

**ANDREW S. GAUL, P.E.**  
*Senior Project Engineer*

**EDUCATION:**

BS in Environmental Engineering from Penn State University  
BS in Biology from Millersville University  
BA in Business Administration from Michigan State University

**PROFESSIONAL REGISTRATION:**

Professional Engineer Registered in the Commonwealth of Pennsylvania –

**MEMBERSHIPS (PROFESSIONAL/PERSONAL):**

PWEA - Pennsylvania Water Environment Association, Member  
WEF - Water Environment Federation, Member

**KEY QUALIFICATIONS:**

Mr. Gaul has more than six years of progressive experience providing engineering planning, permitting, design, operations, and laboratory field research. His computer application experience includes AutoCAD, VTPSUHM, Intelisolve's Hydraflow Storm Sewers, Haestad Methods, and ESRI's ArcView. Mr. Gaul has hands-on laboratory analysis experience including chemical oxygen demand, total suspended solids, volatile suspended solids, and volatile fatty acids. He also has hands-on equipment experience with pH meters, D.O. meters, biogas detectors, gas chromatographers, total organic carbon analyzers, spectrophotometers, colorimeters, and microscopes.

**WASTEWATER PLANNING EXPERIENCE:**

**Act 537 Official Sewage Facilities Plan Revision**

Village of Bethel, Bethel Township, Berks County, PA

Evaluated ability of several designs of new wastewater treatment and collection and conveyance systems to serve existing needs areas and to accommodate future growth, reviewed projected wastewater flows, and addressed overall future sewage planning in light of Township, Berks County, and PA DEP goals.

**Act 537 Official Sewage Facilities Plan Revision –Minor Update Revision**

Union Township, Lebanon County, PA

As authorized by the Township, a Minor Update Revision was drafted and submitted to the PA DEP. The outfall location for the proposed expanded WWTP was changed for cost savings and ease of maintenance. Act 537 Plan revision required coordination with PHMC and PNDI review agencies.

**Act 537 Official Sewage Facilities Plan**

New London Township, Chester County, PA

Evaluated ability of several designs of new wastewater collection and conveyance systems to serve existing needs areas and to accommodate future growth, reviewed projected wastewater flows, identified areas with sewage needs based on septic system repair records, sewage needs survey results, and well water quality data, addressed overall future sewage planning in light of Township, Chester County, and PA DEP goals.

**Act 537 Official Sewage Facilities Plan Revision**

Caernarvon Township, Lancaster County, PA

Identified areas with sewage needs based on septic system repair records, sewage needs survey results, and well water quality data. Needs Area evaluation included door-to-door surveys and the collection of well water samples.

**Act 537 Official Sewage Facilities Special Study**

West Brandywine Township, Chester County, PA

Evaluated new wastewater treatment and collection and conveyance options; reviewed cost analysis, completed required forms, and correspondence; prepared special study to address limited planning area based on Township, County, and PA DEP goals.

**WASTEWATER PERMITTING EXPERIENCE:**

**Bethel Twp. Municipal Authority NPDES and WQM Permits**

Bethel Township, Berks County, PA

Worked with PA DEP to develop and obtain NPDES effluent limits for two new WWTP's and successfully prepared Water Quality Management Permit application packages for both WWTP's and their associated collection and conveyance systems.

**Centre Twp. Municipal Authority**

Centre Township, Berks County, PA

Prepared and obtained NPDES Permit Renewals for the Authority's WWTP's and prepared Chapter 94 Reports for the Authority's facilities.

**Union Township**

Union Township, Lebanon County, PA

Prepared NPDES Permit Renewal for the Township's WWTP's and prepared Chapter 94 Report for the Township's facility.

**Centerport Borough Municipal Authority**

Centerport Borough, Berks County, PA

Prepared Chapter 94 Reports for the Authority's WWTP and evaluated the conversion from coarse air bubble diffusers to fine air diffusers within the Authority's WWTP tanks.

**WASTEWATER FACILITIES DESIGN EXPERIENCE:**

**Bethel Twp. Municipal Authority, Bethel and Frystown Sanitary Sewer Systems**

Bethel Township, Berks County, PA

Lead Project Engineer for both sanitary sewer system projects including the proposed WWTP's and their associated collection and conveyance systems. Developed the plans for the sewer layout to service existing dwellings and worked with manufacturer's representatives to design pump stations and influent lift stations. WWTP design was coordinated through a vendor including the design of the Headworks chamber, flow diversion chamber and MLE extended aeration treatment for BNR.

**Union Township WWTP Upgrade**

Union Township, Lebanon County, PA

Developed conceptual design for an upgrade to the existing 0.1 MGD WWTP. Conceptual design for expanded facility included treatment capacity of 0.3 MGD and relocated discharge outfall. WWTP design was coordinated through a vendor including the design of a SBR WWTP for BNR.

**Stonehedge Sanitary Sewer System**

Upper Uwchlan Township, Chester County, PA

Designed modifications to existing sewage collection and conveyance system serving 27 single-family homes utilizing a failing community on lot disposal system; developed plans and specifications for pumping station and conveyance system modifications, and demolition plans for pumping station abandonment.

## **WASTEWATER OPERATIONS EXPERIENCE:**

### **Wastewater Treatment Plant Operations**

Yuengling Beer Company Port Carbon Facility, Schuylkill County, PA

Performed daily sampling, laboratory analysis, and shift checks for anaerobic pretreatment facility; laboratory analysis included chemical oxygen demand, total suspended solids, volatile suspended solids, volatile fatty acids, and pH; coordinated and performed weekly tasks including sludge sampling, chemical deliveries, and chemical additive change-outs.

### **Infiltration/Inflow Study**

Manheim Township, Lancaster County, PA

Performed regular flow metering data management and maintained network of flow meters; performed storm event inspections.

## **COMPLIANCE DOCUMENTS EXPERIENCE:**

### **Sanitary Sewer Use Ordinance**

Harrisburg International Airport, Middletown, PA

Drafted preliminary ordinance allowing Susquehanna Area Regional Airport Authority to inspect and regulate airport tenants, thus affording control of contaminants conveyed to SARAA's wastewater treatment plant located at airport; analyzed contaminate levels in wastewater influent and sludge to evaluate and develop local limits using best available technology.

### **Oxford Area Sewer Authority**

Project Representative, Oxford, PA

Inspected the dewatering and removal of sludge from the Authority's treatment lagoons per the project specifications.

### **Water Quality Reports**

Susquehanna Area Regional Airport Authority, Middletown, PA

Compiled data for annual water quality reports submitted to PA DEP; performed water quality sampling and completed discharge monitoring reports for SARAA's wastewater treatment plant located at Harrisburg International Airport; compiled data and completed consumer confidence report.

## **LAND DEVELOPMENT PLAN REVIEW/ORDINANCE ENFORCEMENT EXPERIENCE:**

### **Stonebridge Crossing Subdivision**

Carroll Township, York County, PA

Reviewed developer-submitted subdivision and land development plan from preliminary plan approval stage to final plan approval for consistency with municipality's zoning ordinance, stormwater ordinance, and subdivision and land development ordinance.

## **LAND DEVELOPMENT PLAN DESIGN EXPERIENCE:**

### **Fallen Oak Estates Residential Subdivision**

Jackson Township, Lebanon County, PA

Prepared Preliminary subdivision and land development plans including stormwater management plan in accordance with municipal subdivision and land development and stormwater management ordinances for proposed 50-acre residential development consisting of single-family detached homes; developed reports for submission to and review by municipal engineer, and sewer and water authorities.

### **Hawthorne Ridge Residential Subdivision**

Lancaster Township, Lancaster County, PA

Prepared stormwater management plan in accordance with municipal stormwater management ordinance and developed erosion and sedimentation control plan in accordance with Chapter 102 rules and regulations for proposed 83-acre mixed-residential development consisting of single-family detached, semi-detached,

townhouse units, and multi-family apartment units; developed reports for submission to and review by municipal engineer and conservation district.

**Mill Creek Residential Subdivision**

Conewago Township, York County, PA

Prepared stormwater management plan in accordance with municipal stormwater management ordinance and prepared erosion and sedimentation control plan in accordance with Chapter 102 rules and regulations for proposed 100-acre residential development consisting of 78 single-family detached homes; developed reports for submission to and review by municipal engineer and conservation district.

**WATER SYSTEM DESIGN COMPLIANCE EXPERIENCE:**

**Hydraulic Model**

Brookfield Subdivision, Berkeley County, WV

Utilized WaterCAD software to develop a hydraulic model of a portion of County's water distribution system to determine if the system could meet specified fire flow demands and simultaneously maintain defined pressure constraints resulting from a proposed residential subdivision.

**Emergency Response Plan Water Facilities**

Mount Joy Borough Authority, Mount Joy, PA

Developed emergency response plan for municipal treatment plant and distribution system; worked with authority staff to determine vulnerabilities and appropriate countermeasures to provide uninterrupted water service during potential emergency situations; incorporated PA DEP guidance documents and requirements into plan.

**FLOOD CONTROL SYSTEMS EXPERIENCE:**

**Stormwater/Flood Control Stormwater Drainage Mapping**

Capital City Airport, Cumberland County, PA

Assisted with stormwater drainage mapping, responsible for compiling and field verifying previous mapping; verified drainage outlets to rivers and streams; utilized global positioning system and geographic information system to capture inlet locations and outlets.

**Flood Protection Plan**

Harrisburg International Airport, Middletown, PA

Evaluated existing flood protection plan, responsible for review of current and past flood protection system maintenance data, and development of maintenance suggestions for system components and field verification of system components.