

TIMOTHY GAUL, Vice President, Power and Energy

Mr. Gaul is an environmental planner and scientist and the Vice President of Louis Berger's Power and Energy Division. He specializes in electric transmission siting studies, infrastructure planning efforts, ecological assessments, land and resource management plans, and information management efforts for major infrastructure development projects. Mr. Gaul has experience conducting a range of environmental planning studies including: transmission line siting studies, macro corridor analyses, watershed analyses, environmental assessments (EAs), environmental impact statements (EISs), ecological risk assessments, natural resource inventories, and road and transportation plans. He has experience in all aspects of transmission line route selection and permitting and has recent project experience working on several major transmission infrastructure development projects for Dominion Virginia Power, Allegheny Energy, American Electric Power (AEP), FirstEnergy, PPL Electric Utilities, and Public Service Electric & Gas (PSE&G). Mr. Gaul has also provided environmental planning support for a range of federal agencies including the U.S. Forest Service (USFS), National Park Service (NPS), Bureau of Indian Affairs, Bureau of Land Management, Department of Defense, and USACE.

FIRM Louis Berger Group

EDUCATION

- MS, Biology 2000
- BS, Environmental and Forest Biology 1997

REGISTRATIONS / CERTIFICATIONS

- Certified GIS Professional

RELEVANT PROJECT EXPERIENCE ELECTRIC UTILITIES

South Bluefield – Progress park 138 kV Line Rebuild Project. Siting Lead and NEPA Lead for AEP's reconstruction of the South Bluefield to Progress Park project. The project involves rebuilding and realigning an existing 88 kV line to 138 kV standards for a line that crosses the Jefferson National Forest.

Dominion Virginia Power Loudoun County Transmission Upgrades – Siting lead and Project Manager for the development of new 500 kV and 230 kV lines in Loudoun County, VA. Led the siting effort, supporting agency coordination, and the public outreach process.

Grain Belt Express Clean Line, Clean Line Energy. Project Director for the siting and permitting of 750+ miles of 600 kV HVDC transmission line from western Kansas to Indiana. Led the siting effort, supporting agency coordination, public outreach, siting efforts, and provided expert witness testimony. Mr. Gaul has provided expert siting testimony in Kansas and Missouri for this project.

Greater Fort Wayne Area Reliability Project, AEP, Fort Wayne Indiana
Project Director for two projects providing siting and permitting of 15 miles of double circuit 345/138 kV transmission line and ~15 miles of 765 kV transmission line to support Indiana Michigan Power Company, a subsidiary of AEP.

Wythe Area Improvement Project, AEP

Berger siting and environmental analysis lead for a ~20 mile double circuit 138 kV transmission line from the Jacksons Ferry Substation to the Wythe Substation, in Southern Virginia with one circuit terminating at the Progress Park Substation. Provided support for the Virginia Corporation Commission process.

Allegheny Energy/American Electric Power, Potomac Appalachian Transmission Highline (PATH) Siting and Environmental Study. Project manager and siting expert for the route selection studies and permitting efforts associated with the West Virginia and Virginia portions (230 miles) of the PATH 765-kilovolt (kV) transmission line. Project extended across three states, from just north of Charleston, West Virginia, through Frederick, Virginia and into Kemptown, Maryland and included the siting of a 500/765 kV substation. Before PJM demand projections removed the project from further consideration, all siting studies were completed, direct testimony was submitted, and field surveys for cultural

resources, wetlands, and T&E species were completed for more than half of the project.

Allegheny Energy, Trans Allegheny Interstate Line (TrAIL) Line Routing Study and Environmental Analysis. In June, 2006, PJM Interconnection approved an expansion plan calling for the construction of a new 500-kilovolt transmission line from Southern Pennsylvania to Northern Virginia. Mr. Gaul managed the routing study and environmental effects analysis for 180 miles of the project. He was responsible for daily client contact, organizing and facilitating data gathering efforts, managing staff allocation, budgets, and schedule. As part of this project he provided expert witness testimony for regulatory proceedings in West Virginia, Pennsylvania, and Virginia. This project is currently under construction.

Central Electric Power Cooperative, Macrocorridor Study and Environmental Impact Statement for the McClellanville 115 project. Led the preparation of the draft macrocorridor study for the ~20 mile McClellanville 115 kV transmission line. Project Director for the Environmental Impact Statement (in development) by the USDA Rural Utilities Service and the US Forest Service, Francis Marion National Forest.

AEP Transmission Feasibility Study. Project Manager for a feasibility study investigating the potential siting and permitting constraints, opportunities, timelines, and costs for six different potential major transmission connections (confidential project, locations not provided).

Dominion Virginia Power, Meadow Brook to Loudoun 500 kV Line Permitting. Project Manager for permitting and regulatory compliance for 62 miles of 500 kV line, including: the delineation of wetlands along 62 miles (approximately 2,000 acres) of right-of-way; survey and assessments of sensitive migratory birds, sensitive plant surveys, and sensitive mussel habitats; a review of all stream crossings for the Virginia Marine Resources Commission; and preparation of architectural and archaeological surveys in support of Section 106 compliance for the Virginia Department of Historic Resources. This effort also included the preparation of two Environmental Assessments under National Environmental Policy Act (NEPA) compliance for the line's crossing of two National Parks, the Appalachian Trail and the Manassas National Battlefield.

PPL and PSE&G, Susquehanna to Roseland 500 kV Line. Senior technical advisor. PPL and PSEG contracted the Louis Berger/Commonwealth Team to conduct siting efforts for this 150 mile line across two states, provide expert witness testimony, provide engineering and design support, permitting, and public outreach support. Mr. Gaul serves as a senior technical advisor for this effort and provides technical review and analysis support for routing efforts, public outreach, and contract oversight.

Allegheny Energy, Osage-Whiteley 138 kV Project. Project Manager and siting expert for the route selection studies and permitting efforts associated with this interstate project involving 15 miles of 138 kV transmission line between Pennsylvania and West Virginia.

First Energy, Montville Whippany 115/230 kV Project - Project Director and siting lead for siting of a 230 kV connection between the Montville and Whippany Substations in central NJ. Efforts included management, siting, regulatory agency coordination, and permitting for the 10-15 mile 230 kV project.

First Energy, Red Bank 230 kV Project - Project Director and siting lead for siting of a 230 kV connection between the Montville and Whippany Substations in

central NJ. Efforts included management, siting, regulatory agency coordination, and permitting for the ~15 mile 230 kV project.

First Energy, Oceanview – Larabee 230 kV Project - Project Director and siting lead for siting of 15+ miles of 230 kV line. Efforts included management, siting, regulatory agency coordination, and permitting for the 15 mile 230 kV project.

FirstEnergy, Transmission Reinforcement Study. Project Manager. FirstEnergy contracted Louis Berger and Commonwealth Associates to evaluate a range of electric solutions for constructing 30 miles of 115 kV transmission line in eastern Pennsylvania to improve reliability. Efforts included review of potential siting feasibility of several 115 kV routes and potential site identification for four substations.

U.S. FOREST SERVICE

U.S. Forest Service (USFS) Intermountain Rural Electric Association (IREA), Floyd Hill Distribution Tie Line Project, EA. Senior reviewer and advisor for development of this EA on a three-mile crossing of National Forest Lands in Colorado.

USFS, Thunder Basin National Grassland, Wyoming. Project manager and GIS specialist for a Roads Analysis for the Thunder Basin National Grassland, Wyoming, in accordance with FS-643, *Roads Analysis: Informing Decisions About Managing the National Forest Transportation System*. Served as facilitator for all interdisciplinary meetings, conducted the road valuation and risk analysis, and compiled a database for tracking risk and value rankings for each maintenance level 3 and higher road on the National Grassland.

USFS, Roads Analysis Process (RAP) Report for the Decommissioning of the Navy's Extremely Low Frequency (ELF) Transmitter on the Chequamegon National Forest, northern Wisconsin. Managed the analysis, modeling, and preparation of the RAP report, lead agency meetings for individual road risk and value assessments, and served as technical representative for the RAP at public scoping meetings.

USFS, Uwharrie National Forest Roads Analysis Process Report, North Carolina. Managed the production of the Uwharrie National Forest (North Carolina) Roads Analysis Process Report, in accordance with FS-643, *Roads Analysis: Informing Decisions About Managing the National Forest Transportation System*. Responsible for agency coordination, oversight and review of all analyses, preparation of the risk and value analysis, and assessment of hydrologic condition, aquatic communities, and forest resource access.

USFS, EA for Herbicide Treatments on the Long Cane Ranger District of the Sumter National Forest, South Carolina. Managed the preparation of an EA for Herbicide Treatments on the Long Cane Ranger District of the Sumter National Forest in South Carolina. For this analysis, major concerns focused on the indirect effects of herbicide treatments on wildlife, migratory bird use of regeneration sites, and forest composition effects.

USFS, Cullasaja Falls Recreation Improvement Project Biological Inventory and Assessment on the Nantahala National Forest, North Carolina. Project Manager for the Cullasaja Falls Recreation Improvement Project Biological Inventory and Assessment on the Nantahala National Forest, North Carolina. Responsible for project management of field surveys, analysis and assessment of wildlife and aquatic inventory analysis.

USFS, Valle II Project EA (Proposed Restorative Treatment of the Forests of the Cerro Grande Fire Area) on the Santa Fe National Forest, New Mexico.

Responsible for mapping and analysis of GIS information relative to areas under consideration for fire management activities.

USFS, Land and Resource Management Plan Amendment and EA for the Lincoln National Forest, New Mexico.

Deputy project manager for the land and resource management plan amendment and EA for the Lincoln National Forest in New Mexico. The Lincoln National Forest proposes to amend its Forest Plan to meet current Federal wildland fire management policy, direction, and terminology. Proposed changes to the Forest Plan include allowing for the use of wildland fire for resource benefit, removing the option to use wildland fire in areas containing wildland/urban interface (WUI), allowing for prescribed fire in wilderness, and requiring suppression of all human-caused ignitions.

USFS, Bethesda Analysis Area EA on the Enoree Ranger District of the Sumter National Forest, South Carolina.

Project manager for the preparation of the Bethesda Analysis Area Environmental Assessment on the Enoree Ranger District of the Sumter National Forest (South Carolina). Also responsible for preparation of the analyses of timber and vegetation management effects on forest vegetation, soil, and visual and noise resources.

USFS, Lower Enoree Watershed Assessment, South Carolina.

Deputy Project Manager, study included three separate analyses including; an ecosystem analysis, hydrologic condition analysis, and roads analysis all performed at the watershed scale. Responsible for the assessment of forest conditions, water quality analyses, and managing the preparation of the Hydrologic Condition Analysis and Roads Analysis.

USFS, Little Mountain Analysis Area EA on the Long Cane Ranger District of the Sumter National Forest, South Carolina.

Responsible for preparation of the analyses of timber and vegetation management effects on forest vegetation, soil, and visual and noise resources.

USFS, EA for Proposed Modifications of Forest Highway 50 on the Pisgah National Forest, North Carolina.

Major concerns focused on soil and water issues related to paving or not paving several portions of an 8 mile stretch of FS road. Conducted a field survey to support the modeling and assessment of erosion and sediment input to streams adjacent to the proposed road paving and maintenance operations. Analyses concerning soil erosion and water yield estimates will utilize the Forest Service Water Erosion Prediction Project Model (WEPP).

USFS, EA for the Land Between the Lakes Open Area Vegetation Management Plans, Kentucky.

Conducted analyses of water quality and aquatic community concerns, and performed analyses using the Soil and Water Assessment Tool (SWAT) model to determine hazard and risk for a herbicide treatment program.

USFS, Little Muskingum Watershed Assessment, Wayne National Forest, Ohio.

Responsible for inventory and assessment of forest vegetation and structure and technical support for analyses of water quality, aquatic community, and hydrologic conditions analyses.

USFS, Pine Creek Watershed Assessment, Wayne National Forest, Ohio.

Responsible for inventory and assessment of forest vegetation and structure,

analyses of water quality, aquatic communities. Provided GIS support through ortho-photo rectification, remote sensing, and land cover identification.

USFS, Shaver's Fork Watershed Assessment, Monongahela National Forest, West Virginia. Responsible for inventory and assessment of forest vegetation and structure and technical support for analyses of water quality, aquatic community, and hydrologic condition analyses.

USFS, Wayne National Forest Prescribed Fire Program EA, Ohio. Mapped and analyzed prescribed fire area boundaries, and planned and coordinated with both FS personnel and field personnel regarding property boundaries and required T&E survey boundaries.

USFS, EIS on Oil and Gas Leasing in the Finger Lakes National Forest, New York. Responsible for mapping and assessing impacts associated with the various leasing alternatives. In addition to mapping and GIS based natural resource analyses, he supported the assessment of potential noise and visual impacts.

U.S. ARMY CORPS OF ENGINEERS

USACE Kansas City, Environmental Indefinite Delivery Indefinite Quantity (IDIQ). Ecological technical lead supporting the USACE in development of a research compendium to support the development of a Restoration Management Plan for the Missouri River Recovery Program.

USACE Mobile, Upper Turkey Creek Feasibility Study. Technical lead for the Upper Turkey Creek Flood Damage Reduction and Ecological Restoration Feasibility Study. Managed field assessments, ecological restoration treatment planning, and ecological restoration report preparation. Responsible for mapping and analysis of GIS information in support of field survey efforts and stream restoration planning and flow modeling.

USACE Omaha, South Dakota Title VI Land Transfer EIS. Team lead. This project involved a Congressional mandate for the transfer of Federal lands to the State of South Dakota for recreation and wildlife management purposes, and to several Native American Tribes. Acted as the team lead for GIS mapping and data analysis, and was also responsible for the analysis and assessment of potential visual impacts.

Quantico Marine Corps Base, Wetland Delineation and EA for Basic School Improvements. Lead wetland delineator and water resources analyst for NEPA compliance supporting major development efforts at the MCBQ Basic School.

ARMY NATIONAL GUARD

Army National Guard, EA for the Marmet Lock Improvement Project, Charleston, West Virginia. Modeled the effects of the anticipated increase in truck traffic along the entire transport route from the lock to the dredge disposal site using the FHWA's Highway Capacity Software.

Army National Guard, EA for the West Virginia ARNG Regarding Helicopter Flight Operations over the Monongahela National Forest, West Virginia. Responsible for data gathering, client coordination and contract management, and was involved in editing the EA document.

OTHER DEPARTMENT OF DEFENSE

Base Realignment and Closure Environmental Compliance (five EAs). Interdisciplinary team member and senior analyst responsible for assessing

and reporting on water resource concerns under BRAC programs at Fort Bragg, Fort Meade, Fort Dix, Fort Detrick, and Devens Airforce Base (four EAs).

Roads Analysis Process (RAP) Report for the decommissioning of the Navy's Extremely Low Frequency (ELF) Transmitter on the Chequamegon National Forest, Wisconsin. Managed the analysis, modeling, and preparation of the RAP report, lead agency meetings for individual road risk and value assessments, and served as technical representative for the RAP at public scoping meetings.

EA for the U.S. Air Force on the Long Range Air Launch Target (LRALT) system. Technical lead. Project provided a realistic threat simulation for testing Theater Missile Defense systems over the Pacific Ocean. As leader for this project, participated in client coordination and alternatives and issues development, as well as data gathering, analysis, and technical writing for the EA. As the technical lead for this project, responsible for analysis of the oceanic testing environment, technical aspects of environmental effects from missile launch debris and effluent, compilation and editing of report, and client coordination for modeling and analysis.

NATIONAL PARK SERVICE

National Park Service (NPS), Water Resource Scoping Report for the Denali National Park and Preserve, Alaska. The report provides an overview of water-related legislation, summarizes the hydrologic environments in the park, and identifies and provides an analysis of high-priority water resource issues and management concerns. Project responsibilities included **project management**, researching and identifying water resources issues relating to hydrology, development impacts, scoping meeting facilitation, and GIS analyses.

NPS, EA for Wrangell-St. Elias National Park and Preserve, Alaska. The proposed project would establish the first and only formal NPS campground in the park. The campground is located on sensitive wetland habitat along a lakeshore, which required analysis of classification of vegetation types from infrared imagery and available botanical studies to determine wetland impacts.

NPS, EA to Support Rehabilitation Efforts on the Roosevelt Ice Pond Dam in Hyde Park, New York. Responsible for project management and GIS analyses and modeling. GIS activities for this project included general mapping and efforts to determine peak flows for development of appropriate dam rehabilitation methods.

NPS, EA to Support Rehabilitation Efforts on the Val Kil Pond in Hyde Park, New York. Responsible for both project management and GIS analyses and modeling. GIS activities for this project included general mapping and review of historical imagery to assess changes in pond size and structure over time.

NPS, Potomac Gorge Wetland Inventory, Mapping, and Characterization Project, a Joint Venture between the Nature Conservancy and the NPS. Identified wetlands from satellite imagery and performed field inventory of the type and vegetation composition of all identified wetlands within the Potomac Gorge (which forms the boundary between Maryland/Washington, DC and Virginia).

NPS, Delaware Water Gap National Recreation Area McDade Trail EA Amendment and Monitoring Plan, Pennsylvania. Responsible for TR55 modeling and hydrologic analysis in support of culvert design and sediment and erosion control design efforts.

NPS, EA for the Mount Rushmore Fourth of July Fireworks Program, South Dakota. Responsible for analyses of vegetation and fire risk, noise, and all GIS mapping and analysis.

NPS, EA for the Blue Ridge Parkway, Regarding Reconstruction of a Bridge and Other Park Facilities and Restoration of Eroded Areas at the Otter Creek Campground, Amherst County, Virginia. The current bridge design results in debris buildup and flooding during severe storm events, causing massive stream bank erosion and subsequent sedimentation of Otter Creek and Otter Lake downstream, loss of riparian areas, and threatens visitor health and safety, as well as the stability of Park structures. High waters also flood a nearby sewage system, causing untreated wastewater to be discharged into the Creek. Analyzed impacts of the alternatives on air quality, the sanitation system, land use, and impacts from construction noise on park operations and resources.

NPS, EA for the NPS Denver Service Center that analyzed the construction and operation of a new Corinth Civil War Interpretive Center in Corinth, Mississippi, to be operated and maintained as part of the Shiloh National Military Park, Tennessee. Responsible for the analysis of noise impacts from the proposed construction and operation of the interpretive center. This resource was of particular concern due to the potential of activities to affect a nearby elementary school and daycare center.

U.S. FISH AND WILDLIFE SERVICE

U.S. Fish and Wildlife Service, GIS Database Development, Mapping, and Training for the Chassahowitzka Refuge Complex, Florida. Provided introductory and advanced training in GIS to the Chassahowitzka Refuge Complex, which includes the Chassahowitzka, Crystal River, Egmont Key, Passage Key, and Pinellas Refuges. A custom training curriculum was developed to coincide with the needs of the refuges' CCP planning process. Additional tasks included the development a GIS database for the refuge and creation of maps for the final CCP.

GENERAL SERVICES ADMINISTRATION

General Services Administration, EA Analyzing Deer Management at a Federal Facility, Silver Spring, Maryland. Conducted field investigations of vegetation type and abundance both within the project area and in comparable sites in the region to characterize deer impacts on forest understory.

STATE AND LOCAL GOVERNMENTS

District of Columbia Comprehensive Plan, Environmental Technical Report. Led the preparation of an environmental baseline report in support of the District's Comprehensive Planning Process. Also served as GIS team lead for the project, coordinating GIS analysis for habitats, water resources, environmental hazards, and all mapping efforts.

Nottawasaga and Lake Simcoe Target Load Study, Lake Simcoe Regional Conservation Authority. Team Lead for the Lake Simcoe and Nottawasaga River phosphorous load target setting study. Supported the development of a phosphorus target setting strategy for a rapidly developing watershed north of Toronto, California. Regularly presented results and status to the Project Technical Advisory Committee comprised of local municipality leaders in Ontario, managed GIS analysis efforts, and led the production of the final report.

TRIBAL EXPERIENCE

EA to Support the Development of a Forest Management Plan for Naragansett Indian Tribe of Rhode Island. For the Naragansett (a Category 4 –

Minimally Forested Reservation), forest planning centers around management of forest resources for firewood, wildlife, culturally significant species, and protection of forest resources from insects and disease. For this project, GIS analysis primarily focused on correlation of forest inventory data with Tribal land use patterns to determine appropriate management prescriptions for different land areas.

Forest Management Plan and associated EA for the Mississippi Band of Choctaw Indians. Project Manager. For the Choctaw (a Category 1 – Major Forested Reservation), forest planning centers around multiple use management of forest resources for timber production, recreation, and protection of forest resources from insects and disease. For this project, GIS analysis correlates forest inventory data with Tribal land use patterns, recent imagery, and for developing appropriate management strategies for the 7 major communities that comprise the Mississippi Band of Choctaw lands.

ADDITIONAL INFORMATION (FOR INFORMATION ONLY)

Education

MS, Biology, Creighton University, 2000

BS, Environmental and Forest Biology, College of Environmental Science and Forestry at Syracuse University, 1997

Registrations/Certifications

Certified GIS Professional (GISP)

Training

Wetland Delineation and Management Training Course - U.S. Army Corps of Engineers (USACE)-approved, 2002