



MINING DEVELOPMENT & PERMITTING SERVICES

CONTACT: Kris Almskog, PG, Vice President
630 Johnson Avenue, Suite 7 • Bohemia, NY 11716
Phone: 631.589.6353 • Fax: 631.589.8705 • krisa@pwgrosser.com



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





MINING DEVELOPMENT & PERMITTING SERVICES

INTRODUCTION TO MINING DEVELOPMENT & PERMITTING SERVICES

Mine Development and Permitting Services

- MLR Permit Applications, Modifications, & Renewals
- Reserve Analysis
- NYS DOT Source Reports and Approvals
- NYS DEC compliance support
- Spill Prevention, Control and Countermeasure Plans
- Drone Aerial Imagery (Topography, photogrammetry, stockpile volumes, and slope stability)
- Stormwater Pollution Prevention Plans, SPDES permitting, stormwater management and compliance
- Hydrogeologic investigations
- Land development design, including Site Plan development, design, and permitting



- Water Quality Modeling and Monitoring Services
- Sound level and noise monitoring
- Water Withdrawal Permits and Reporting
- Air Registration, Permitting and Compliance
- Visual Analysis Viewshed Analysis

Aerial Imagery and Modeling

- Remote Sensing
 1. Modeling
 2. Elevation contours
 3. Volume calculations (stockpiles, cut + fill)
 4. 3-D renderings and site models
 5. Point cloud models of structures to evaluate integrity
- Site Inspections and Monitoring
- Regulatory Compliance

Operational Compliance

- Run-off control and handling
- Stockpile calculations
 1. Accurate evaluation of remaining materials
 2. Ensure proper sloping of stock-piles and excavation
 3. Berm locations and size
 4. Potential for additional income and maximize profits
 5. Additional locations for excavation operations
 6. Optimize site layout of stock-piles and traffic patterns



Mined Land Reclamation Permit Application

Client: Sand Highway LLC

Contact: Pat Bistran III

Site: East Hampton, NY

Project Manager: Regina Bykov, PG, Project Manager

PROJECT DESCRIPTION

PWGC assisted the project team with development of a Mined Land Reclamation (MLR) Permit Modification Application to the New York State Department of Environment Conservation (NYSDEC) to modify its permit to continue to mine available sand and gravel reserves below the water table and within its fully permitted Life of Mine. In support of the permit modification PWGC evaluated the hydrogeologic conditions beneath Sand Highway LLC and prepared a Hydrogeologic Assessment Report. The purpose of this Hydrogeologic Assessment Report was to document the methodology and results of the assessment, as well as to serve as a supplement to Sand Highway LLC's permit modification application.

PWGC ROLE

PWGC provided the following services for Sand Highway LLC:

- Site visit to evaluate existing site conditions.
- Reviewed public records published by the United States Geological Survey (USGS) and the Suffolk County Water Authority (SCWA). In addition, Freedom of Information Law (FOIL) requests were submitted to the Suffolk County Department of Health Services (SCDHS) and NYSDEC for access to records pertaining to private and public water supply well information.
- Contracted Environmental Data Resources Inc. (EDR) to conduct a search of public and EDR proprietary records for potential and/or existing sources of contamination to up to one mile from the Mine.
- Coordinated and oversaw the advance of four soil borings.
- Evaluated soil borings to classify the types of soils located across the site and developed a site conceptual plan identifying the maximum depth of the proposed lake.
- Coordinated and oversaw construction of six monitoring wells.
- Developed and implemented a groundwater sampling plan for the site.
- Reviewed and analyzed on-site groundwater monitoring data to determine the extent of impact that existing mining operations have had on groundwater quality.
- Performed an assessment of the potential sources of contamination to identify the type and quantity of contaminants which could be introduced to the lake from surface spills occurring adjacent to the property.
- Reviewed available reports and data associated with previous investigations performed at the Mine.
- Prepared a Hydrogeologic Assessment Report.
- Coordinated prepared of the Mine Plan and Reclamation Plan.
- Prepared MLR Permit Modification Report and supporting documentation
- Prepared a Spill Prevention, Control and Countermeasure Plan (SPCC Plan).



DRONE AERIAL IMAGERY

Client: Coram Materials

Contact: Lorraine Vigliarolo

Site: Coram, NY

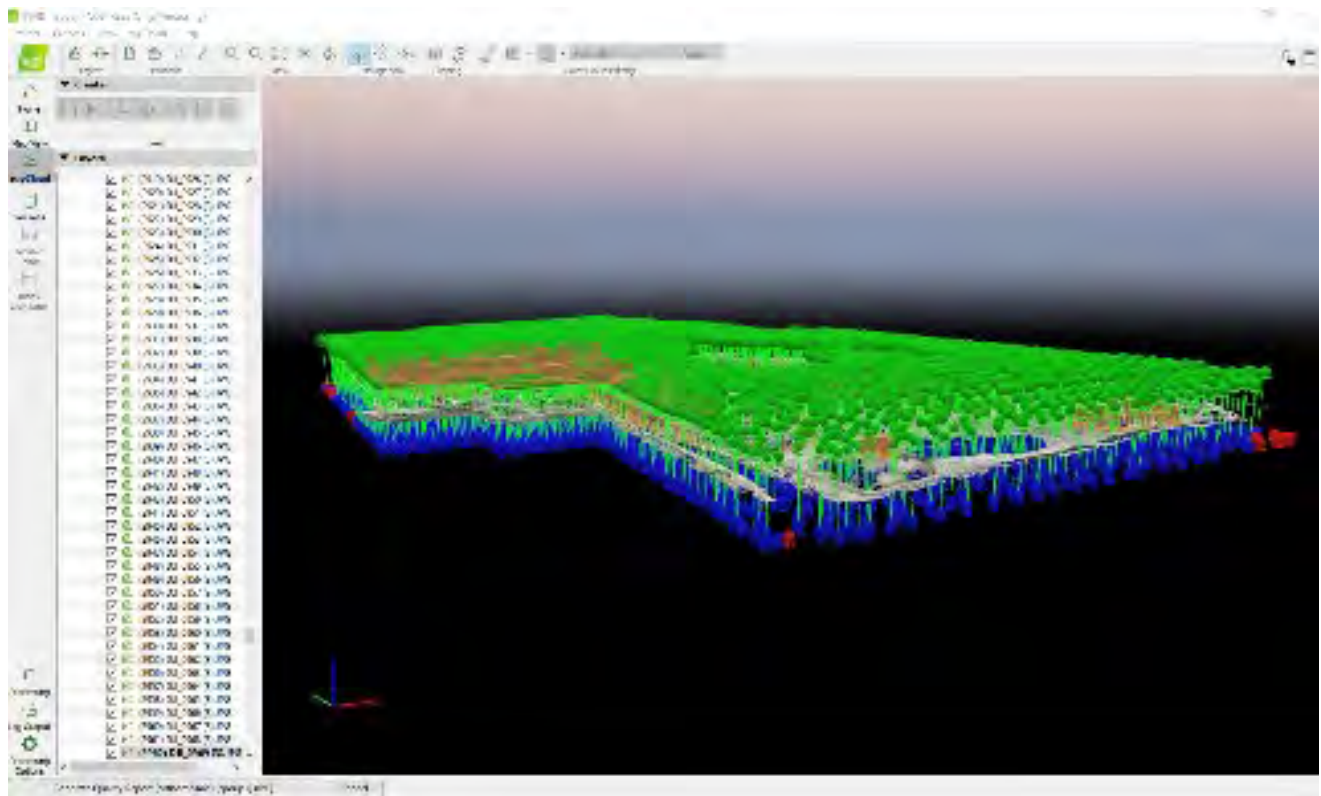
Project Manager: Kris Almskog, PG, Vice President

PROJECT DESCRIPTION

PWGC developed a customized flight plan to cover a 300 acre site in an effort to generate stockpile calculations and provide an inventory management plan for a mining operation. The purpose of the flight was to calculate the volume of material remaining on site, generate a cost analysis of the remaining material, and to maximize site usage by determining where they can remove more material and stay within the allowable slopes.

PWGC ROLE

- Site visit to evaluate current conditions of the site.
- Conducted a Nadir flight of the subject property.
- Generated an orthomosaic model of the site
- Rendered the orthomosaic image into a three dimensional point cloud model to generate contour lines
- Calculated the volume of each individual stockpile to generate an inventory report
- Generated a cost sheet of the material on site to assist the client in budgeting remaining resources
- Overlaid the entire site with a model of the allowable slopes to ensure the client stays within regulations, while maximizing the material they can remove.



CLIENT DRIVEN SOLUTIONS

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PWGROSSER.COM BOHEMIA, NY 11716

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BULKHEAD PERMIT APPLICATION

Client: Blue Point Community Association

Contact: Mathew Schneck

Site: Blue Point, NY

Project Manager: Kris Almskog, PG, Vice President

PROJECT DESCRIPTION

In support of the Blue Point Association's efforts to replace over 300 feet of existing bulkhead and perform maintenance dredging along their 90 boat slip canal and marina along the Great South Bay, P.W. Grosser Consulting (PWGC) provided engineering design, planning, permitting and bid support services.

PWGC ROLE

PWGC has served the Blue-point Community Association since 1999 and has conducted detailed soundings, volume estimates, collected sediment samples, coordinated disposal of dredge spoils, prepared dredging plans, permit applications and specifications, and prepared bid documents for dredging, dyke maintenance and the re-constructed bulkhead. PWGC prepared the Joint Permit Application for the project in order to secure approvals from the United States Army Corps of Engineers (USACE), the NYS Department of Environmental Conservation (NYSDEC) and Brookhaven Township; and requested and obtained numerous extension permits. Applications were prepared for the bulkhead reconstruction, as well as maintenance dredging required to maintain navigable water depths.



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AIR PERMITTING

Client: Northwell Health

Contact: Jeff Scott

Site: Long Island Jewish Medical Center

Project Manager: Maksim Beygelman, PE, Project Manager

Regulatory: NYSDEC Region 2, USEPA Region 2

PROJECT DESCRIPTION

Title V Air permitting services that included the review of applicable rules and regulations, including, but not limited to New Source Performance Standards (NSPS), Title V permitting, New Source Review/Prevention of Significant Deterioration Permitting, Maximum Achievable Control Technology (MACT), and Reasonably Achievable Control Technology (RACT) for the Long Island Jewish Medical Center.

PWGC ROLE

PWGC provided an analysis of regulatory air laws and regulations and their applicability to cogeneration system emission sources. PWGC prepared a Title V Major Modification to permit the cogeneration engines and prepared applicable permits required by the New York City Department of Environmental Protection (NYCDEP). During the Title V application process, PWGC worked with the NYSDEC to provide LIJMC with nitrogen oxides (NOx) emission reduction credits (ERCs) for the decommissioning of 5 utility boilers and coordinated Stack Testing with our sub-contractor Environmental Laboratories Inc. (ELI), which was required by newly established permit conditions.



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Grading Improvements and Field Slope Management Plan

Client: Calverton Tree Farm

Contact: Ed Partridge

Site: Calverton, NY

Project Manager: Regina Bykov, PG, Project Manager

PROJECT DESCRIPTION

PWGC prepared a grading improvement and field slope management plan for the Calverton Tree Farm. The purpose of the plan was to assist in evaluating site conditions on the existing site and the adjacent agricultural district land. In support of the plan, PWGC assisted in the evaluation of site conditions on the existing nursery site and the adjacent agricultural district lands to evaluate soils and groundwater water table conditions in the area of the failed nursery plantings and adjacent agricultural district lands. PWGC assisted with oversight of installation of three geotechnical soil borings at the Site and determination of existing soil conditions and characteristics, as well as documenting the water table, at various locations through the site. It was determined that soils were unsuitable for nursery plantings. PWGC assisted with developing a viable Nursery Operations Plan to assure survival of nursery stock plantings, which included site grading recommendations. The grading plan was prepared to optimize topsoil and subsoil conditions, and water table separation for nursery stock tree plantings.

PWGC ROLE

PWGC provided the following services for Calverton Tree Farm:

- Site visit to evaluate existing site conditions.
- PWGC coordinated and oversaw the advance of three soil borings.
- Evaluated soil borings to classify the types of soils located across the site and developed a site conceptual plan identifying the maximum depth of the proposed lake.
- Prepared application to NYS Agriculture and Markets to support of adding property to the state certified Agricultural District.
- Prepared Grading Improvement and Field Slope Management Plan, including proposed modification to existing elevation grades on two portions of the property to increase agricultural yield.
- PWGC performed soil volume analysis resulting from the grading action.
- Prepared a Sediment and Erosion Control Plan.
- Prepared Planting Plan.



AIR EMISSIONS INVENTORY & COMPLIANCE

Client: Adelphi University

Contact: Robert Shipley

Site: Adelphi University Campus

Project Manager: Maksim Beygelman, PE, Project Manager

PROJECT DESCRIPTION

P.W. Grosser Consulting (PWGC) assisted Adelphi University with air emissions compliance and new national emissions standards for hazardous air pollutants (NESHAPs) Subpart JJJJJJ regulations for the University's campus.

PWGC ROLE

- PWGC ensured Adelphi University met the new NESHAPs requirements in Subpart JJJJJJ by providing an initial notification to the U.S. Environmental Protection Agency, performing a one-time energy assessment and initial tune-up with submittal of compliance to the respective agency on time.
- PWGC performed an on-site audit to inventory air emissions sources that included boilers, heaters, generators and non-combustion sources that may be at the facility, which may include storage tanks, refrigerant carrying equipment and laboratory hoods. PWGC reviewed applicable air emissions documentation on file such as fuel usage records and available figures locating emissions sources. A list of boilers and generators had been provided and PWGC verified the list and added information including dates of installation, which were required for regulatory compliance review.
- The NYSDEC regulatory air requirements are based on a three-tiered permitting system: Title V permit, State Facility Permit, and a Registration required for minor sources.
- PWGC provided on call assistance to keep Adelphi University abreast and maintain compliance with air regulations.
- PWGC prepared a report summarizing the services performed.



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Compliance Management and Consulting

Client: Prysmian Power Cables & Systems USA, LLC

Contact: Romeo Menegat

Site: Neptune Regional Transmission System

Project Manager: Regina Bykov, PG, Project Manager

PROJECT DESCRIPTION

Neptune Regional Transmission System is a 65-mile long, over and undersea and underground High Voltage Direct Current (HVDC) system that features a cable that runs from Sayreville, NJ to New Cassel, NY. It carries 660 megawatts (MW) of energy, which is enough to meet the electricity demands of about 600,000 average-sized homes.

Following an extensive permitting process, PWGC provided various levels of personnel, from Principal through field/environmental scientists, to provide independent oversight services throughout the construction of this environmentally sensitive project. Specifically, PWGC was responsible for review of project work plans, specifications, stipulations and interagency agreements to provide independent oversight and auditing services to the contractors performing the cable and sub-station construction. PWGC performed independent inspections and auditing of the construction activities pertaining to the many environmentally sensitive areas along the entire Wantagh State Parkway. This included Storm Water Pollution Prevention Plan inspection for trenching, horizontal drilling activities, sub-station construction site (built on a former landfill), health and safety compliance, and NYSDOT traffic safety controls. PWGC ensured that any deficiencies were addressed immediately by the hundreds of contractors performing constructions services along the 13-mile stretch of roadway. Although PWGC reported to the NYS Public Service Commission, we worked seamlessly various contractors to ensure that the site was brought into compliance immediately to minimize potential environmental and health and safety concerns.

Attention was required during horizontal drilling activities that bored beneath water bodies and bridges in environmentally sensitive areas and during construction of the power sub-station that was built above an abandoned landfill. PWGC worked closely with the various constructions and drilling contractors to ensure that best management practices were being rigorously followed and that potential threats to the nearby wetlands were minimized by ensuring use of non-toxic drilling fluids and the installation of silt fences and swales.

PWGC effectively worked as an integral team member during this highly visible, environmentally sensitive \$600 million aggressive construction project to ensure that it was completed in accordance with the approved plans, specifications, applicable permits, approvals, and interagency agreements. As a result of cooperative working early on in the project to address potential deficiencies, the contractor was able to complete the project ahead of schedule. The cable and sub-station were activated in time for the summer peak load period.



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