work with Greeley and Hansen (Stan Diamond, PE, 317/924-3380): Field testing and evaluation of mechanisms affecting the performance of barrier well system, Northwest Wellfield, including modeling of barrier mound vicinity hydrogeology, testing of parameters that clog wells, and recommendations and projections of potential effects. March 2001-ongoing. Phase two site work was conducted in 2003 to make repairs to and rehabilitate critical barrier wells. This work included developing specifications for a rare and difficult in-place seal repair in a screened well, cleaning and conducting testing to define results.

Metropolitan Domestic Water Improvement District, Tucson, AZ, Gary Burchard, 520/575-8100.

Metro Water is a customer-owned utility serving suburban Tucson, operating over 20 wells, many inherited from systems developed by private water companies. Many of these are older and due for replacement. In 2002, Metro Water installed a new 1200-ft well that performed suboptimally upon completion. Ground Water Science conducted a review of the hydrogeology, well construction methods and design, and analyses of collected videos and samples in a forensic diagnosis of problems. Recommendations for resolution and future planning were provided. 2003. In 2005, problems with an additional new well were also analyzed and recommendations provided for mitigation (ongoing).

Ohio Department of Transportation District 1 – Overcoming coliform positive problems, Jim Myers, Kohli & Kaliher Associates, 419/225-1135

Roadside rest areas operated by District 1 on I-75 in Hancock County were experiencing total coliform positive results in systems supplied by carbonate aquifer wells. Ground Water Science supervised drilling and well construction to remove the wells as a source of problems, and made recommendations to redesign the system to remove compromising components. These latter remain in place, as do the problems, but the wells are coliform-free.

Madison Water District, Mansfield, OH, Lonnie McGhee (MTWSI) 419/886-4716

Madison Water District was formed to consolidate public water supply in eastern Richland County, and operates the Kiefer wellfield, installed to replace supplies in the area contaminated by PCE. Ground Water Science was retained to conduct step tests and aquifer tests on existing wells to define the limits of individual well performance and the impact of potential withdrawal expansion. 2003 and ongoing.

Village of Danville, Ohio. Robert Shipley, Administrator, 740/599-6888

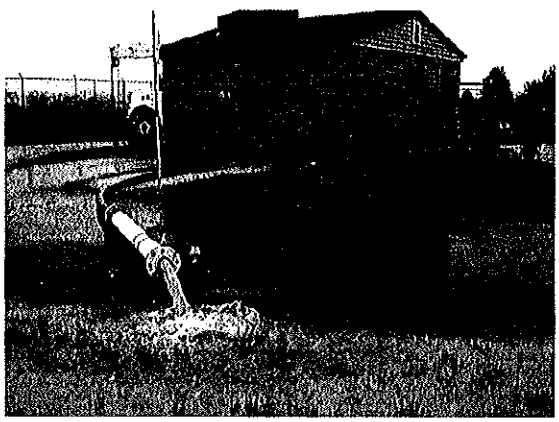
(1) Danville is in the process of developing a new wellfield and water treatment plant, being designed by Bird+Bull. Ground Water Science worked with the village and MTWSI to deal with existing well water quality problems, including a new well installed in 2003 that experienced problems with passing coliform tests, as did an existing well that previously had no record of bad samples. Ground Water Science developed a plan to identify the source of the problems and to solve them without intrusive, expensive repairs. After a second well provided poor yield, Ground Water Science conducted exploration in the wellfield to find optimal well positions in the mixed sandstone-shale sequence; design, test and certify new wells; and bring them to production. A new 400-gpm well was successfully brought into production. 2002-present. (2) With MTWSI, Ground Water Science is aiding the village in defining and mitigating an ammonia plume in the vicinity of their wastewater treatment lagoons (2007-present).

Mercer County Water and Sewer, Celina, OH, Jared Ebbing, Development Director 419/584-1982 – Wellfield development for industry and public water supply

Mercer County is a growing area of the state with increased water demands. However, the county's major municipal supplier, Celina, is faced with quantity limits and quality problems with its lake water source, even with sophisticated water treatment. Efforts to secure surface or ground water supplies are further hampered by the proximity of the Lake Erie-Gulf of Mexico watershed divide. The Great Lakes Compact requires that water from the Lake Erie watershed be returned to the watershed. The county is developing new wellfield capacity for domestic and industrial water supply. Video inspections, step tests and aquifer tests were conducted on existing wells constructed in 2001-2002 to define individual well performance and overall withdrawal impact on the area. A hydrogeologic framework was defined to focus additional well site locations and overall development strategy. Planning is now under way to develop at least 2-MGD of capacity from the current wellfield and to explore others, and to bring these supplies into service. Withdrawal of the planned anchor industrial water user has interrupted progress. Ground Water Science is working closely with engineers Fanning & Howey and the county. 2004 and ongoing.

Village of New Washington, Ohio and McGhee Technical Water Services Inc. Lonnie McGhee (MTWSI) 419/886-4716 – Exploring options for ground water supply

New Washington operates a marginal surface water supply. "Conventional wisdom" is that ground water is unavailable in municipal capacity in the area. Ground Water Science has conducted preliminary ground water exploration, locating promising aquifer targets for the village to explore, and test drilling to define potential capacity and water quality. Planning with OEPA and the village was under way when the village accepted an offer to have a regional water supplier purchase its system and supply it water. (2005-2009). Plans are under way to interest other potential buyers in the defined high-capacity ground-water resource.



City of Richmond, MI, Jon Moore, City Manager 586/727-7571 – Restoring well performance

Richmond has a series of deep gravel wells supplying more than 2 MGD, with ground water operations handled by an outside contractor. One well was brought on line years after construction and produced poor water quality. Rehabilitation was attempted, but proceeded with difficulty and well damage occurred. Ground Water Science was engaged to assist the city in its decision-making process and to supervise and document attempted well rehabilitation and new constriction. October 2004-2008.

Village of LaRue, Ohio, Board of Public Affairs (Robert T. Shoaf, PE, URS Corporation 614 464-4500) – New wellfield

LaRue is a village in Marion County Ohio with an aging water treatment plant and one functioning well after a failure and collapse of a welded well liner. Ground Water Science has worked with the village since 2005 to first of all attempt to restore the existing wells, and since in an effort to develop a new wellfield, working closely with engineers, URS Corporation. We patiently worked with village leadership (often on our own time) to understand what was needed and how to go forward. Financing was secured in 2009 and testing commenced on one property in early 2010. That proved to be unproductive. Using photogrammatic techniques, Ground Water Science identified promising drilling targets on two other available properties, and worked with Ohio EPA to obtain well site approval. Installation and testing of wells on the selected property is under way (June 2010 – ongoing).

State of West Virginia, Department of Natural Resources – Well performance testing, condition evaluation, and improvement recommendations in support of water supply expanions, Cacapon Resort State Park, Berkeley Springs, WV

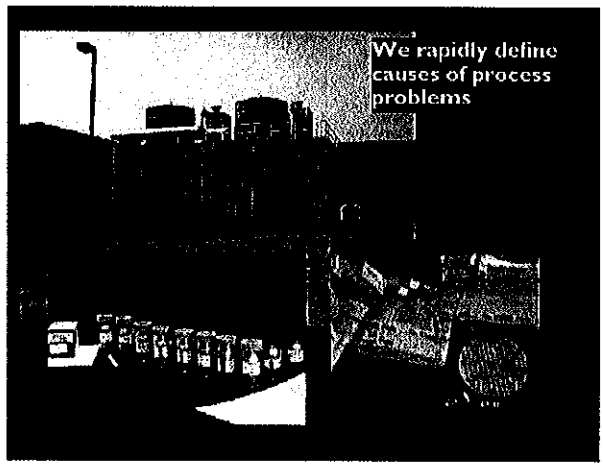
At the request of engineering firm, KCI, Ground Water Science was contracted by the WV DNR to conduct well performance testing, well condition inspection and documentation, and providing recommendations for well performance and condition improvement. Work commenced in September 2009, but was delayed due to state contractual issues to provide necessary well contractor services (pump handling). Testing and inspection is completed and reporting of condition is near completion. (2009-present).

In addition, we have conducted numerous well testing, siting, and improvement projects for industry, mobile home parks, small transient and nontransient public wells for schools, churches, and convenience stores, particularly in the rock area of western Ohio.

Selection of Biofouling and Well Maintenance and Rehabilitation Clients:

This is a specialty area of ours that involves a larger number of clients, often in shorter-term projects. Several provide repeat business. Contacts are available upon request.

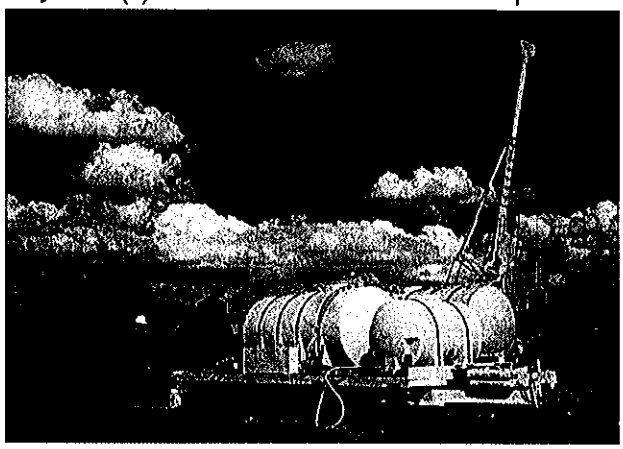
***Tate-Monroe Water Association*, Bethel, Ohio.** (1) Biofouling testing and maintenance analysis with recommendations. July-September 1998. (2) Review and advice on current well cleaning is conducted periodically (e.g., in 2000) and (3) in 2003-2004, results of a well cleaning project were evaluated using specific capacity results and recommendations for improvements provided. Greg Stanley. This client relationship extends back to 1987. TMWA has since installed a radial collector well and has put much of the older wellfield in reserve.



***Tonka Equipment Co.*, Plymouth, MN.** Planning and execution of testing to determine possible biological and organic chemical causes of interference with Fell oxidation in a conventional aeration-reaction-filtration plant operated by the Cincinnati Water Works in Mason, Ohio. 2002. Pre-1997 work included consulting on a dispute over a plant dealing with high levels of biofouling.

City of Elkhart, IN. (1) With Panterra Corp, Dayton, Ohio, for Greeley-Hansen Engineers: Analysis of biofouling problems, South Wellfield, Elkhart, IN, with specifications for rehabilitation, rehabilitation supervision, and analyses with recommendations. February - October 1998. (2) As an extension of prior work with Greeley and Hansen: Field testing and evaluation of mechanisms affecting the performance of barrier well system, Northwest Wellfield, including modeling of barrier mound vicinity hydrogeology, with recommendations and projections of potential effects. March 2001-2003. Phase two site work was conducted in 2003 to make repairs to and rehabilitate critical barrier wells. This work included developing specs for a rare and difficult in-place seal repair in a screened well, cleaning and conducting testing to define results.

U.S. Bureau of Reclamation, Ecological Research and Investigations Group (some via URS Greiner/Woodward Clyde Federal Services), Denver, CO. (1) Review of well maintenance and performance problems, Closed Basin Project, Alamosa, CO, with review of rehabilitation plans, consultation on future maintenance activities, research on causes and development of a maintenance plan. Final report with comprehensive review of causes, hydrogeological aspects, effectiveness of past treatment, and detailed recommendations provided. Sarah Wynn and John Ellis (TSC). > $50,000 budget. July 1998-ongoing. (2) Services to BOR Dam Safety Division: Conduct a field evaluation of biofouling in an earthen dam drainage system and provide recommendations for rehabilitation and maintenance treatment as part of a multidisciplinary team (2001). Treatments have to be designed to avoid negative impact on downstream ecological resources. Pilot studies and comprehensive system-wide planning of treatment for dams are in process, starting with analyses of clogging and corrosion potential. Denise Hosler. October 2000-ongoing.



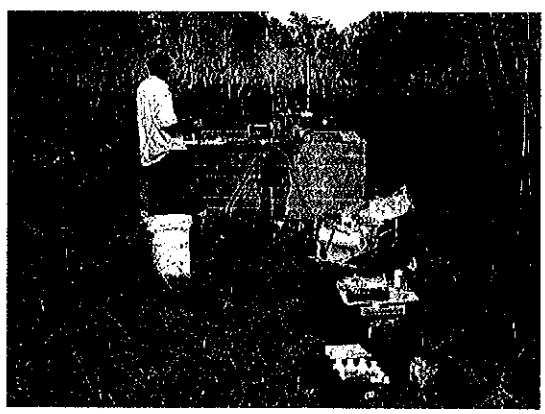
U.S. Army Corps of Engineers. With ARCC, Inc., Port Orange, FL: (1) Development of a detailed "engineering pamphlet" (technical publication) in mitigation and maintenance methods (completed and published on USACE web site) for problems of pumping and reinjection wells on hazardous and radioactive waste sites. August 1998-December 2000. (2) Provide training seminars. With GEO Consultants LLC: Rehabilitation planning and development of maintenance monitoring methods for pressure relief wells (contracting in progress) 2010-ongoing.

C.C.A. Limited, Carenage, Canouan, St. Vincent and the Grenadines. Conduct analysis of biofouling, corrosion rates, potential causes and recommendations for resort sea water and ground water treatment plants and distribution systems. October 1999-May 2000.

Environmental services contractor to major energy fuel facility, KY (as of now confidential). With GEO Consultants LLC: Conduct analysis to define biofouling and biocorrosion mechanisms involved in the rapid corrosion of multiple monitoring well casing, potentially compromising critical data on potential chemical and radiological contamination of ground water. Smith-Comeskey supplied project scope, an on-site laboratory capability to analyze for microbial contributors to biocorrosion, documentation of evidence of biocorrosion from pulled well components, and definition of a method to measure corrosion potentials between inner and outer casings through grout. Project conducted on a very rapid time scale. October 2000-2001.

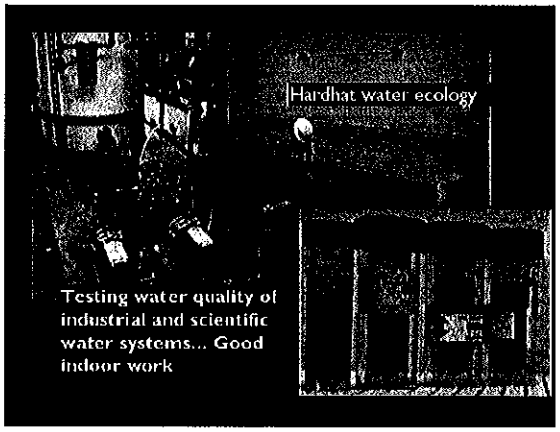
Village of Byesville, Ohio. Conduct an investigation of causes of rapid filter fouling and persistent occurrence of certain heterotrophic bacterial genera in distribution system water. Wells and downstream treatment system components were sampled for analysis of biofouling parameters, and data on microbial occurrence reviewed for patterns. Report with recommendations to date. January 2001-2004. The affected wellfield was abandoned and surface water treatment installed to treat mine-affected water.

National Ground Water Well Association, Westerville, Ohio. NGWA selected Ground Water Science to conduct a FEMA-funded study of emergency well disinfection methods to refine response to large-scale flooding events such as hurricanes. The project involves literature reviews and testing disinfection methods on a variety of wells in coastal North Carolina affected by Hurricane Floyd in 1999, and involves a well inspection and treatment subcontractor (EGIS, P.A., Chapel Hill, NC) and peer review of results. The project was completed as scheduled in September 2002 (>$90,000 budget). We have conducted projects for NGWA since 1983.



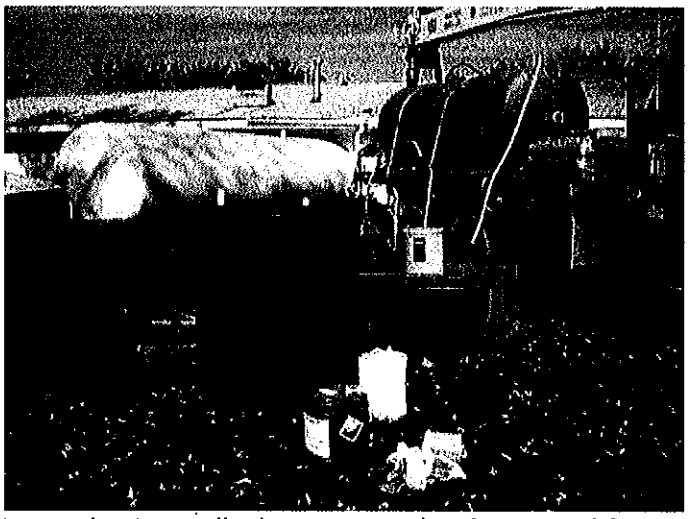
University of Cincinnati Genome Research Institute, Cincinnati, Ohio. U.C. took over an existing animal study facility with piped water systems subject to biofouling. Engineering and testing contractors for facility restoration turned to Ground Water Science for planning and executing biofouling testing and recommendations for remediation and ongoing maintenance to assure quality water to experimental animals. Initial testing conducted in 2002, followed by testing of the rebuilt system in 2003. When finished, then reporting to Nelson Stark Co., Cincinnati, the facility was in the final planning phase in preparation for lab animal delivery.

Newport, Ohio (subcontracted by formerly well-known environmental firm on behalf of well-known chemical manufacturer). Tom Watkins, Water Supt, 740/473-1224. Newport operates a wellfield along the Ohio River. Fire department practice with fire-suppression chemicals led to infiltration to the aquifer zone, triggering elevated iron levels in ground water. Ground Water Science was brought in to evaluate well performance impacts, and make recommendations on well rehabilitation or replacement. 2000.



Earth Tech, Massachusetts and New York offices. Review of clogging potentials and development of O&M plans and procedures for a new wellfield facility, Hudson River Valley, NY. Earth Tech (Patricia Flores, *518/951-2329*) is developing a new and innovative wellfield facility for the City of Bethlehem, NY. The aquifer is shallow and wide, and the wellfield will include angled wells under the Hudson River. Water quality is highly prone to clogging. A detailed O&M plan is being developed to aid in extending well life. Ground Water Science is evaluating water quality and developing the well maintenance aspects of the plan. 2003-2008.

Weeks Drilling & Pump Co., Sebastopol, CA, Charlie Judson, 707/823-3184. Weeks is a century-old, full-service water well firm serving northern California. Ground Water Science provides technical support to Weeks on an ongoing basis on well maintenance and rehabilitation projects. 2003-ongoing.



Sylvan Glen Estates, Brighton, MI, John Fimognari, water treatment supervisor, 330/568-7873. Sylvan Glen is a large manufactured home property served by a ground water system with filtration to remove abundant iron and manganese. The Birm medium does not work well when heavily biofouled. The purpose of well cleaning was to reduce the biofouling load on the filters. Ground Water Science developed a well cleaning procedure and supervised cleaning by the local well contractor. Three wells were cleaned in three days on a rapid schedule. 2005.

Village of Pandora, OH, Marv Steiner, W/WW Supt., 419/384-3300. Pandora was experiencing coliform positives with one of its production wells that prevented its being used for potable water supply. Ground Water Science diagnosed the several possible sources, inspected the well, and devised and supervised a well cleaning program to remove contaminating material, then tested results. The well was rendered coliform-free and returned to production at a fraction of the cost of developing a new well. November 2007-2008.

RESUME

Allen E. Comeskey, MS, RG, CPG, Partner
Smith-Comeskey Ground Water Science

PROFESSIONAL EMPLOYMENT HISTORY

September 1996-present: Smith-Comeskey Ground Water Science LLC (partner), 295 S. Lawn Ave., Bluffton, OH 45817USA. Tel: 419/358-0528, allen@groundwaterscience.com. URL http://www.groundwaterscience.com.

Scope of services: Advising clients on ground water supply issues; planning and analyzing aquifer and step testing; numerical modeling and wellfield protection and planning studies, both in glacial-fluvial and fractured carbonate rock settings; geology; GIS.

January 1995-March 1996: Leggette, Brashears and Graham, Inc., Trumbull, CT 06611. Position: Hydrogeologist II, responsible for supervising test drilling, monitoring well installation and sampling at remediation sites, numerical modeling of aquifers to delineate wellhead protection areas, assisting with aquifer tests.

August 1993-January 1995: Earth Data Inc., St. Michaels, MD 21663. Position: Hydrogeologist, responsible for record keeping and report writing for remediation projects; aquifer test analysis; hydrogeologic analysis; performing geophysical logging.

September 1989-June 1993: Dept. Of Geology and Geological Engineering, University of North Dakota, Grand Forks, ND 58202. Position: Teaching/Research Assistant. Responsible for teaching geology laboratories and assisting in department research.

September 1979-July 1989: North Dakota State Water Commission, Bismarck, ND 58505. Position: Hydrogeologist supervising test drilling for county ground water studies and other hydrogeological investigations, operating and maintaining borehole geophysical logger, logging 50,000 ft of borehole per year; radiation safety officer.

September 1978-September 1979: Freeport Exploration, Elko, NV and Utah Geological and Mineral Survey, Salt Lake City, UT. Positions: Logging drilling cuttings and collecting samples for gold and coal exploration projects.

EDUCATION

Degrees and Emphases:

MS, Geology, University of North Dakota, Grand Forks, ND 58202 (1993). Thesis: The Hydrogeology of Agnes Marsh, Grand Forks, ND.

BS, Geology, Bowling Green State University, Bowling Green, OH 43403 (1978).

Selected Continuing Education:

Ground water flow and well hydraulics for porous and fractured media; Analysis and design of aquifer tests including slug tests and fracture flow; geographical information systems, photogrammatic analysis (LIDAR, etc.), environmental project management. Hold 40-hr + supervisor OSHA HAZWOPER certification.

PROFESSIONAL CERTIFICATION AND REGISTRATION

Certified Professional Geologist (#9880), American Institute of Professional Geologists.

Registered Professional Geologist (Pennsylvania, #PG-001844-G and Indiana, #1788).

PROFESSIONAL AFFILIATIONS

American Institute of Professional Geologists; National Ground Water Association; International Association of Hydrogeologists; American Water Works Association.

RESUME

Stuart A. Smith, MS, RG, CGWP, Partner
Ground Water Science (Smith-Comeskey Ground Water Science LLC)

PROFESSIONAL EMPLOYMENT HISTORY

September 1996-present: Ground Water Science, 22 Edgewater Dr., Poland, OH 44514 USA. Tel: 419/235-4955, email: stuart@groundwaterscience.com, URL http://www.groundwaterscience.com.

September 1983-September 1996: S.A.Smith Consulting Services, Ada, OH 45810 (now Smith-Comeskey Ground Water Science).

Scope of services: Hydrogeologic and ground-water microbiological analysis and consultation, wellfield planning and management, contract research and troubleshooting on biofouling problems in wells and water systems and their maintenance and rehabilitation.

August 1981-August 1984: Dept. of Geological Sciences, Wright State University, Dayton, OH 45435. Position: Adjunct associate professor in water well technology and hydrogeology, responsible for developing, organizing, marketing, and teaching technical field and classroom courses in ground water technology and science.

September 1979-September 1983: National Water Well Association (now Nat'l Ground Water Assn.), 601 Dempsey Rd., Westerville, OH 43081. Positions: Education coordinator, technical research associate, and training specialist, researching and responding to technical inquiries from members and the public concerning a wide variety of industry topics; and audiovisual program development.

EDUCATION

Degrees and Emphases:

MS, Environmental Biology, The Ohio State University, Columbus, OH (1984). Self-designed thesis program evaluating methods for sampling iron-related bacteria from wells.

BA, Biology and Earth Science (dual major), Wittenberg University, Springfield, OH (1977).

Selected Continuing Education:

Water well engineering; Water supply protection and treatment; Aquifer and well biofouling; Well maintenance and rehabilitation; Transport/fate of subsurface contaminants; Professional expert testimony, contracts; Deep subsurface microbiology; Hold 40-hr + supervisor HAZWOPER.

PROFESSIONAL CERTIFICATION AND REGISTRATION

Certified Ground Water Professional (#316), Association of Ground Water Scientists and Engineers (granted 1990, effective: continuing education fulfilled and certificate renewed).

Registered Professional Geologist (Kentucky, #1179, effective 12/1993/current).

SELECTED PROFESSIONAL AFFILIATIONS AND ACTIVITIES

AWWA Ohio Section Water for People Section Committee; Chairman, AWWA-WEF-APHA joint technical group section 9240, iron and sulfur bacteria; AWWA Groundwater Committee; ASTM Committee D18.21 on groundwater investigations; NGWA Rural Water Committee, Microbial Interest Group (past chair), Developing Countries Interest Group, ANSI/NGWA 001 Water Well Construction Standard development; Sandusky River Watershed Coalition steering committee, past water/wastewater chair and SC past chair; AWARE (Mill Creek, Yellow Creek and Meander Creek watersheds); Water Management Association of Ohio; Planning a water supply construction capability for Tanzanian health and agricultural NGOs. Numerous seminar and conference presentations including national AWWA and NGWA.

More details and project descriptions may be found at www.groundwaterscience.com

SELECTED PUBLICATIONS OF THE PRINCIPALS

Smith, S.A. 1980. A layman's guide to iron bacteria problems in wells. *Water Well J.* 34(6): 40-42 (reprinted in AWWA *OpFlow*, Feb. 1981).

Comeskey, A.E. and J. Reiten, 1982. Ground-Water Resources of the Surrey Area, Ward County, North Dakota, North Dakota Ground-Water study No. 87, North Dakota State Water Commission, Bismarck.

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Eggington, H.F., et al.. 1992. *Australian Drilling Manual.* Australian Drilling Industry Training Comm., Macquarie Ctr., NSW. (553 pp. Smith principal editor: and section author.)

Smith, S.A. 1992. *Methods for Monitoring Iron and Manganese Biofouling in Water Supply Wells.* AWWA Research Foundation, Denver, CO (96 pp.).

Smith, S.A. 1992. New developments in water well restoration. (Invited paper) in: *Proc. Drill '92, Conference of the Australian Drilling Industry Assn., Perth, W.A., October 1992.* West Australia Branch, ADIA, Fremantle, W.A., Australia.

Comeskey, A.E. and P.J. Gerla, 1993. Estimation of Wetland Water Budget: Agnes Marsh, *Agronomy Abstracts*, American Soc. of Agronomy.

Borch, M.A., S.A. Smith, and L.N. Noble. 1993. *Evaluation and Restoration of Water Supply Wells.* NGWA for AWWA Research Foundation, Denver, CO (270 pp.).

Smith, S.A. 1995. *Monitoring and Remediation Wells: Problem Prevention, Maintenance and Rehabilitation.* CRC Lewis Publishers, Boca Raton, FL (183 pp.).

Clancy, J.L. and S.A. Smith. 1995 and 2004. Iron bacteria, Chapter 2. In: *Problem Organisms in Water: Identification and Treatment.* Manual M7, American Water Works Assn.

Smith, S.A. 1996. Monitoring biofouling in source and treated waters: status of available methods and recommendations for standard guide. *Sampling Environmental Media*, ASTM STP 1282, J.H. Morgan, Ed., ASTM, West Conshohocken, PA, pp. 158-175.

Australian Drilling Industry Training Committee (including S.A. Smith). 1997. *Drilling: The Manual of Methods, Applications and Management.* (Co-editor/section author.) CRC Lewis Publishers, Boca Raton, FL (replaced 1992 ed.).

Smith, S.A. 1997. Well Construction, maintenance and abandonment: How they help in preventing contamination. *Under the Microscope: Examining Microbes in Groundwater,* Proc. Groundwater Foundation's 1996 Fall Symposium, AWWA, Denver, CO.

Comeskey, A.E. 1997. A Study to Provide Integrated Scientific Management of a Municipal Wellfield (abstract and presentation), Annual Conference, Ohio Section AWWA, Columbus, OH, September 1997.

National Ground Water Assn. 1998. *Manual of Water Well Construction Processes.* NGWA, Westerville, OH (Stuart Smith principal author/editor). Also participated in the 2010 revision.

S.A. Smith. 1999. Source water quality management: Groundwater (Chap. 4a). *Water Quality & Treatment* Fifth ed. AWWA and John Wiley & Sons, New York.

Alford, G., Roy Leach and S.A. Smith. 2000. Operation and Maintenance of Extraction and Injection Wells at HTRW sites, EP 1110-1-27, U.S. Army Corps of Engineers, St. Louis.

Smith, S.A. and A.E. Comeskey, 2001. Field Documentation of Improvements in Well Performance Using Innovative Rehabilitation Methods, World Water and Environment Conference, ASCE, May 2001, Orlando, FL.

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Groundwater Committee. 2003. *Groundwater* Manual 21, AWWA. Smith developed the well maintenance and rehabilitation material. A new edition is in the planning stages (probable completion 2012).

Smith, S.A. and D.M. Hosler, 2006. Current Research in Dam Drain Clogging and its Prevention, Proc. Dam Safety '06, 23rd Annual Conference, Association of State Dam Safety Officers.

Smith, S.A. and A.E. Comeskey, 2009. *Sustainable Wells: Maintenance, Problem Prevention, and Rehabilitation*, Taylor & Francis CRC Press.

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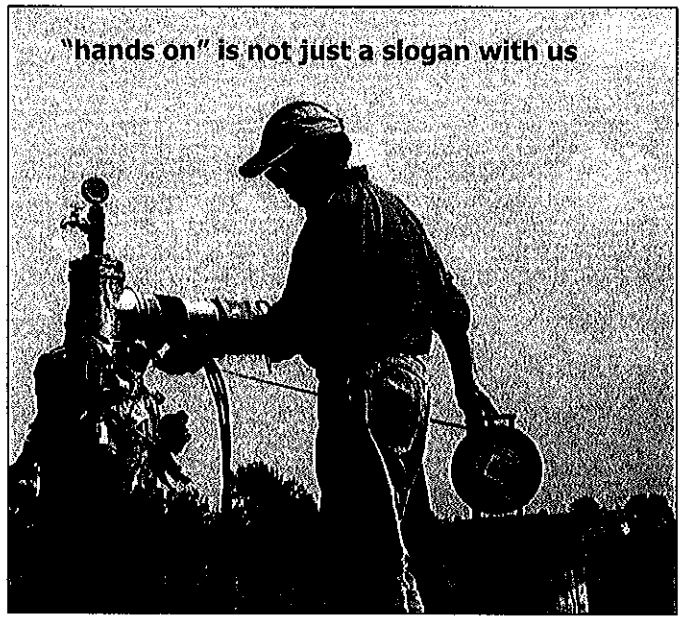
Making Sure You Get What You Need in Ground Water Supply

Smith-Comeskey Ground Water Science **is a highly experienced provider of quality planning and troubleshooting for installing and improving ground water source water supplies. We "do ground water" every day.**

- **We are first and foremost professional hydrogeologists. We devote ourselves to quality ground water supply.**
- **In cooperation with your engineers, we take care of all "the ground water stuff" on new well projects: selecting well contractors, job observation, testing and documentation, even maintenance planning.**
- **We know well contracting and make sure you get the most from your investment. On *your* project we are *your* eyes and ears and make sure that everything going into the ground is top quality.**

Experienced Staff:

The Ground Water Science principals, Stuart Smith and Allen Comeskey, are certified and licensed geologists and ground water professionals with advanced degrees. Smith is also an environmental microbiologist. *Each* contributes over 30 years of varied, quality, hands-on professional experience to the firm. They bring their old-fashioned personal care and "by the book" standards, cutting-edge expertise – and *passion* for quality in ground water supply – along on each project, large or small.



Our approach to managing ground water projects works to your advantage:

- **We research and plan up front to understand the details of your ground water situation -- no "cookie cutter" approach here.** We use maximum available information to write the specs and take competitive quotes to give you the best "bang for your buck"
- **We know and provide specialized expertise that you need.** We competitively preselect well contractors and other experts in specialties you need – we select people known for their commitment to quality and who are best suited to your particular job. We vouch for their qualifications and reliability.

- **We watch and document what they do for your piece of mind.** We know what we're looking at and the contractor knows that, too. No corners cut.
- **We test and verify well performance.** Well testing is conducted and analyzed to satisfy the regulators – but way more important than that, to best choose the most efficient pumping rates so your facility can plan more effectively.
- **We advise on long-term operations and maintenance.** Our concern doesn't end with plan approval and start up. We show you how to keep it working at its best, how to watch performance and keep records, and can even provide maintenance contracts including performance monitoring and necessary service and repairs.

Experience teaches you some things:

- **Water well contractors and other service providers in this field are not interchangeable.** They are very distinct from one another in capability. They are very independent and many are not good estimators – so if the going gets tough, some cut corners.
- **The "full service" business model is attractive – one project manager and not a fleet of specialists to watch. However** (especially is they are beholden to stockholders) the need for profit margin can make for constant temptation to cut corners to improve the bottom line. There is no independent supervision of well construction – equipment that goes into the ground, never to be seen again. *If something goes wrong that will cost the well contracting company to fix – and that happens even to the skilled and conscientious – no one can independently assign responsibility whose job or bonus isn't at stake.*
- **Ground water projects are each unique and constantly amazing.** You need to have an attitude that you must concentrate on each project and learn all the time to provide the best result for the client.
- **You have to take the long view with ground water projects:** What is sustainable? What materials and methods are going to offer long life?

"Their" way:

- **"Leading experts" listed in the brochure are back at the office – in Phoenix**
- **Sales rep who made all the promises is somewhere else, making promises to another client – or on the cell phone or radio calling the crew chief to nag him to get done and on to the next job.**

Our way

- **The leading experts with gray hair are on the job watching, focused on your job, taking data and making decisions.**
- **Best of all, you are left with the most efficient and trouble-free system possible that will offer a long, quality service life.**

Ours isn't always the cheapest way to do the work if judged only by initial construction cost. But this is your water supply system and your customers trust you to supply reliable, high-quality water. Your best "cost" factor is *life cycle cost* – what will it cost in the long run? And what price do you put on quality, reliable water?

www.groundwaterscience.com • 1-419.358.0528

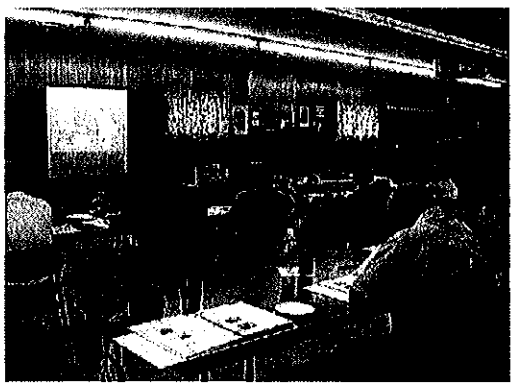
WE TRAIN:

Face-to-Face Training to increase your ground water know-how:

Talk topics from Ground Water Science (can be modified for specific needs):

- **Day-long well and wellfield maintenance course (7 hr)[+†]**
- **Ground water and wells for public water supply officials (6.75 hr)[+†]**
- **Valid ground water SWAP delineation: A quick review (0.5-1.5 hr)**
- **BART (and other) testing for biofouling and biocorrosion monitoring (1 hr)[+]**
- **Aquifer and well testing - getting valid information (1-2 hr)[+]**
- **An introduction to well and wellfield performance maintenance 1.5 hr**
- **Wellhead and well site security 1 hr[+]**

[+] Field or lab training, demonstration, or consultation available. All OEPA contact hours approved. [†]Indiana contact hours approved. Other states can be arranged.



At our place or yours...

☑ Have us bring our course or short talks to your place or program, customized to your needs and interests
☑ Don't forget - If we provide professional services, we train and that counts for contact hours

And don't forget our our informative web site
www.groundwaterscience.com

Interest Form

☐ **Training at the inquirer's site or program**
☐ **Your upcoming course dates and programs**
☐ **Make sure we're on the *Flowlines* newsletter notification list**

Please complete as much of the following as you wish and mail to 295 S. Lawn Ave., Bluffton, OH 45817USA or email it to info@groundwaterscience.com.

Name: _____
Organization: _____
Postal address: _____
City, state, zip: _____
Telephone: _____
Email address: _____

Thank you for your interest in our services. Best wishes for a good year.

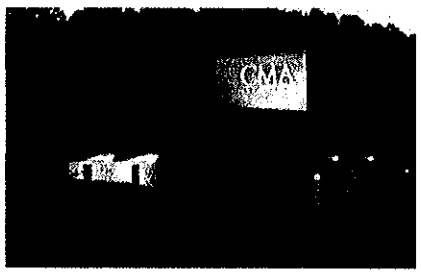
Ground Water Science

Science and Planning for Earth's Most Critical Resource

CORPORATE PROFILE

CMA ENGINEERING

Clingenpeel/McBrayer & Associates, Inc.



Services
Clingenpeel/McBrayer & Associates is a West Virginia based small business firm, providing services in the areas of HVAC, plumbing, fire protection and electrical engineering. CMA's founders have long believed in the philosophy that a successful project requires a comprehensive approach. This includes all traditional facets of project planning, starting with master planning, working closely with the client, developing the completed construction documents, bidding the project and contract administration. However, our depth of expertise goes far beyond the traditional services. From developing design criteria for owners to designing the mechanical and electrical systems for the West Virginia DEP Consolidated Office Building, the first LEED certified building in the state, CMA is a proven leader in providing engineering services in the design-build delivery method. As we have been involved in LEED Certification and other "LEED-oriented" ventures for several years, we attempt to incorporate the most efficient and sustainable "green" designs in all of our projects.

History
Since 1986, Clingenpeel/McBrayer & Associates has provided services on numerous projects of varying size and complexity. Clients include architects, industrial companies, governmental agencies, contractors, engineers, developers and private organizations. With offices strategically located in Charleston and Morgantown, our professional staff can provide clients with exceptional hands-on engineering services for planning, meetings, site visits and construction administration without effecting the project' s budget.

Commitment
Clingenpeel/McBrayer & Associates' submittal is based on your needs and our experience. Our firm has the experience, service and quality work to create a successful project. We are committing senior design professionals in order to assure you receive top priority. We have extensive experience with projects of this nature. Examples of projects for which we were the Engineer are listed in this proposal.

In 1987, computer aided drafting stations were added to provide the best quality and engineering services for our clients. We are currently operating AutoCad 2009. Our firm is constantly monitoring the latest technology, the cost effects and the end results to the final project.

Present staffing allows CMA to complete work in a timely manner without limiting our ability to perform our ongoing work. The staff of CMA is large enough to handle any size project, yet small enough for direct input and supervision by key personnel.

CMA ENGINEERING

Clingenpeel/McBrayer & Associates, Inc.

824 Cross Lanes Drive
Charleston, WV 25313
(304) 343-0316 tel
(304) 343-5146 fax

5 Riddle Court
Morgantown, WV 26505
(304) 598-2558 tel
(304) 598-2472 fax

www.cmawv.com

Professional Affiliations

Leadership in Energy & Environmental Design (LEED)

U.S. Green Building Council (USGBC)

American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., (ASHRAE)

American Institute of Architects— WV Chapter Affiliate Member (WVAIA)

National Fire Protection Association (NFPA)

American Society Of Plumbing Engineers (ASPE)

MasterSpec Specifications (ARCOM)

Illuminating Engineering Society (IES)

WV Society of Healthcare Engineers (WVSHE)

Business Partner

International Code Council (ICC)

P R O F I L E

Timothy Cox, P.E., NCEES
President
Mechanical Engineer

(304) 598-2558
tcox@cmawv.com

EDUCATION

University of Colorado
Boulder, Colorado
Degree: Mechanical Engineering B.S.

REGISTRATIONS/PROFESSIONAL AFFILIATIONS

Association of Energy Engineers-CBCP

Registered Professional Engineer in WV, VA, KY

CPD (Certified in Plumbing Engineering)

Member of ASHRAE

American Society of Plumbing Engineers

National Association of Fire Protection Engineers

WV Society of Healthcare Engineers

EXPERIENCE

Mr. Timothy Cox, President and Senior Mechanical Engineer of CMA Engineering brings 24 years of mechanical design experience to our clients. Mr. Cox has been project manager and project engineer for a variety of projects.

PROJECTS

West Virginia University
Open End Contract since 1999
- Mountain Lair Plaza Renovations
- Boreman HVAC/Plumbing/Fire Sprinkler Upgrades
- Soccer Stadium
- Coliseum Life/Safety Renovations
- Coliseum Locker Room Suites
- Engineering Science Building Addition/ Renovations
- Arnold Hall Fire Alarm/ FireSprinkler Upgrades
- Wrestling Training Facility

West Virginia University Hospitals
- WV Eye Institute-MEP systems design for new facility
- Cheat Clinic-MEP design for new clinical addition
- WVUH Emergency Department-HVAC, electrical, fire and communication systems design for new addition
- Chestnut Ridge Hospital-various MEPRenovations
- Healthworks Rehab and Fitness –MEP systems design for new facility

Mylan Pharmaceuticals, Morgantown, WV
Various projects including HVA plumbing, fire sprinkler and controls for new office building, fluid bed addition ,North plant expansion, parking garage and weighing and packaging.

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P R O F I L E

Daniel Lee Ellars, P.E.
LEED AP

Principal
(304) 343-0316
dellars@cmawv.com

EDUCATION

West Virginia University Institute of Technology
Montgomery, West Virginia.
Bachelors of Science in Electrical Engineering

West Virginia State University
Institute, West Virginia
Bachelors of Science in Business Administration

REGISTRATIONS/PROFESSIONAL AFFILIATIONS

Registered Professional Engineer in West Virginia

National Fire Protection Association (NFPA)

Institute of Electrical and Electronics Engineers (IEEE)

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

EXPERIENCE

Mr. Daniel L. Ellars, Electrical Engineer for Clingenpeel/ McBrayer & Associates, Inc. brings 19 years of electrical design experience to our clients. Mr. Ellars has been a project manager and project engineer for a variety of projects including commercial and industrial facilities as well as for both power and tele-communications utilities.

PROJECTS

Educational Experience
Jackson County (WV) Schools—Electrical Upgrades & Expansions
Talcott Elementary School-Electrical Design
Fairdale Elementary School-Electrical Design

Hospital Experience
West Virginia University / Ruby Memorial Hospital
West Virginia Eye Institute—Electrical systems design for new facility.
Thomas Memorial Hospital—Electrical systems survey, upgrades and documentation. Standby emergency power engine generator replacement.

Military Experience
West Virginia Army National Guard
Eleanor (WV) Maintenance Center—Electrical systems design for new facility.
Elkins Readiness Center-Electrical systems design or new facilityf

Industrial Experience
Mylan Pharmaceuticals
Mylan Office & Lab Buildings—various electrical systems designs for new, existing and expanded facilities including new 23kV/12kV switchyard and grounding plain layout.

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P R O F I L E

James A. Kerns
Mechanical/Electrical Designer

(304) 343-0316
jakerns@cmawv.com

EDUCATION

West Virginia State College
Institute, West Virginia
Degree: Bachelor of Science in Industrial Technology/Building Construction

REGISTRATIONS/PROFESSIONAL AFFILIATIONS

Member of ASHRAE

EXPERIENCE

Mr. James A. Kerns has over 32 years experience in Mechanical and Electrical engineering design. He has been responsible for design projects in the educational, commercial, and health care fields.

Mr. Kerns has been a great asset to Clingenpeel/ McBrayer & Associates. His knowledge and experience enables him to complete project designs in a clear and concise manner and in a timely fashion.

PROJECTS

Kanawha County Schools
George Washington High School-HVAC Renovations
George Washington High School-Classroom Additions
Horace Mann Middle School-HVAC Renovations
Elkview Middle School-Classroom Additions
Elkview Middle School-Fire Alarm System
Ruffner Elementary School-Classroom Additions
Point Harmony Elementary School-Activity Building

Concord College
Athens, West Virginia — various renovation projects throughout the campus, which include Twin Towers Fire Alarm, Twin Towers Elevator Renovation, Alexander Arts Center Chiller Replacement and new Chapel

U.S. Postal Service
Open End Contract Since 1993, which encompasses numerous Post Office Renovations, new Post Offices, and new Postal Maintenance Facilities. Mr. Kerns has been Project Manager for over 65 projects for the U.S. Postal Service.

Yeager Airport
New Parking Garages
New Emergency Generator
Electrical Upgrades
Fire Alarm System Upgrade

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P R O F I L E

Matt Corathers, E.I.
Mechanical Designer

(304) 598-2558
mcorathers@cmawv.com

EDUCATION

West Virginia University
Bachelor of Science -Mechanical Engineering

PROFESSIONAL DEVELOPMENT

Successfully passed Fundamentals of Engineering Exam

EXPERIENCE

Matt joined the staff of CMA Engineering in 2008 having previously worked for Whitman, Requardt and Associates in Baltimore, MD.

PROJECTS

West Virginia University
Mechanical design for new two-story child care facility

University High School, Morgantown, WV
Mechanical design for renovations/ upgrades to the HVAC systems

Randolph County Building
- Mechanical design for completion of two story addition and modifications of the existing second floor to be used by the Family Court

Monongalia County Family Court
Mechanical design for renovations to 4,850sf in existing court facility

Veterans Hospital, Clarksburg, WV
Mechanical design for renovations to Dental Lab

Monongalia General Hospital
Evaluation of kitchen gas systems
Mechanical design for renovations to IT workroom cooling

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P R O F I L E

Larry Weese
Mechanical/Plumbing Designer

(304) 343-0316
lweese@cmawv.com

EDUCATION

West Virginia University
Morgantown, West Virginia
Degree: Division of Forestry BS,MS

PROFESSIONAL DEVELOPMENT

Various seminars and technical sessions

EXPERIENCE

Mr. Larry Weese, Mechanical Designer for Clingenpeel/McBrayer & Associates, Inc. brings 18 years of mechanical design and project management experience to our clients.

PROJECTS

Medical Facilities Experience
Charleston Area Medical Center
Women & Children's Hospital– Renovations to Emergency Room
Hess Medical Office Building-New Facility
Pinewood Medical Office Building-Renovations
Southern West Virginia Hospice-New Facility
NorthGate Doctor's Office Building-New Facility

WV Department of Health and Human Resources
Office of Chief Medical Examiner, Charleston
New Facility Mingo County

Emergency Response Facilities
Randolph County 911-New Facility
Mason County 911-New Facility
Raleigh County 911-New Facility
Orchard Manor Fire Station-New Facility

Industrial Experience
Standard Laboratories-Laboratory Addition
Dow Process Control-New Facility
Diamond Electric-Expansion

Commercial Experience
Bobcat of Advantage Valley-New Facility
Allegheny Springs Restaurant

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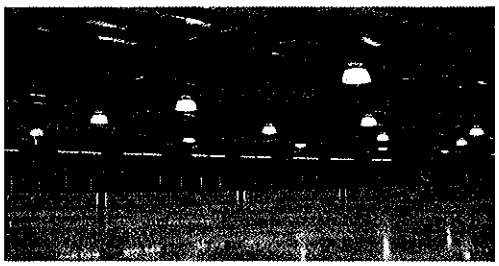
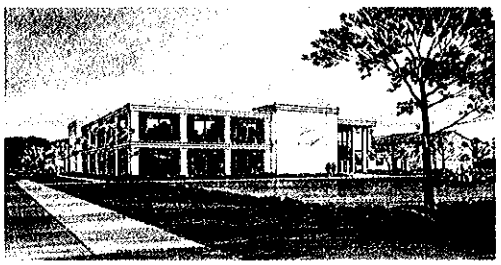
Project Profiles

Recreational Facilities



Jefferson County Community Center
CMA Engineering provided mechanical, electrical and plumbing design services for developing the design criteria for new18,900sf community center which included gymnasium with bleacher seating, lobby area, activity rooms, office space, a full service kitchen, storage and comfort facilities.



Ayash Community Center, St. Albans
CMA Engineering provided design for HVAC, plumbing, fire sprinkler, fire alarm systems, communication systems, lighting and electrical power for new 26,900sf community center which included gymnasium, wrestling room, fitness room, locker rooms and an open area for aerobics, dance and gymnastics.

Jackson's Mill
CMA Engineering providing mechanical, electrical and plumbing design services for renovations to the Assembly Hall, Northern Panhandle Cottage, Lewis Cottage, Dining Hall and the Air Strip Buildings.

Canaan Valley Resort-Ski Base Lodge
CMA Engineering provided design services for the HVAC, electrical and plumbing systems for the new guest service facility.

North Bend State Park
CMA Engineering provided mechanical, electrical and plumbing design services for renovations to the Lodge.

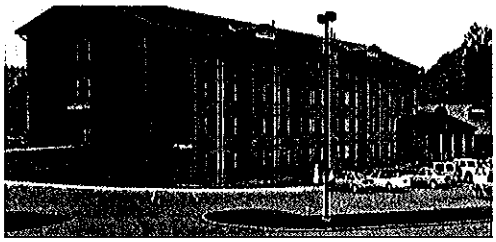
CMA
ENGINEERING

Project Profiles

Recreational Facilities

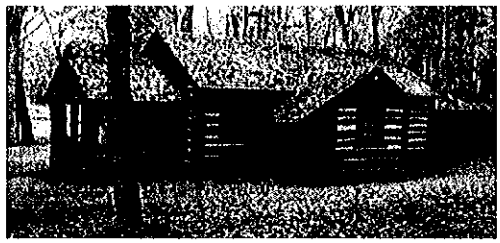
Beech Fork State Park
CMA Engineering providing mechanical, electrical and plumbing design services for 8 new cabins, a new bathhouse, 237 camping sites and sewage treatment system.

Snowshoe Mountain Resort
CMA Engineering provided design for HVAC, electrical, plumbing , fire alarm and fire sprinkler systems for new Allegheny Springs Lodge. CMA also provided engineering services for the fit-out of such restaurants as the Foxfire Grille, Junction Restaurant and Village Bistro located at the Village in Snowshoe.



Chief Logan State Park
CMA Engineering provided mechanical, electrical, plumbing and fire protection design services for the new lodge and the new conference center.

New River Gorge
CMA Engineering provided mechanical, electrical and plumbing design services for the new Visitors Center at the New River Gorge.



Cacapon State Park
CMA Engineering providing design services for the electrical renovations to the Lodge.

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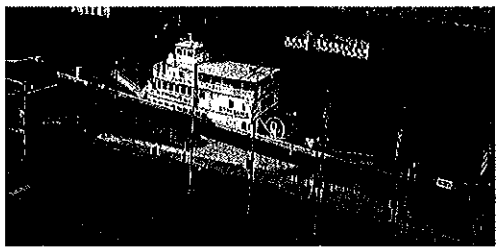
Project Profiles

Lighting



Kanawha Boulevard Lighting
CMA provided engineering services for the re-lighting of Kanawha Boulevard from the Patrick Street Bridge to the 35th Street Bridge in Kanawha City. This project included specifying of new light poles, arms and light fixtures.

CAMC 33rd Street Streetscape, Kanawha City.
As part of the expansion of the CAMC Memorial Division, 33rd Street was required to be re-aligned. CMA provided engineering services for design of the lighting along 33rd Street, providing a lighting design that welcomes visitors into the neighborhood.

Kanawha County Courthouse
CMA recently completed design of an exterior lighting renovation project for the Virginia side of the Courthouse which is listed on the National Historic Register. This project while adding lighting for security, highlights the architectural features of the entrances and light towers.

Ripley Streetscape
CMA Engineering provided engineering services for the streetscape of Court Street from Main Street to North Street transforming this into a pedestrian friendly area.

Charleston Municipal Auditorium
CMA Engineering provided electrical engineering services for replacement of the dimmer rack and renovations to the stage and front-house lighting systems.

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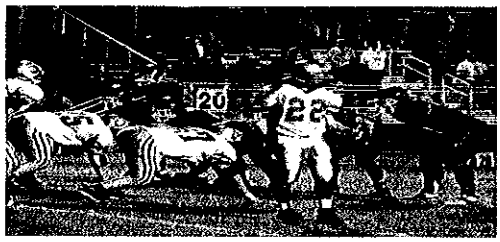
Project Profiles

Lighting

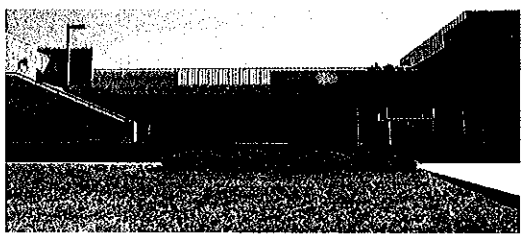
Charleston Gateway Greenspace
CMA Engineering provided site lighting plan, details and specifications for new Greenspace park, property was previously a parking lot, located in downtown Charleston.

Summit Bechtel Family National Scout Reserve
CMA Engineering is currently providing electrical engineering design for the basic utility infrastructure for the new Boy Scout Camp at Mt. Hope, WV. Camp will accommodate approximately 50,000 campers, with multiple camp sites over the 10,600 acre reserve.



Kanawha County Schools
CMA provided electrical engineering services for the exterior lighting design for the football fields at Nitro High School, South Charleston High School, Sissonville High School, George Washington High School and St. Albans High School.

Williamson Streetscape
CMA Engineering provided electrical design services for the renovation of approximately 460 linear feet of streetscape. Enhancements included 14 pole-top light fixtures with convenience receptacles along both sides of the street and design of the electrical power system to accommodate future streetscape enhancement projects.



Alexander Arts Centre-Concord university
CMA provided electrical design services for the demolition of two dilapidated stage dimming systems, in the Studio Theater and Main Auditorium Theater, and replaced them with modern stage dimming equipment and lights.

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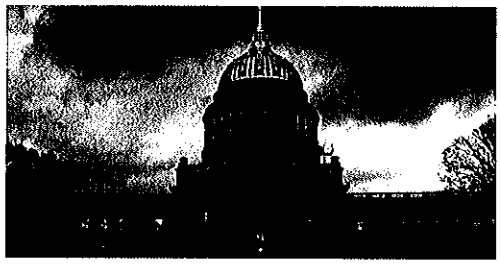
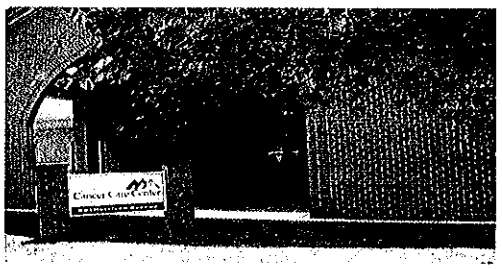
Project Profiles

Renovations

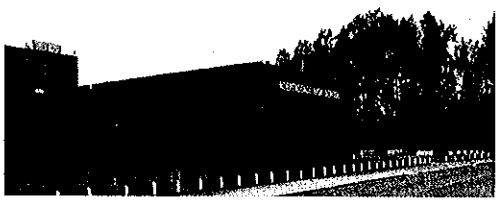


State of West Virginia House and Senate Offices
CMA is currently providing mechanical, and electrical design services for renovations to the first and second floors' HVAC systems at Building #1 at the State Capitol Complex.

Kimball War Memorial, Kimball, WV
CMA Engineering provided mechanical, electrical and plumbing design services for the restoration of the historic memorial which was destroyed by fire in 1991. Registered with the National Historical Society.



Davis Memorial Hospital
CMA Engineering has provided mechanical, electrical, plumbing, and fire protection engineering services for various projects at DMH including the new operating room suite, relocating endoscopy unit, updating the fire suppression system in the computer room and design of the clean room in the Pharmacy.



Independence High School, Raleigh County
CMA is currently providing mechanical, electrical, plumbing, fire alarm, data and telephone design services for the addition of six new classrooms, art studio and toilets. CMA also provided design for the renovation to the HVAC system.

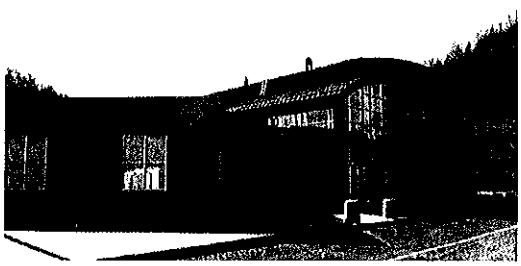
Doddridge County Courthouse
CMA provided design services for the upgrades of the mechanical, electrical, plumbing, fire sprinkler /fire alarm and communication systems for the second and third floors of the facility.

CMA
ENGINEERING

Project Profiles

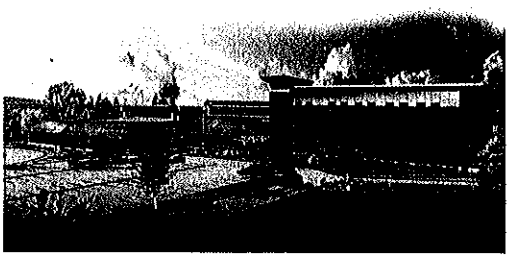
New Construction

West Virginia University Child Care Center
CMA Engineering provided the design of HVAC, fire sprinkler, fire alarm, plumbing, electrical lighting/power and communications systems for the new two story child care facility at 201 Laurel Street, Morgantown, WV.



Sissonville Middle School, Kanawha County
CMA Engineering provided mechanical, electrical, plumbing, sprinkler, and data/communication/alarm/ control engineering design services for the new, approximately 80,000sf facility, consisting of administrative areas, commons, auditorium, media/ technology, sixth, seventh and eighth grade educational areas, laboratories, special education, food services and physical education areas. CMA is currently providing design for the addition of the fifth grade wing.

Talcott Elementary School, Summers County
CMA Engineering provided construction documents for HVAC, plumbing, fire sprinkler, fire alarm, communication, lighting and electrical power systems for new 26, 000sf elementary school, consisting of administration areas, pre-kindergarten to fifth grade classrooms, special education, art/music, multi-purpose, dining kitchen and toilet rooms.



Pikeview Middle School, Mercer County
CMA Engineering provided design of HVAC, plumbing, fire alarm, fire sprinkler, electrical, lighting, communications, audio/visual and CCTV systems for new 75,000sf middle school comprised of a main wing with offices and gymnasium and a three-story classroom wing.

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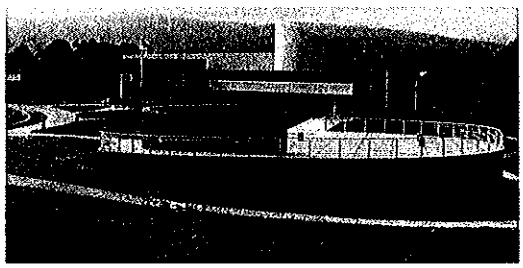
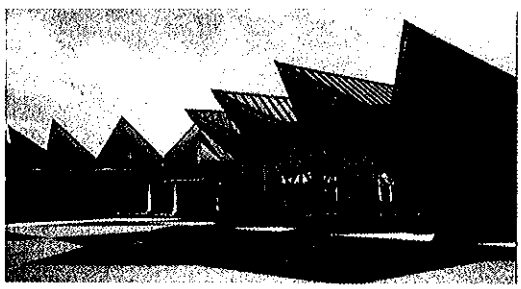
Project Profiles

New Construction

WVANG Summersville Readiness Center
CMA Engineering provided engineering services for the design of mechanical, electrical and plumbing systems for the 42,000sf readiness center. This facility also features areas for use by the City of Summersville for events throughout the year.



NRAO Greenbank Observatory Visitor's Center
CMA Engineering provided mechanical, electrical, plumbing, fire protection and communication systems design for new visitor's science center.



Tamarack Caperton Conference Center
CMA Engineering provided mechanical, electrical, plumbing, fire protection and communication systems design for the 22,450sf addition to the Caperton Center. CMA provided engineering services for the original construction of the Tamarack facility.

Jefferson Place, Charleston, WV
CMA Engineering provided mechanical, electrical, plumbing and fire protection design services for new medical apartment complex consisting of 24 units of one, two and three bedroom apartments.

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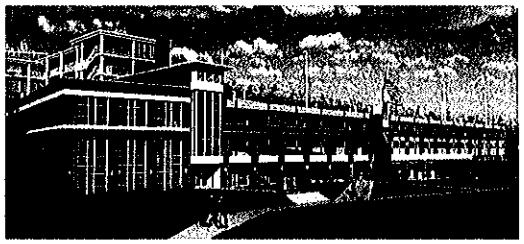
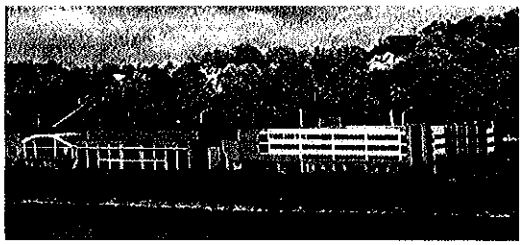
Project Profiles

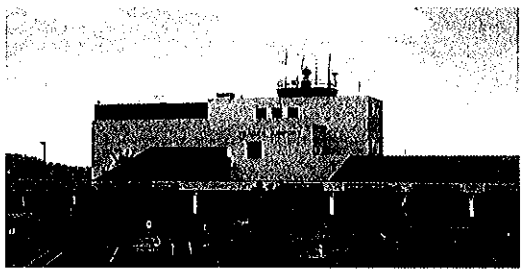
New Construction
Design Build



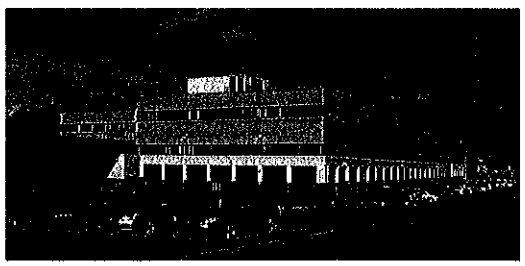
West Virginia University Intermodal Parking
CMA Engineering is provided engineering services to develop performance criteria data for a new intermodal parking facility located on the Health Sciences Campus in Morgantown, WV. The initial phase of the project is to create a 500 space parking garage expandable to 1500 spaces with offices, retail and storage space.



Morgantown Events Center
CMA Engineering provided engineering services for the criteria development and preparation of RFP for Design/Builders for new 80,000sf multi-purpose event center and parking structure.



Yeager Airport-Parking Garage
CMA Engineering provided mechanical, electrical and plumbing design services for developing the design criteria for the new design/build multi-tiered parking facility with new toll booths and employees comfort area.



WV Department of Environmental Protection
CMA Engineering provided mechanical, electrical, plumbing and fire protection design services for the design/build construction of the new consolidated DEP office in Charleston, WV. Building is a three-story facility of approximately 180,000sf with a 650 car parking area. This facility is registered **as a LEEDS construction project.**

Residence Halls-University of Charleston
CMA Engineering provided mechanical, electrical, plumbing and fire protection design services for the design/build of two new four-story Dormitories, constructed during the summers of 2004 and 2005. In 2006, CMA provided design for the addition of a wing to the second dormitory.

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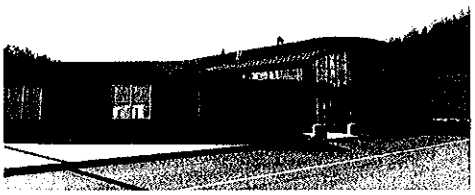
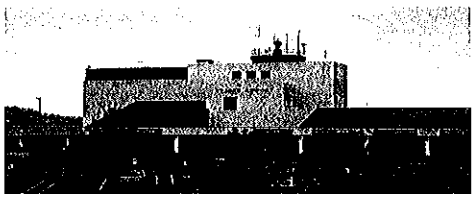
References

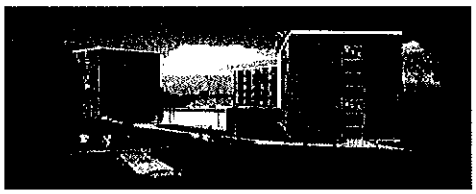
Mechanical/Electrical/Plumbing



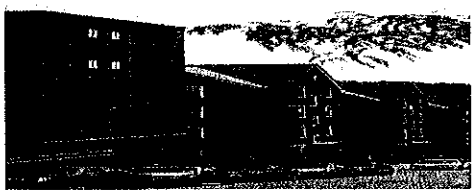
Kanawha County Schools
3300 Pennsylvania Avenue
Charleston, WV 25302
Contact: Mr. Charles Wilson
(304) 348-6148



Yeager Airport
100 Airport Road
Charleston, WV 25311
Contact: Mr. Rick Atkinson
(304) 344-8033

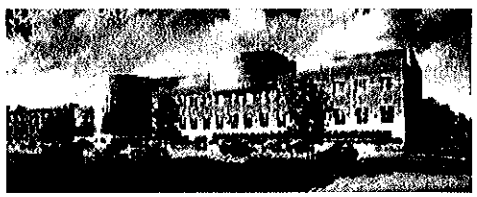


Concord University
P.O. 1000
Athens, WV 24712
Contact: Mr. John Ferguson
(304) 384-5233



West Virginia University
979 Rawley Lane
Morgantown, WV 26505
Contact: Mr. Eric Rosie
(304) 293-2853

West Virginia University
979 Rawley Lane
Morgantown, WV 26505
Contact: Tony Napolillo
(304) 293-7478



Mylan Pharmaceuticals
P.O. Box 4310
Morgantown, WV 26504
Contact: Mr. J. J. Dotson
(304) 599-2595

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References

1. Mr. Dennis Kincer, P.E.
   WV Division of Natural Resources
   Wildlife Resources
   State Capital Complex, Building 3
   1900 Kanawha Boulevard, East
   Charleston, WV 25305
   (304) 558-2771

2. Honorable Dick Callaway
   Mayor
   City of St. Albans
   1488 MacCorkle Avenue
   St. Albans, WV 25177
   (304) 727-2971

3. Honorable Damron Bradshaw
   Mayor
   City of Chesapeake
   12404 MacCorkle Avenue
   Chesapeake, WV 25315
   (304) 949-1496

4. Mr. Greg Bailey, PE
   Director Engineering Division
   Engineering Division
   WVDOT - Division of Highways
   Building Five
   1900 Kanawha Boulevard, East
   Charleston, WV 25305
   (304) 558-9722

RFQ No. DNRB11059

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 exceed 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: Chapman Technical Group

Authorized Signature: _____ Date: 3/22/2011

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 22 day of March, 2011.

My Commission expires September 20, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC _____

Official Seal
Notary Public, State of West Virginia
Jessica D. Gunnoe
506 Coal Fork Road
Charleston WV 25306
My Commission Expires Sept. 20, 2020