

## Mining Operation Services

### Qualifications Exceeding Expectations



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# P. W. GROSSER CONSULTING

## STRATEGIC ENGINEERING SOLUTIONS

### Meet PWGC

PWGC was founded more than 28 years ago by Paul Grosser, P.E., Ph.D., 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, 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 planning and permitting of mining and land reclamation. 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.

### 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 include:

- Strong working relationships with key regulatory sector players
- Specialists in regulatory requirements to facilitate quicker approvals
- Responsiveness 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



These assets 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 City, NY
- Syracuse, NY
- Seattle, WA
- Shelton, CT

#### QUALIFICATIONS

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

#### AFFILIATIONS

- ACEC
- NYCMA



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# 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

## Expert Counseling/Client Representation

- Expert Testimony, Support & Counsel

## Natural Resource Studies

- Wetlands Delineation, Permitting and Mitigation Design
- Threatened and 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 and Construction Management
- Renewable Energy Design for Solar and Wind
- Carbon Footprint Analysis, Profile and Management
- Alternative Fueling Station Planning and Design, Equipment Specification, Construction Observation, Permitting, Compliance and Facility Commissioning for Compressed Natural Gas, Hydrogen, Biodiesel and Ethanol-85

## Energy/Sustainability Solutions Continued

- Building Due Diligence and Energy Studies
- LEED Administration and Sustainable Design Practices
- High Performance Sustainable Buildings
- Energy Conservation and Energy Recovery Alternatives
- MEP/High Efficiency Equipment Solutions
- Power Generation, Cogeneration and Fuel Cells
- Energy Modeling, Utility Rebate Programs and Tax Incentives
- Green Legislation and ARRA Stimulus Grants
- GIS Based Modeling for Wind, Solar and Carbon Footprint Analysis

## Mining Development & Permitting Services

- Reserve Analysis
- MLR Permit Applications, Modifications, & Renewals
- Drone Flights for Topography, Photogrammetry, Stockpile Volumes, and Slope Stability
- Spill Prevention, Control and Countermeasure Plans
- Stormwater Pollution Prevention Plans, SPDES Permitting, Stormwater Management and Compliance
- NYSDEC Ccompliance Support
- Hydrogeologic Investigations
- Land Development Design, including Site Plan Development, Design, and Permitting
- Water Quality Modeling and Monitoring Services
- Sound Level and Noise Monitoring
- NYSDOT Source Reports and Approvals
- Water Withdrawal Permits and Reporting
- Air Registration, Permitting and Compliance

## Operational Compliance

- Run-off Control and Handling
- Stockpile Calculations
- Accurate Evaluation of Remaining Materials
- Ensure Proper Sloping of Stock-piles 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

## 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 and Conversion
- Infrastructure and Asset Management
- Wetlands & Endangered Species Delineation
- Digital Elevation Model Analysis
- Customized GIS Applications, GIS/CAD Integration
- Database Development, Conversions, Manual Digitizing
- Web site development
- GPS field data collection and post-processing
- Remote sensing and image processing

## Wastewater & Water Supply

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

# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Services Provided

- Reclamation Plans
- Geological Evaluation
- Soundings
- Water Withdrawal Permits
- Curb Cut/Site Design/Site Plan
- Wetland Evaluation/Mapping of Wetland
- Groundwater Evaluation/Monitoring/Modeling
- Cut and Fill Estimates
- Stormwater Pollution Prevention Plans
- Safety Audits
- Compliance Audits
- Agricultural Use Evaluation
- Underground Injection Control Evaluations
- Property Transaction Support
- Sampling and Analysis of Reserves and Imported Fill
- Noise & Dust Surveys
- Strategic Site Planning



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Roanoke Sand and Gravel - Middle Island, NY

**Mining Permit Modification** – PWGC has been responsible for the preparation of technical reports, drawings, reserve analysis and reclamation plan assistance to create a 151 acre lake in association with the expansion of this 300 acre sand and gravel mining operation. In addition, PWGC prepared projected volume of material to be removed estimates in support of the expansion. PWGC developed a Spill Prevention Control and Counter-measure Plan (SPCC) for the facility.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Environmental Compliance Services - Chentronics

Chentronics is a manufacturer of high energy ignition systems located in Norwich, New York. Operations at the facility result in the generation of hazardous waste and air emission sources. Due to the nature of the facility's water system and the number of full-time onsite employees, the facility is also classified as a Public Water System and is therefore subject to the monitoring and water treatment requirements of 10 NYCRR.



Chentronics' parent company documented several findings during an environmental compliance audit of the facility. PWGC was contracted to address issues of non-compliance and help the client navigate applicable local, state and federal regulations. PWGC worked with the Chenango County Health Depart, NYSDEC and EPA to address the initial findings as described below, and plans to conduct annual facility reviews to ensure continued compliance.

#### PWGC'S role:

- Perform a facility walkthrough to become familiar with operations relative to hazardous waste generation and air emission sources;
- Determine if onsite air emission sources require NYSDEC Air Registration and complete registrations as necessary;
- Review air emission sources as they relate to federal Maximum Achievable Control Technology (MACT) standards and document applicability;
- Interview facility personnel and collaboratively determine the amount of reportable chemicals released as compared to federal threshold reporting quantities;
- Review hazardous waste generation activities at the facility, prepare a Waste Management Plan that outlines the proper waste handling and disposal activities, and register the facility's appropriate waste generation status with the EPA;
- Conduct an onsite training session on the appropriate handling and disposal of Universal Waste for facility personnel;
- Register the onsite septic system in accordance with the EPA's Underground Injection Control (UIC) Program; and
- Assess the facility water system and water system usage, determine the required water treatment processes, and prepare a water monitoring and sampling program to satisfy 10 NYCRR requirements for a Public Water System.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Hazeltine Greenlawn Campus, Greenlawn, NY - BAE Systems

Specialized turn-key environmental remediation services for an Environmental Remediation Program at BAE Systems.

PWGC decommissioned two underground injection wells (UIWs) that had served as part of a wastewater disposal system, decommissioning of ten (10) groundwater monitoring wells and perform the clean out of several on-site storm water catch basins. Through a combination of real time data collected in the field by PWGC hydrogeologists and accelerated turn around on the analytical samples, PWGC eliminated downtime and unnecessary re-mobilization of equipment completing the project within the allotted budget and time. The UIWs received regulatory closure from the Nassau County Dept. of Health and USEPA while the monitoring wells received NYSDEC sign-off.

In line with its standards for turn-key service projects PWGC:

- prepared a detailed Work Plan, Health & Safety Plan, and Contingency Plan to identify required tasks and potential hazards
- developed engineering controls to minimize potential impacts to the environment resulting from the remedial action
- subcontracted a remediation contractor and environmental analytical laboratory to support the project
- minimized disposal costs to BAE by utilizing existing BAE contracts with waste transporters and disposal facilities



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Hazeltine Greenlawn Campus, Greenlawn, NY - BAE Systems

After completing the remediation of several Underground Injection Wells at the site, PWGC evaluated the site's network of stormwater and industrial drywells, former and current cesspools, and other underground injection structures. The program's objective was to assemble a comprehensive UIC database and update appropriate State Pollutant Discharge Elimination System (SPDES) Permits that the client would be able to use as a basis for establishing a long-term UIC Management Plan.

PWGC conducted an analysis and field verification of existing maps, documentation, and database records to validate the completeness and accuracy of UIC's site inventory. That same UIC database continues to be incorporated into a GIS platform to manage the SPDES permit and UIW inventory.

Key elements in the project were:

- Field verification included dye/flush testing to confirm interconnections, elevation surveys of piping inverts, and determination of construction details.
- PWGC field engineering services focused on the required formal closure of surplus UIWs, which included arranging surveys, obtaining digging permits, coordinating excavation and sampling, and documenting remediation and closure tasks.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Glen Cove, NY - North Shore University Hospital

Design and construction of a 800-gpm open loop groundwater heat pump system in compliance with NYSDEC regulations.

PWGC's role in the project:

- PWGC conducted and documented a feasibility study
- Developed design and construction specifications for the geothermal well system, detailing an open-loop groundwater supply and recharge well system with inter-connecting process piping
- Coordinated well permits documentation, prepared Long Island Well Permit and Engineering Report
- Developed a project implementation strategy
- Oversaw project execution and administered field activities

To determine the extent of the proposed upgrade and expansion of existing air-cooling system, PWGC:

- Investigated and determined best-suited size and location of the new wells
- Modeled the effects of the proposed system on existing wells
- Prepared construction cost estimates
- Developed project designs and strategy to address unique site challenges
- Prepared a comprehensive engineering report and well permit in accordance with NYSDEC regulations.
- Sized the various system components, and coordinated with other project consultants to route piping, and locate process equipment.

PWGC determined that, based on analysis of hydraulic, economic, and hydrogeologic aspects the system's expansion would be feasible, and that the construction would not significantly disrupt the hospital's day-to-day operations.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### **Various Healthcare Systems - Northwell Health (Formerly North Shore Long Island Jewish Health System)**

Environmental audits for eleven North Shore Long Island Jewish (NSLIJ) Health System Hospitals and three Centers. Develop an Environmental Compliance Issues Document for each hospital based on the environmental audits. In addition, provide continuing support to address any identified violations per government, state, and local environmental regulations.

PWGC collaborated with NSLIJ Health System Review applicable regulations at federal, state, and local levels - specifically, EPA's environmental issues of concern at healthcare facilities (i.e. universal waste recycling, mercury, asbestos, employees training, chemotherapy waste disposal, Spill Prevention Plans (SPP), State Pollution Discharge Elimination System (SPDES) permits, etc).

At each site listed, PWGC:

- Developed a prioritized checklist of environmental concerns
- Conducted on-site inventories and staff/on-site management surveys
- Generated solutions based on the results of inventories/surveys
- Prepared Environmental Compliance Issues Document to report information gathered during the audit and the recommendations, which address the identified environmental issues for five NSLIJ Hospitals
- Developed a GIS (geographic information systems) database with an electronic file to link data to each environmental area of concern issues for five NSLIJ Hospitals
- Continues to provide support in developing environmental policies and assistance during regulatory inspections

Initially, PWGC has conducted several facility visits with appropriate NSLIJ personnel. Visits included inspection, photograph documentation, and inventory of all aboveground and underground storage tanks, hazardous materials/wastes storage areas, air emission/venting locations, stormwater collection locations, potable and wastewater collection locations. PWGC collected operations documentation, such as current/historical maps of the facility layout and surrounding properties, standard operating procedures (SOPs) for hospital activities, a list of chemicals with appropriate materials safety data sheets (MSDS) utilized by the facility, copies of pertinent permits and waste manifests, training logs, and records of operations and maintenance of engineering, laboratory and environmental service procedures.

While completing the environmental audit for NSLIJ at Glen Cove, PWGC identified several environmental concerns, and collaborated with NSLIJ Management to:

- Update current NCDOH Toxic of Hazardous Materials Storage Facility Permits and NYSDEC Air Facility Registration Certificates
- Create alternative methods to dispose of the laboratory's solvent waste
- Establish program for reporting illicit silver discharges to the wastewater system PWGC had discovered during initial inspections
- Develop a chemotherapy waste inventory

PWGC has established an effective support system and continues to manage and enhance NSLIJ's Environmental compliance and reporting processes.

PWGC performs periodic hazardous waste, universal waste and regulated medical waste training; both with formal presentations and impromptu in-service sessions during inspections.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Gilberti, Stinziano, Heintz & Smith, P.C.

**St. Lawrence County, NY - Curb Cut Application Preparation and Wetlands Delineation**—PWGC provided preliminary site planning services for a proposed mining operation in St. Lawrence County, NY. Specifically, PWGC prepared a curb cut application for a planned access road and provided a preliminary wetlands delineation at the site. PWGC staff visited the site to document local road conditions (e.g., road dimensions, traffic signs, etc.), select a potential location for the curb cut, and subsequently prepared the application and associated site plan. While onsite, PWGC staff also documented potential wetlands and later compared field observations to the wetlands database to facilitate the preparation of preliminary wetlands figures.



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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### **Neptune Regional Transmission System Compliance Management & Consulting**

Neptune Regional Transmission System is a 65-mile long, over undersea and underground High Voltage Direct Current (HVDC) system which includes 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 through-out the construction of this environmental sensitive project. Specifically, PWGC was responsible for review of project work plans, specifications, stipulations and interagency agreements in order 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 environmental 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 which was 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 in-seam with the various contractors to ensure that the site was brought into compliance immediately to minimize potential environmental and health and safety concerns.

Particular attention was required during horizontal drilling activities that bored beneath water bodies and bridges in environmental 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 practice 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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# PWGC Experience

## STRATEGIC ENVIRONMENTAL ENGINEERING SOLUTIONS

### Hydrogeologic Consulting & Support Services—Brookhaven National Laboratory

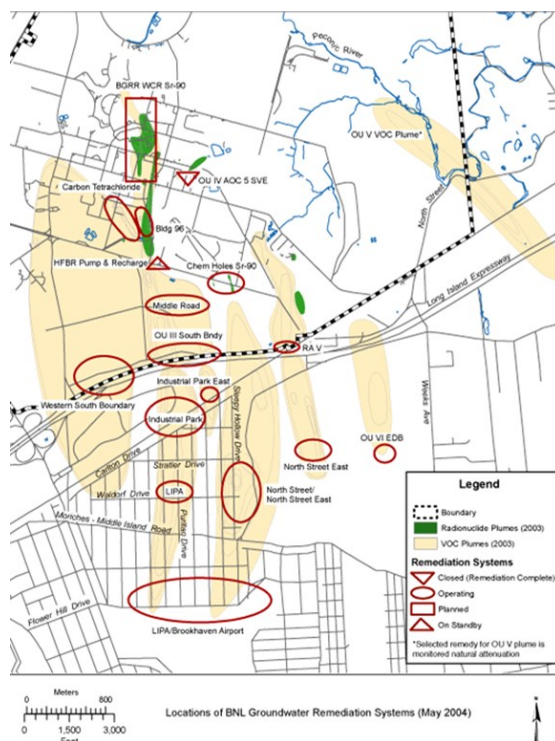
Projects in support of the program involved the installation of temporary vertical profile borings, permanent monitoring wells, and recovery/extraction wells using various drilling technologies such as Geoprobe®, Hollow Stem Auger, Mud-Rotary, Reverse Circulation, and Rota-Sonic.

PWGC provided observation and support services such as

- Coordination and execution of daily safety meetings
- Health and safety oversight
- Oversight of subcontractors and field crew
- Collection of soil and groundwater samples
- Soil classification using the USCS and Munsell Color Chart
- Field screening using instruments such as a PID, FID, and MVA

PWGC Field Hydrogeologist Support Services spanned across

- Decontamination of sampling equipment
- Documenting and tracking wastes generated
- Development of permanent monitoring wells
- Maintenance and operation of granular activated carbon units; and Documentation of field observations including blow counts, sample collection techniques visual observation, health and safety information, and construction activities



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# PWGC Experience

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