



AERIAL IMAGERY & MODELING SERVICES

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FIRM PROFILE

PWGC: SOLUTIONS FOR A CHANGING WORLD

MEET PWGC

PWGC was founded more than 29 years ago by Paul Grosser, PhD, PE, PG, a thought leader who recognized the need for a multi-disciplined engineering and environmental consulting firm that offered a diverse range of services to meet market demand regionally and nationally. Based in Bohemia, NY, PWGC has offices in New York City, Albany, Syracuse, Connecticut and Washington.

PWGC serves the New York Metropolitan region and has established a strong reputation for innovative problem solving and providing quality services to municipal, educational, private, public and federal clients. The firm is dedicated to providing cost-effective and timely services that result in practical solutions for its clients.

PWGC has a multi-disciplined staff of more than 70 professionals, which includes recognized experts in the application of wastewater and water supply technologies. Its strength lies with these licensed professional engineers, geologists and hydrogeologists, LEED accredited professionals and environmental compliance specialists, which gives PWGC a wealth of experience key to helping bring your project from idea to reality.

CHOOSE PWGC

Whether your objectives are planning, design and/or redevelopment, PWGC's solutions are innovative and economical. PWGC is committed to client goals and our dynamic team of professionals provide innovation and flexibility to deliver customized solutions to projects regardless of size, complexity or duration.

THE PWGC DIFFERENCE

What sets us apart is our customized approach to each project, rapport with regulatory agencies and exceptional project management. This approach has cemented PWGC's industry reputation as a leader in engineering. PWGC's assets that translate into additional value for you:

- Strong working relationships with key regulatory sector players
- Specialists in regulatory requirements to facilitate quicker approvals
- Highly responsive to budget & time constraints to get your project on line faster
- Project and quality control monitoring to exceed your project needs
- More than 70 dedicated professionals to provide a wide array of services
- Strict adherence to environmental compliance standards

Make PWGC quality environmental consulting and engineering solutions work for you.



PWGC QUICK FACTS

Corporate

- Founded & Incorporated: 1990
- SAM/SBA Registered
- Small Business
- DUNS # 798730966
- Federal ID: 11-3612196

Offices

- Bohemia, NY
- New York, NY
- Saratoga Springs, NY
- Syracuse, NY
- Seattle, WA
- Shelton, CT

Qualifications

- LICENSES - Engineer, Geologist, LSP, NC, NY, NJ, PA, MD, IN, NH, MA, FL, WA
- LEED-AP
- Envision

Service Codes

NAICS

- 562910 Environmental Remediation
- 541330 Engineering
- 541620 Environmental Consulting
- 562998 Waste Management Services
- 541370 GIS Base Mapping
- 237130 Green Services

SIC

- 8999 Environmental Services
- 8711 Engineering Services



SUMMARY LIST OF SERVICES

Environmental Services

- Contract Administration
- Petroleum & Chemical Spill Investigation & Remediation
- Remedial Alternative Assessment & Design
- Remedial Construction Management
- Property Transaction Services
 - Due Diligence, RI/FS, PCR
 - Brownfields Redevelopment—Investigation, Remediation, Program Management
 - Phase I, Phase II Environmental Site Assessments
 - NYC E-Designated Sites
 - NYC OER Program Management—Investigations, Remediation, Grant Application
 - Cost Estimating—Property Investigation & Remediation
- Environmental Audits—Assess Environmental Liability
- Environmental Assessment & Contaminant Source Evaluation
- Groundwater Investigation & Remediation
- Aquifer/Pumping Testing
- Risk-Based Approach Solutions
- Site Closure Reports
- UST/AST Management
- Air, Water, Soil & Soil Vapor Sampling/Monitoring Community Air Monitoring
- Environmental & Health Risk Assessment
- Radiological Investigation & Remediation Services
- Hazardous Waste Management
- Soil Management, Certified Clean Fill
- Storm Water Management
- Water Table Evaluation & Flood Mitigation
- Dewatering Design, Permitting & Compliance Sampling

Environmental Compliance/Management

- Air Quality—Title V Permitting, Air Emission Inventories, Tier II & TRI Reporting
- Articles XI & 12 Hazardous Materials Storage Compliance for Nassau & Suffolk Counties, NY
- Chemical/Petroleum Bulk Storage Tanks—Permitting, Audits, Regulatory/Environmental Compliance Management
- Facilities Contingency Plan Development/Management, including SPCC, SWPPP, FRP
- Compliance Review
- Regulatory Compliance Reporting
- FAR 139.321 Fire Safety Inspections
- Fuel Storage Facilities & Mobile Fuel Equipment

Wastewater/Water Supply

- Water Supply/Wastewater—Systems, Planning, Design
- Groundwater Modeling
- Site/System/Feasibility Evaluation, Planning & Technical Assistance
- Water Conservation Plan Development

Expert Counseling/Client Representation

- Expert Testimony, Support & Counsel

Natural Resource Studies

- Wetlands Delineation, Permitting & Mitigation Design
- Threatened & Endangered Species Surveys
- Migratory Studies
- Ecological Studies
- Ecological Risk Assessments
- National Environmental Policy Act (NEPA) Studies
- Planning
- Watershed Analysis

Energy/Sustainability Solutions

- Geothermal System Feasibility Analysis, Design, Permitting & Construction Management
- Renewable Energy Design for Solar & Wind
- Carbon Footprint Analysis, Profile & Management
- Alternative Fueling Station Planning & Design, Equipment Specification, Construction Observation, Permitting, Compliance & Facility Commissioning for Compressed Natural Gas, Hydrogen, Biodiesel & Ethanol-85
- Building Due Diligence & Energy Studies
- LEED Administration & Sustainable Design Practices
- High Performance Sustainable Buildings
- Energy Conservation & Energy Recovery Alternatives
- MEP/High Efficiency Equipment Solutions
- Power Generation, Cogeneration & Fuel Cells
- Energy Modeling, Utility Rebate Programs & Tax Incentives
- Green Legislation & ARRA Stimulus Grants
- GIS Based Modeling for Wind, Solar & Carbon Footprint Analysis

Civil/General Engineering

- “Best Economic Alternatives” Evaluation
- Comprehensive Feasibility Studies
- Conservation Plan Development
- Construction Planning, Management, QA/QC
- Drainage Planning, Grading & Design
- Evaluation, Planning & Technical Assistance
- Facility Design & Condition Assessment
- Planning & Design
- Property Condition Report

Geographical Information Systems/ Global Position Systems

- Data Collection & Conversion
- Infrastructure & Asset Management
- Wetlands & Endangered Species Delineation
- Digital Elevation Model Analysis
- Customized GIS Applications, GIS/CAD Integration
- Database Development, Conversions, Manual Digitizing
- Website development
- GPS Field Data Collection & Post-Processing
- Remote Sensing & Image Processing



An aerial photograph of a large-scale construction project. The site is filled with various construction materials, including stacks of orange bricks and wooden formwork. Several tall yellow tower cranes are positioned around the site, some with their jibs extending over the buildings. The ground is a mix of dirt, concrete, and rebar. In the background, there are residential buildings and a road with parked cars. The overall scene is one of active development.

AERIAL IMAGERY & MODELING SERVICES

INTRODUCTION TO AERIAL IMAGERY AND MODELING

PWGC aerial imagery and modeling services provide a rapid response to obtain your data needs quieter, safer, and more efficiently than traditional information collecting methods. Drone usage allows for a quick overview and/or investigation of your site that will save your company time and money, while providing a more thorough and useful deliverable to meet your requirement.

PWGC maintains a team of FAA-licensed and insured drone pilots that can evaluate the topography of your site in only a fraction of the time of conventional methods. Aerial imaging and modeling services can help your company focus efforts where needed, saving valuable time and resources.

PWGC's drone imagery can provide technical, marketing and advertisement avenues for your company not previously utilized.



Aerial imagery and modeling services offer fast and accurate renderings and measurements. PWGC can assist you in the following areas:

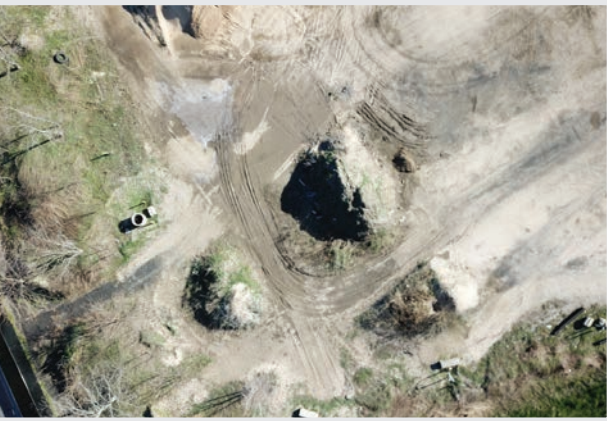
Remote Sensing

- Modeling
 - Elevation contours
 - Volume calculations (stockpiles, cut + fill)
 - 3-D renderings and site model
 - Point cloud models of structures to evaluate integrity
- Photogrammetry
- Cartography
- LiDAR 3-D mapping
- Orthomosaic site models and imagery
- NDVI orthomosaic models for agriculture to evaluate:
 - Overall plant health
 - Indicate zones of concern
 - Watering/fertilizer needs
 - Weeds and Insect damage
 - Potential disease
 - Soil health

Site Inspections and Monitoring

- Insurance claims assessments
 - Storm damage
 - Property damage
- Solar Farm panel inspections
- Wind park functionality and maintenance evaluations
- Powerline inspections

INTRODUCTION TO AERIAL IMAGERY AND MODELING



- Line loss
- Vegetation encroachment
- Structural integrity
 - Poles
 - Wires (sagging, insulation)
- Industrial park overviews for site safety and potential hazard evaluation
- Oil/gas line evaluation for structural integrity and potential leaks investigations
- Structure assessments and monitoring
- Change modeling
 - Deforestation (Industry, Pests, Disease)
 - Erosion
 - Post storm shoreline evaluation (breaches, damage to infrastructure and properties)
 - Bathymetric modeling
 - Sand Migration
 - Seasonal changes
 - Plant and Wildlife preservation and conservation
 - IR imagery for wildlife populations and migration
 - Near-IR for invasive plants populations and migration
- Construction developments
 - Follow progress across all phases of work
 - Building progress
 - Façade evaluation
 - Interior reconstruction
 - Roof assessments
 - Dredging operations

Regulatory Compliance

- Part 360 Operational Compliance
 - Run-off control and handling
 - Stockpile calculations
 - Accurate evaluation of remaining materials
 - Ensure proper sloping of stockpiles and excavation
 - Berm locations and size
 - Potential for additional income and maximize profits
 - Additional locations for excavation operations
 - Optimize site layout of stock-piles and traffic patterns

