



Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY

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April 28, 2016

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
PO Box 3265
Harrisburg, Pennsylvania 17105-3265

RECEIVED
2016 APR 29 AM 11:04
PA P.U.C.
SECRETARY'S BUREAU

Re: Act 12 of 2016 (HB 1326)
Utility Valuation Expert

M-2016-2543193

Dear Ms. Chiavetta,

In accordance with the above referenced Act, the Public Utility Commission (PUC) is responsible for maintaining a list of qualified Utility Valuation Experts. Herbert, Rowland & Grubic, Inc. (HRG) has been active in this role, assisting both selling utilities and acquiring utilities with establishing fair market value for over twenty (20) years.

Enclosed, please find a list noting prior experience working with both public and private entities on the valuation of water and wastewater assets along with resumes of staff working on these assignments. We request for the PUC to add HRG to the list of qualified Utility Valuation Experts.

In addition to our experience establishing fair market value for the selling and leasing of utility assets, HRG has prepared hundreds of reports assessing the original historic cost and replacement costs of water and wastewater facilities in accordance with Act 57 of 2005 and Act 209 of 1990.

If you have any questions or would like additional documentation of our experience, please do not hesitate to contact me at 717-564-1121 or avicari@hrg-inc.com.

Thank you for your time and assistance.

Respectfully,

Herbert, Rowland & Grubic, Inc.

Adrienne M. Vicari, P.E.
Manager – Financial Services

AMV/pk
S:\Financial\PUC Rate Studies\2016.04.28_UTILITY Valuation Submission

Attachment

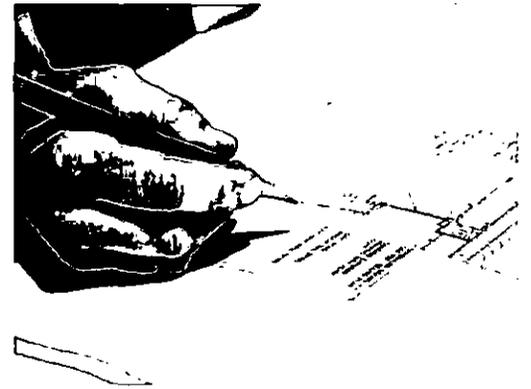
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DESIGNING SOLUTIONS.]

Relevant Experience

During Herbert, Rowland & Grubic, Inc.'s (HRG) fifty year history, our professionals have successfully delivered engineering and financial solutions to diverse clients throughout the Mid-Atlantic region. The team of professionals assembled to complete Utility Valuation Studies has engineering, accounting and related backgrounds, allowing us to fully integrate engineering and financial principles to achieve an in-depth, comprehensive utility analysis. We have experience designing, implementing and operating water and wastewater systems and have assisted a wide range of municipal and authority clients in: 1) weighing advantages and disadvantages of selling or leasing their utilities, 2) providing valuation of facilities for selling or leasing to private companies or other authorities, and 3) assisted in sale or lease negotiations on behalf of our clients.



Combining this experience and knowledge allows us to not only apply industry standards, but to holistically evaluate appropriate sale and lease values using various industry approved methods from the perspective of both the buyer and seller. This allows HRG to provide in-depth insight as to the reasonable and fair market value.

EXTENSIVE FINANCIAL SERVICES EXPERIENCE

The extensive background of our project team yields over 60 years of experience in engineering and financial consulting and includes the following financial services:

- Utility Valuation Studies
- Revenue Requirement Studies
- Cost of Service Studies
- Utility Rate Studies and Long Term Capital Financing Plans
- Rate Design Bond Feasibility Studies
- Capital Charge Studies
- Expert Testimony on Charge Related Matters
- Tax Exempt Bonds, Bank Loans and other Agency and Developer Financings
- Grant Administration and Compliance
- Comprehensive System Reviews
- Economic Impact/Feasibility Studies
- Utility Accounting and Budgeting

Over the past twenty years, HRG has assisted numerous clients with valuation of utilities for the purpose of selling or leasing the system. The following projects demonstrate our experience in working with municipalities and/or authorities in Pennsylvania to value system assets for the purpose of sale or lease:

Relevant Experience & Examples

Reading Area Water Authority (Berks County): Valuation of the system and determination of a fair annual rental value to be paid by Authority to the City of Reading.

New Cumberland Borough (Cumberland County): Acquisition of Borough wastewater system (currently entering into an agreement for sale with PAWC.)

Media Borough/Media Borough Authority (Delaware County): Acquisition of Borough water system (sold to Aqua PA.)

Greenville Borough – Act 47 (Mercer County): Valuation of both the water system owned by Greenville Borough Water Authority along with the Borough's wastewater conveyance & collection system. (No change in ownership.)

Evans City Borough, (Butler County): Valuation of the Borough's water and wastewater systems for sale to the newly formed Evans City Water and Sewer Authority.

Upper Providence Sewer Authority (Delaware County) – Valuation of sewer system for possible sale to Aqua PA.

Concord Township Sewer Authority (Delaware County) – Valuation of sewer facilities for sale to Delcora.

Lancaster Area Sewer Authority (Lancaster County) – Valuation of the Manheim Township sewer system for acquisition by Lancaster Area Sewer Authority.

Lancaster Area Sewer Authority (Lancaster County) – Valuation of the Leola Township sewer system for acquisition by Lancaster Area Sewer Authority.

Lancaster Area Sewer Authority (Lancaster County) – Valuation of the Columbia Borough sewer system for acquisition by Lancaster Area Sewer Authority.

Hawley Area Authority (Wayne County) – Valuation of utility for possible sale to Aqua PA.

Milton Borough (Northumberland County) – Valuation of wastewater collection and treatment system for sale to a new regional authority.

PA American Water – Performed original cost study for system acquisition.

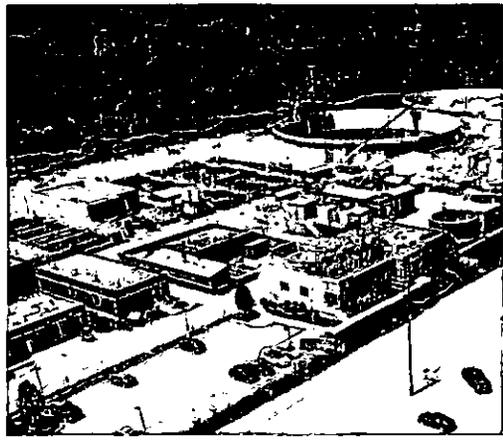
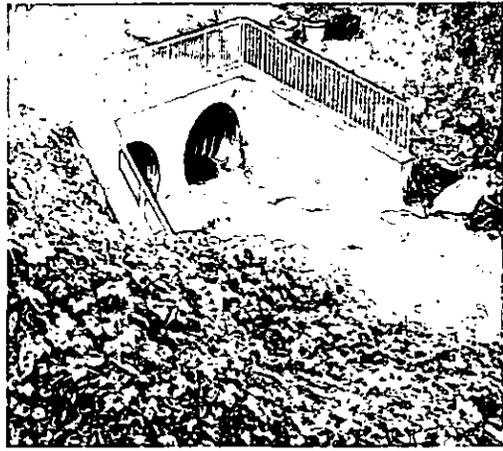
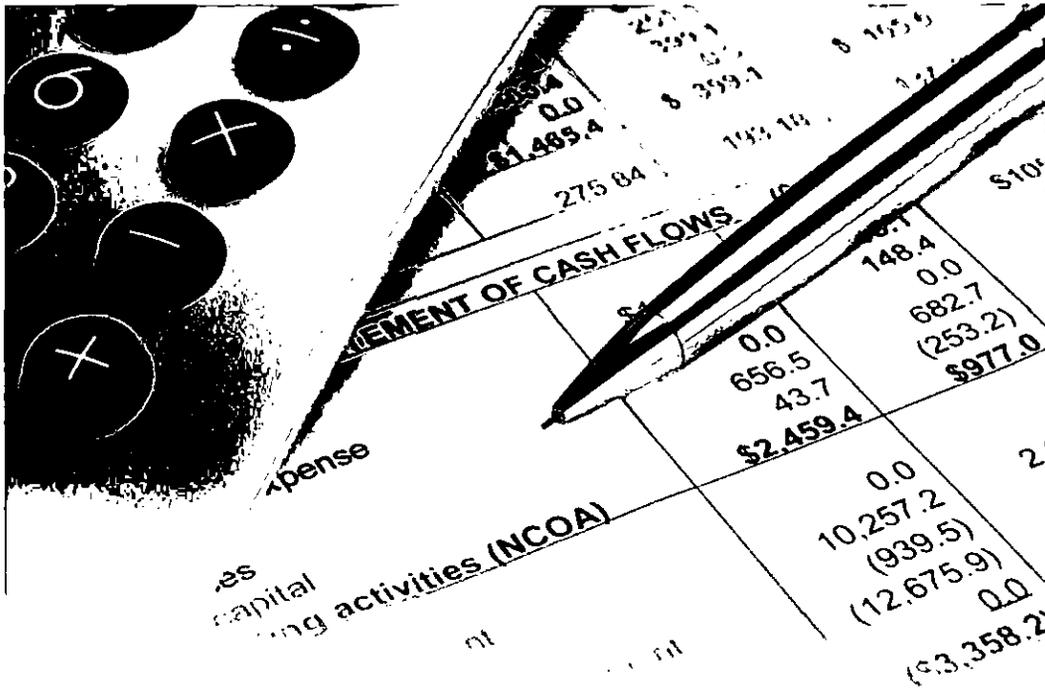
Similarly, HRG has assisted clients in the preparation of Tapping Fee Studies throughout Pennsylvania for both Municipality and Authority owned or operated Sewer and Water Systems. The following examples include studies completed by HRG assessing the original historic cost and/or replacement costs of the utility.



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- Borough of Littlestown, Littlestown, PA
- Borough of Steelton, Steelton, PA
- Steelton Borough Authority, Steelton, PA
- South Creek Township, Gillett, PA
- Port Matilda Borough, Port Matilda, PA
- Port Matilda Borough Authority, Port Matilda, PA
- City of Hermitage, Hermitage, PA
- Westfall Township Municipal Authority, Matamoras, PA
- Lycoming County Water and Sewer Authority, Montoursville, PA
- Benner Township Water Authority, Bellefonte, PA
- Spring-Benner-Walker Joint Authority, Bellefonte, PA
- Mount Pocono Borough
- Hummelstown Borough
- Swatara Township Sewer (3 Districts)
- Cove Privatization Project
- Canton Borough Authority
- Carlisle Suburban Authority - Water
- Carlisle Suburban Authority - Sewer
- Penn Township Municipal Authority - Water
- Penn Township Municipal Authority - Sewer
- Valley Forge Sewer Authority
- White Run Regional Municipal Authority
- Wiconisco Township
- Mountaintop Area Municipal Authority
- Woodland-Bigler Area Authority
- Hawley Area Authority
- Borough of Milton/Milton Municipal Authority
- Port Matilda Municipal Authority
- Spring-Benner-Walker Joint Authority
- Suburban Lock Haven Water Authority
- Lower Swatara Township Municipal Authority
- Conoy Township
- Township of South Park
- Cressent-South Heights Municipal Authority
- Municipal Authority of the Township of Morris
- Warwick Township Municipal Authority - Water
- Warwick Township Municipal Authority - Sewer
- Borough of Strasburg - Water
- Borough of Strasburg - Sewer
- Concord Township Municipal Authority
- Mifflinburg Borough - Water
- Mifflinburg Borough - Sewer
- Upper Providence Township Sewer Authority
- Cranberry Township - Sewer
- Cranberry Township - Water
- South Park Township Sewer Systems
- University Area Joint Authority - Sewer
- Smithfield Township Sewer Systems
- Saxonburg Area Authority - Sewer
- Saxonburg Area Authority - Water
- Honeybook Sewer Authority
- Williamsport Sanitary Authority
- East Lampeter Sewer Authority
- Moshannon Valley Joint Sewer Authority



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Financial Services

Our comprehensive financial services help to maximize available dollars to fund long-term needs.

IMPLEMENTING A STRATEGIC APPROACH TO INFRASTRUCTURE MANAGEMENT SAVES TIME AND MONEY.

We use strategies such as asset management and capital improvement planning to identify needs and define, prioritize, and schedule solutions. Our thorough analysis provides the detailed information necessary to develop a comprehensive plan and funding strategy that address budget shortfalls associated with the long-term maintenance of aging infrastructure.

KNOWLEDGE AND EXPERIENCE ALLOWS US TO HELP CLIENTS MAKE INFORMED DECISIONS.

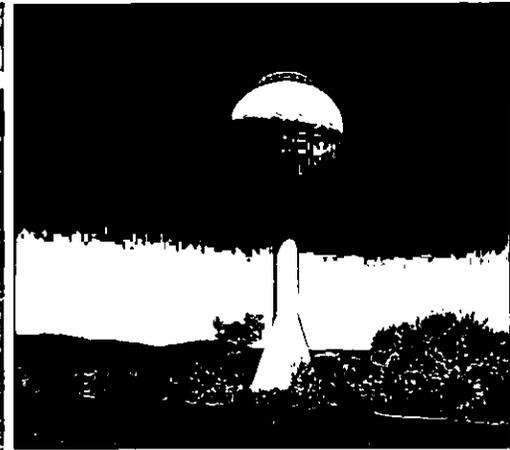
We take pride in helping our clients find long-term solutions to address budget shortfalls. Our professionals offer an unbiased qualitative and quantitative financial analysis to determine if pursuing complex financial transactions, such as the creation of stormwater authorities and leasing of utilities, achieves short-term gains or meets the long-term needs of a community. Our knowledge and experience allows us to help clients make informed decisions.

PROVEN SUCCESS IN SECURING PROJECT FUNDING TO MOVE PROJECTS FORWARD.

Our comprehensive knowledge of available funding programs enables us to design a unique package of bonds, loans, and grants to fit your project goals. We help navigate through the complex funding application process and, once funding is secured, our specialists are available to carefully monitor projects from design through construction to completion to ensure they meet funding agencies' stringent eligibility criteria. HRG's clients benefit from our unique position as a trusted source to perform project compliance audits directly for state funding agencies. This experience provides us with an innate understanding of what it takes to keep your project eligible and moving forward.

Technical Capabilities

- Long-range Capital Plans and Funding Strategies
- Grant & Loan Financing/Administration
- Utility Rate Studies/Cost of Service Studies
- Capital Charge Studies
- Asset Management Plans
- Stormwater Authority Development
- Valuation Studies/Utility Sale & Lease Analysis
- Program Management
- Expert Testimony on Charge Related Matters
- Budget Assistance & Review
- Intermunicipal Agreements/Wholesale Service Fee Development
- Economic Impact Studies
- Impact Fees/Assessment Programs
- Recovery Plans
- Infrastructure Management



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Water & Wastewater

Small or large, conventional or complex — we design solutions to protect the health of local communities.

WE DESIGN CUSTOMIZED COST-EFFECTIVE SOLUTIONS.

Water and wastewater treatment needs are unique to each community. We provide the technical expertise needed to design conventional solutions as well as innovative approaches to the most complex challenges. Our professionals are at the forefront of incorporating state-of-the-art technologies such as wastewater to energy and concepts such as regionalizing water and wastewater treatment. Conventional or complex, we develop cost-effective solutions to fit your specific needs.

FULL-SERVICE CAPABILITIES STREAMLINE PROJECT DELIVERY.

Studies and analysis. Asset management. Strategic financial planning. Securing project funds. Design. Construction phase services. We are your single source for all of your project needs from start to finish. Communication and coordination is seamless, which means projects are delivered on time and within budget.

OUR STRATEGIC APPROACH ENSURES LONG-TERM SUSTAINABILITY, COMPLIANCE, AND SAFETY.

Maintaining safe water and wastewater infrastructure and adhering to strict regulatory compliance standards can be an overwhelming challenge. Using GIS technologies, strategic financial techniques, and quality engineering designs, HRG helps you address these challenges. Whether you are prioritizing projects, securing funds, or complying with environmental regulations, HRG provides long-term solutions to manage your infrastructure and ensure the health and safety of your local community.

Technical Capabilities

- Water & Wastewater Planning
- Water Treatment, Storage & Distribution Systems
- Wastewater Collection, Conveyance, & Treatment Systems
- Regulatory Compliance
- Infiltration & Inflow Studies
- Asset Management
- Sewer System Capacity Studies
- Combined Sewer Systems
- Regionalization
- Sustainability and Reuse Planning
- Operations Assistance
- Construction Phase Services



ADRIENNE M. VICARI, P.E.
Financial Services Regional Service Group Manager

Ms. Vicari is a Regional Service Group Manager with Herbert, Rowland & Grubic, Inc. (HRG). She has experience in a broad range of financial, project management, and design engineering services for municipal wastewater, water, and stormwater clients. Ms. Vicari is responsible for developing financing strategies and capital project plans for municipal and private entities. These strategies include both long range financial planning as well as assisting clients with the obtainment of federal, state and local project financing.

As a Regional Service Group Manager for HRG, Ms. Vicari provides direct financial services to clients, staff and management personnel and evaluates the financial impacts of proposed engineering projects on capital and operating costs. In addition, Ms. Vicari has designed wastewater collection, conveyance and treatment facilities and CSO utility separation. Ms. Vicari also has experience with feasibility studies, environmental plans and reports, permit applications, and construction administration.

PROJECT FINANCING

Ms. Vicari has assisted clients in obtaining capital project funding from various federal, state and local agencies including the Pennsylvania Infrastructure Investment Authority (PENNVEST), United States Department of Agriculture Rural Utility Service (RUS), Pennsylvania Department of Community and Economic Development (DCED), the Commonwealth Financing Authority (CFA), along with appropriations from State and Federal budgets. Tasks included guiding clients to appropriate funding opportunities, obtaining legislative support from state and federal officials, promoting projects through the creation and submission of compelling funding application packages, assisting with the preparation and submission of post-award documentation, loan closing requirements and fund disbursement requests. Funds obtained include:

South Creek Township, Gillett, PA - Commonwealth Financing Authority (\$2,951,000 grant obtained), PENNVEST (\$1,175,937 grant obtained), Federal Appropriation through the EPA (\$200,000 grant obtained), State appropriated Safe Water Grant (\$150,000 grant obtained), County Entitlement DCED Community Development Block Grant (CDBG) (\$160,000 grant obtained). Project fully funded through grant dollars.

Port Matilda Borough Authority, Port Matilda, PA - PENNVEST (1,500,000 grant obtained). County Entitlement DCED Community Development Block Grant (CDBG) (\$163,000 in total grants obtained). Project fully funded through grant dollars.

The Harrisburg Authority, Harrisburg, PA - Commonwealth Financing Authority (\$5,520,000 grant obtained), PENNVEST (\$26,000,000, \$5,668,000, and \$1,888,000 loans obtained), USACE Section 22 Technical Assistance

Delaware Township Municipal Authority, Watsonstown, PA - Commonwealth Financing Authority (\$4,000,000 grant obtained), PENNVEST (\$2,338,000 grant and \$8,462,000 loan obtained)

EDUCATION:

B.S., Civil Engineering,
Valparaiso University, 2001

LICENSE(S):

Professional Engineer, PA
Professional Engineer, OH

ADRIENNE M. VICARI, P.E.

DCO Energy, Blair County, PA – PENNVEST (\$10,000,000 loan obtained)

Alexandria Borough-Porter Township Joint Municipal Authority, Huntingdon County, PA – PENNVEST (\$5,772,230 grant obtained/\$13,822,080 loan obtained)

Woodward Township Sewage & Water Authority, Houtzdale, PA - PENNVEST (\$3,984,365 grant obtained/\$4,165,635 loan obtained)

Berwick Area Joint Sewer Authority, Berwick, PA – PENNVEST (\$2,258,060 grant/ \$2,040,551 loan obtained), Growing Greener II (\$500,000 grant obtained)

Bradford Township, Woodland, PA – PENNVEST (\$751,681 grant/\$1,210,646 loan obtained)

Erie Sewer Authority, Erie, PA – Commonwealth Financing Authority (\$505,360 grant obtained)

Port Matilda Borough, Port Matilda, PA – County Initiative DCED CDBG (\$100,000 grant obtained), state appropriated grant (\$40,000 grant obtained)

Suburban Lock Haven Water Authority, Lock Haven, PA - PENNVEST (\$381,168 grant/\$3,857,832 in loans obtained)

Northern Blair Regional Sewer Authority, Tyrone, PA – Commonwealth Financing Authority (\$1,000,000 grant obtained)

City of Harrisburg, PA – PENNVEST (\$900,000 loan obtained)

Howe Township Municipal Authority, Howe Township, PA – PENNVEST (\$460,000 advanced funding loan obtained)

Boggs Township, Clearfield, PA – PENNVEST (\$2,645,758 grant obtained)

Middletown Borough Authority, Middletown, PA – PENNVEST (\$1,275,000 loan obtained)

Haines Woodward Municipal Authority, Centre County, PA – PENNVEST (\$143,812 grant/\$536,188 loan administered)

Millerstown Municipal Authority, Millerstown, PA – PENNVEST (administered \$1,807,500 loan),b Commonwealth Financing Authority (administered \$3,615,000 grant)

Milton Regional Sewer Authority, Milton, PA – USACE Section 22 Technical Assistance obtained

UTILITY RATE STUDIES AND LONG TERM CAPITAL FINANCING PLANS

Ms. Vicari has been involved in the development of financial plans for water and wastewater systems to insure financial security for both regulated investor and municipally owned utilities. Responsibilities included evaluating current and proposed income and expenses along with proposed capital improvement expenditures in order to develop tools for planning the timing and magnitude of necessary rate increases, along with providing options for the restructuring of rates. Plans include:

The Harrisburg Authority, Harrisburg, PA - Publicly owned water and wastewater systems serving over 21,000 customers. Developed detailed 5-year and 20-Year Capital Improvements Plans for both systems evaluating the timing and funding for necessary system upgrades and improvements. Plans were wrapped into detailed rate studies which evaluated upcoming revenue and expenses to determine the timing and magnitude of rate increases necessary to recover the cost of providing service. Proposed rates were developed to fulfill trust indenture requirements. Rate studies performed 2010/2011 and 2013.

Borough of Steelton, Steelton, PA - Publicly owned wastewater system serving roughly 2,400 customers in multiple municipalities. Evaluated existing intermunicipal agreements along with current and historical billing structures to establish a program for correct intermunicipal billing procedures. Determined proposed operation and maintenance

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costs along with costs of service for each customer class in order to develop separate rate structures for each class of customer served by the system.

Borough of Littlestown, Littlestown, PA - Assisted this publicly owned water and wastewater system in the development of user rates for approximately 2,350 customers. The Borough recently embarked on a wastewater treatment plant upgrade and completed improvements to their well pumping and disinfection buildings (five), and wanted to make sure increased debt service and revised operating expenses were reflected in billing. Work included evaluating twelve consecutive months of existing retail customer billing records, the existing fee structure, expenses and upcoming capital expenditures to calculate projected necessary revenue requirements for a 5-year future period. Two revised rate structures were presented for each system to help the Borough meet its goals. Analysis of the impacts to retail and wholesale customer bills were presented to better assist the Borough with the decision of which option for each system would be the most uniform and reasonable to implement.

Northern Blair County Regional Sewer Authority, Tyrone, PA - Municipally owned wastewater collection and conveyance system serving approximately 3,970 customers. The Authority has agreements with Tyrone Borough and Logan Township for the treatment of wastewater collected in the Authority's system. Worked with the Authority and municipalities in the review of existing agreements and associated annual treatments costs, preparation of annual budgets and end of year reconciliations. Assisted entities in understanding the basis of treatment charges and the effects of increased flow, BOD and TSS loadings to overall costs, in charge of reviewing existing industrial user agreements, assisting in the preparation of new agreements and preparing annual end-of-year reconciliations for the contributing industrial users and municipalities.

South Creek Township, Gillett, PA - Publicly owned wastewater system providing various levels of sewer service to approximately 230 customers. Evaluated likely operation and maintenance costs for this start-up utility and proposed rate structures and billing charges for customers on centralized service, small flow treatment facilities and sewage management plans.

Slippery Rock Municipal Authority, Slippery Rock, PA - Publicly owned water and wastewater system serving approximately 2100 customers. Evaluated existing customer base, fee structure, expenses and upcoming capital expenditures to propose a revised rate structure which met the goals of the Authority and surrounding community.

CAN DO Inc., Hazelton, PA - Non-profit industrial/economic development corporation which provides water and wastewater service to approximately 180 commercial, industrial and wholesale customers. Services included review and analysis of existing rates based upon Public Utility Commission guidelines, cost of service study and PUC filing for water and wastewater user fee increases.

Port Matilda Borough Authority, Port Matilda, PA - Publicly owned wastewater system serving approximately 330 customers. Work included review of current billing methods, system needs and expansions in order provide a financial management plan which would restructure rates, remove disparity between current expenses and customer revenue, and restore financial soundness of the system.

Liverpool Municipal Authority, Liverpool, PA - Municipally owned water and wastewater system serving approximately 333 customers. Increases in operation and maintenance expenses, along with additional debt service costs, created a disparity between revenue and expenditures. Project included projecting operation, maintenance and capital costs over a five-year period and determining necessary rate increases to fund future budgets. The Authority's existing billing structure was revised in order to arrive at a structure which better fit customer types and usage and which appropriately allocated costs among users.

Port Matilda Borough, Port Matilda, PA - PUC governed water system serving approximately 330 customers. Work included analysis of revised rate structure options in order to eliminate a high minimum charge and restore rate equity to low volume users of the system. Work included capital improvement planning and the establishment of an equipment replacement fund. Rate recommendations were developed to fit the rate policy objectives of the Borough and plan for fiscal health of the system.

Milton Regional Sewer Authority, Milton, PA - Regional wastewater system serving 11,000 EDUs in seven municipalities. Provided revenue and expense budget to evaluate changes in operational costs over five year period associated with significant upgrades to the treatment facility and regionalizing with two new municipalities. Budget evaluated impact on process changes to operations budget, along with the impact of additional users, higher flows

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and new debt service costs. Identified revenue need and strategy for implementing stepped rate increase to minimize impact on user rates in any given year.

Evans City Water and Sewer Authority - Publicly owned water and wastewater system providing retail and wholesale service to approximately 850 customers. Work included completing rate analysis for the water and sewer utilities. Various rate options were evaluated in comparison to the Authority's rate policy objectives to arrive at a rate structure which included minimum charge and volumetric components. Rates were updated to include additional debt service costs related to a significant treatment plant upgrade and trust indenture requirements associated with project financing. Wholesale user rates were evaluated and adjusted based upon existing Inter-municipal Agreements.

INTERMUNICIPAL/INDUSTRIAL USER RECONCILIATIONS

Northern Blair County Regional Sewer Authority (Blair County, PA) - Financial Services Engineer responsible for the establishment of sampling protocols for significant industrial users and performing annual reconciliations in which charges to individual industrial users and wholesale municipalities are calculated based upon total flow along with cBOD and TSS concentrations. Annual treatment and conveyance costs are evaluated using these cost causative parameters and allocated based upon formulas developed for use by the Authority.

Middletown Borough Authority, Dauphin County, PA - Financial Services Engineer responsible for annual reconciliations for wholesale municipal customers in conformance with billing practices established through Intermunicipal Agreements in which system costs allocated to wholesale service are calculated using causative parameters and allocated based upon formulas developed for use by the Authority.

ACT 57 TAPPING FEE STUDIES

Ms. Vicari has prepared tapping fee studies in accordance with PA Act 57 of 2003. Studies included the calculation of capital charges including connection fees, customer facilities fees, and tapping fees in order to provide municipal water and wastewater clients a means to recover specific costs and equity in their systems. Studies include:

- Borough of Littlestown, Littlestown, PA
- Cranberry Township, Butler County, PA
- Borough of Steelton, Steelton, PA
- Steelton Borough Authority, Steelton, PA
- South Creek Township, Gillett, PA
- Port Matilda Borough, Port Matilda, PA
- Port Matilda Borough Authority, Port Matilda, PA
- City of Hermitage, Hermitage, PA
- Westfall Township Municipal Authority, Matamoras, PA
- Lycoming County Water and Sewer Authority, Montoursville, PA
- Benner Township Water Authority, Bellefonte, PA
- Spring-Benner-Walker Joint Authority, Bellefonte, PA
- University Area Joint Authority, State College, PA
- Evans City Water and Wastewater Authority, Evans City, PA
- East Lampeter Sewer Authority, Lancaster, PA

UTILITY VALUATION STUDIES

Ms. Vicari has assisted various clients in weighing the advantages and disadvantage of selling or leasing water and wastewater assets. Her experience includes providing valuation of facilities for selling or leasing to private companies or other authorities, and assisting in sale or lease negotiations on behalf of our clients. Her work includes determining the fair rental value of assets using various industry methods including cash flow value, net book value, market value, replacement value and the like.

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CONSULTING AND ENGINEER ANNUAL REPORTS

Ms. Vicari is responsible for the preparation and submission of annual reports to municipal bond trustees for the utilities listed below. Reports include analysis of state and federal regulations and associated compliance, system maintenance, repair and operation, capacity, revenues and expenses.

- The City of Harrisburg, Harrisburg, PA - Sewer Collection System
- The City of Harrisburg, Harrisburg, PA - Sewer Collection and Treatment Facilities
- The Harrisburg Authority, Harrisburg, PA - Sewer Collection System
- The Harrisburg Authority, Harrisburg, PA - Sewer Collection and Treatment Facilities
- The Harrisburg Authority, Harrisburg, PA - Water Treatment and Distribution System
- Mid Centre County Authority, Milesburg, PA - Sewer Collection, Conveyance and Treatment Facilities

SELF LIQUIDATING DEBT REPORTS

Ms. Vicari assisted in the development of Self Liquidating Debt Reports in support of Local Government Unit Debt Act filings for the following clients:

- North Codorus Township,
- Milton Regional Sewer Authority, Milton, PA
- Evans City Water and Sewer Authority, Evans City, PA
- Millerstown Municipal Authority, Millerstown, PA
- Alexandria Borough/Porter Township Joint Sewer Authority, Huntingdon County, PA
- Littlestown Borough, Littlestown, PA

TAX EXEMPT BONDS AND BANK LOAN FINANCINGS

- **Evans City Water and Sewer Authority, Butler County, PA** - Provided financing assistance for \$9,295,000 upgrade and expansion to the wastewater treatment facility
- **The Harrisburg Authority, Harrisburg, PA** - Provided financing assistance for \$50,000,000 upgrade and expansion to the Advanced Wastewater Treatment Facility including \$30,000,000 variable rate demand bonds, \$20,000,000 PENNVEST note and \$2,000,000 interim financing note.
- **Woodward Township Sewage and Water Authority, Clearfield County, PA** - Provided financing assistance for the refinancing of \$792,000 USDA loan via tax-exempt bank note

Northern Blair County Regional Sewer Authority, Blair County, PA - Provided financing assistance for various tax-exempt bank financings ranging from \$280,000 to \$2,400,000 to fund various improvements to the wastewater collection and conveyance system

- **Royalton Borough Authority, Dauphin County, PA** - Provided financial assistance in evaluating various tax-exempt bank loan options for water system upgrade.

RULES AND REGULATIONS/DEVELOPER HANDBOOKS

- **Benner Township Water and Sewer Authority, Bellefonte, PA** - Project Manager responsible for writing Rules and Regulations for a startup water authority acquiring assets of existing HOAs. Wrote Developer Handbook to outline process for develop reviews and approvals, construction standards, etc. for developer constructed facilities.
- **Port Matilda Borough Authority, Port Matilda, PA** - Project Manage responsible for reviewing Authority's Rules and Regulations, including rates and charges and system connections to identify necessary revisions to provide the utility with an established guidelines for use in effective management of the utility.

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- **South Creek Township, Bradford, PA** - Project Manager responsible for writing Rules and Regulations for a startup sewer authority which established rates, charges and billing procedures, system connection and extension requirements, surcharges, industrial discharges, etc.
- **Northwestern Chester County Authority, Honey Brook, PA** - Financial Services Project Engineer responsible for reviewing Authority's Rules and Regulations, including rates and charges, system connections, surcharges, and customer classifications. Identified necessary revisions to provide the utility with an established guidelines for use in effective management of the utility.

WASTEWATER COLLECTION AND TREATMENT

New Wastewater Collection and Treatment Facilities, South Creek Township, Gillett, PA - Role: Project Manager. Responsible for planning, permitting, design, funding acquisition and construction administration client contact and overall project management. Project entailed design of a new wastewater collection and treatment facility. System consists of approximately 25,000 linear feet of low pressure sewer, a 0.25 MGD extended aeration treatment facility, decentralized treatment including three (3) small flow treatment facilities, and a sewage management plan.

Wastewater Treatment Facility Upgrade/ BNR Upgrade for Berwick Area Joint Sewer Authority, Berwick, PA - Role: Wastewater Engineering Technician. Responsible for planning, permitting, design, funding acquisition and construction administration. Project entailed upgrade of a 2.2 MGD treatment facility including modifications to existing oxidation ditches, secondary clarifiers, utility water system, controls and SCADA to add increased nitrogen and phosphorus removal and bring the plant into compliance with the Chesapeake Bay Tributary Strategy. A 2.2 MGD sludge treatment system was also added to assist with nitrogen removal and limit the amount of sludge generated at the plant

Sunnyside Sanitary Sewer Extension for Spring-Benner-Walker Joint Authority, Bellefonte, PA - Role: Wastewater Engineering Technician. Responsible for permitting, design and funding acquisition. Project entailed design of a sanitary sewer extension to service residences along Sunnyside Boulevard and included 3,000 linear feet of collection and conveyance piping and one pump station.

Influent Structure Design for Berwick Area Joint Sewer Authority, Berwick, PA - Role: Project Manager. Responsible for design. Project entailed design of a building to house the influent metering pit and sludge receiving station at the treatment facility. Work included the design of process piping modifications, selection of odor control equipment, and coordination of architectural, electrical, and mechanical project components of the building design.

Alternative Analysis for Wastewater Needs, South Creek Township, Gillett, PA - Role: Project Manager. Responsible for a study designed to evaluate cost saving options to identify a reliable and economically feasible solution for the Township's wastewater needs. Project entailed analysis of centralized collection and treatment, community on-lot systems, small flow facilities and a sewage management plan. Findings were compiled into a report and ultimately included in the Township's Consent Order and Agreement with the PA DEP. The recommended alternative is proposed to save the Township approximately \$1.5 million in project costs when compared to their original intended solution.

Basis of Design Study for Milton Regional Sewer Authority, Milton, PA - Role: Wastewater Engineering Technician. Responsible for completion of a Basis of Design Report. Project entailed installation of a centrifuge and related equipment to handle sludge dewatering processes at a wastewater treatment facility. Study included analyzing current and future sludge flows, evaluating existing dewatering equipment, sizing and selecting proposed sludge pumps, centrifuges; polymer feed equipment and conveyors to be used in project design, proposing related equipment and building modifications, and establishing an opinion of probable construction costs.

Scott Road Pump Station Study for University Area Joint Authority, State College, PA - Role: Site Design Engineer. Responsible for flow analysis, evaluation of various pump capacities and pumping arrangements, and cost analysis of potential alternatives. Project entailed completion of a study designed to analyze wet weather flows at the existing pump station and evaluate options for increasing station capacity.

ADRIENNE M. VICARI, P.E.

SEWAGE FACILITIES PLANNING

Act 537 Sewage Facilities Plan, South Creek Township, PA – Role: Project Manager. Responsible for revision of Act 537 Planning documents to incorporate mutual goals of both the Township and the PA DEP. Project entailed completions of an Act 537 Plan as the main component of the Township's Consent Order and Agreement with the PA DEP for the design and construction of a wastewater collection and treatment system.

Cranberry Township, Butler County, PA – Financial Services Engineer responsible for financial analysis performed to compare long term costs of upgrading and maintaining a treatment facility designed to handle full twenty year flows of the service area as compared to costs associated with a second option to become wholesale customer of neighboring sewer authority, thus allowing for a smaller treatment facility upgrade to be implemented. Evaluated capital and operational costs and present worth costs of each option and prepared report outlining analysis and recommendations.

WATER SYSTEM TREATMENT AND DISTRIBUTION

Reconstruction of Wells 3 & 5, Port Matilda, PA – Role: Project Manager. Responsible for planning, permitting, design, funding acquisition and construction administration. Project entailed reconstruction of the Borough's main water supply wells. Project was implemented in order to remove surface water contaminants from the wells, comply with the Borough's Consent Order and Agreement, and bring the municipality into compliance with the Safe Drinking Water Act.

Beneficial Reuse Treatment and Conveyance for University Area Joint Authority, State College, PA – Role: Water Systems Engineering Technician. Responsible for design and layout as well as obtaining necessary municipal, county, and state permits. Project entailed installation of pipelines designed to convey treated wastewater effluent to commercial facilities for industrial usage. The design was constructed in three phases, using dual 12-inch ductile iron pipes to transport water 15,000 linear feet, serving factories and local agriculture.

Water Supply Feasibility Study, Port Matilda, PA – Role: Project Manager. Responsible for completion of a study designed to evaluate the Borough's water well system and analyze alternatives for system upgrade to insure a long-term viable water supply. Project entailed evaluation of rebuilding filtration plant and regionalization options in terms of capital cost, present worth cost, reliability, operability, and other related factors in order to recommend a solution to bring the Borough back into compliance with the Safe Drinking Water Act.

Water System Evaluation for Benner Township Water Authority- Benner Township, PA – Role: Site Design Engineer. Responsible for the evaluation of privately constructed wells and water treatment and distribution systems which the authority was interested in acquiring. Project entailed evaluation of existing infrastructure, opinion of value, recommendation for infrastructure improvements, opinion of operation and maintenance costs, and an outline of steps necessary to both acquire the system and implement the authority.

RELATED EXPERIENCE

From July 2002 to September 2004, Ms. Vicari was a project engineer/designer with GRW Engineers, Inc. in Indianapolis, IN. Tasks included designing wastewater facilities including gravity, pressure and vacuum collection with extended aeration, and media filtration treatment systems; assessing rehabilitation/replacement needs for existing wastewater facilities and designing solutions; and engineering stormwater master plans designed to analyze and prioritize stormwater problems within municipalities, as well as creating planning level design solutions, cost estimates, and strategies for improved handling of flooding issues. Ms. Vicari also investigated combined sewer systems and sources of infiltration/inflow; designed CSO separation projects; and acquired project funding for municipalities through IDEM, USDA RD, and IDOC grants and loan programs. She also compiled preliminary engineering and environmental reports, and performed construction administrative services for the construction and rehabilitation of wastewater collection, conveyance, and treatment facilities.

From June 2001 to July 2002, Ms. Vicari was a project engineer/designer with Sweetland Engineering & Assoc., Inc. in State College, PA. Duties included designing wastewater collection, conveyance, and treatment facilities; beneficial reuse conveyance; and retaining walls. Ms. Vicari was a Project Manager. Responsible for transportation enhancement projects and was responsible for attaining environmental permits and loans for clients including Act 537 Plans, E&S Plans, Wetland Finding reports, NPDES permits, Public Water Supply permits, PENNVEST loans,

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PENNDOT grants, and DCED grants. She was also responsible for communication with clients and subcontractors for various projects.

From May 2000 to August 2000, Ms. Vicari was an intern with Powers & Schram, Inc. in State College, PA. She assisted in the design of timber and concrete bridges and buildings. She also drafted various types of structural drawings using AutoCAD.

From June 1999 to August 1999, Ms. Vicari was an intern with Gannett Fleming in State College, PA. She aided in the creation of GIS systems for various government agencies and companies.

From May 1998 to August 1998, Ms. Vicari was an intern for the Engineering and Public Works Department with State College Borough in State College, PA. She helped create the Borough's GIS system and oversaw its field annotations. She also oversaw the microsurfacing of streets, analyzed sewers in need of repair, redesigned simple traffic patterns, aided in the reconstruction of a major road, designed plans using AutoCAD, and gave presentations to various local agencies.

Ms. Vicari's past experience included work on the following projects:

Wastewater Collection and Treatment

- Wastewater Collection and Treatment Facilities for Lauramie Township Regional Sewer District, Stockwell, IN
- Wastewater Collection and Treatment Facilities for Rockfield Regional Sewer District, Rockfield, IN
- Wastewater Collection and Treatment Facilities, Jackson Township, PA
- Wastewater Collection and Treatment System, Dearborn County, IN
- Wastewater Collection System for Twin Lakes Regional Sewer District, Monticello, IN
- Wastewater Collection and Conveyance System Rehabilitation, Reynolds, IN

Sewage Facilities Planning

- Preliminary Engineering Reports (PERs), Indianapolis, IN
- Preliminary Engineering Report (PER), Town of Reynolds, IN
- Preliminary Engineering Report (PER) for Rockfield Regional Sewer District, Rockfield, IN
- Preliminary Engineering Report (PER) for Dearborn County Regional Sewer District, Dearborn City, IN
- Preliminary Engineering Report (PER) for Twin Lakes Regional Sewer District, Monticello, IN
- Preliminary Engineering Report (PER), Rockfield, IN
- Act 537 Sewage Facilities Plan, Watts Township, PA
- Act 537 Sewage Facilities Plan, New Buffalo Borough, PA

Combined Sewer Systems

- Combined Sewer Overflow Long-Term Control Plan (CSO LTCP), City of Aurora, IN
- Combined Sewer Overflow (CSO) System Investigations, Indianapolis, IN
- Combined Sewer Separation and Rehabilitation, Philipsburg Borough, PA

Stormwater Systems

- Stormwater Projects Plan, Fort Wayne, IN
- Drainage Improvement Plan, Avon, IN
- Stormwater Inventory Project, Avon, IN
- Stormwater Management Plan for Flying J Travel Plaza, Porter County, PA

TRAINING

- Project Management for Engineers, SmartPros Engineering
- Project Managers Boot Camp, PSMJ

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PROFESSIONAL MEMBERSHIP(S)

Pennsylvania Water Environment Association
Society of Women Environmental Professionals



Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

RUSSELL F. MCINTOSH
Vice President, Financial Services

Mr. McIntosh is an assistant vice president with Herbert, Rowland & Grubic, Inc. (HRG) responsible for overseeing the Financial Service Group. His broad-ranging experience includes project financing, grant administration and compliance, financial consulting, military master planning, utility and corporate accounting, and business management/ownership. Specific assignments have included the development of financing plans, user charge systems, rate studies, valuation studies, calculation of capital charges, impact fees, and assessments for private and municipality-owned sewer and water utilities.

He has assisted numerous clients with the preparation of grant and loan applications to PENNVEST, the Environmental Protection Agency, the PA DEP, HUD, and Rural Utility Services (RUS, formerly FmHA). He has also developed specialized computer programs to analyze data and perform sensitivity analyses.

Mr. McIntosh has participated as a technical advisor to the joint committee comprised of members of this Pennsylvania Municipality Authorities Association (PMAA) and Pennsylvania Builders Association (PBA) responsible for drafting the procedures and language incorporated into Pennsylvania Act 203 of 1990 and Act 57 of 2003. These Acts govern the calculation and imposition of capital charges: Connection Fees, Custom Facilities Fees, and Topping Fees, that can be assessed in Pennsylvania.

As a recognized expert in his field, Mr. McIntosh has written several articles and presented numerous seminars and workshops concerning municipal financing, rate structures, and tapping fee calculations. He is also routinely retained as an expert witness in these areas.

CAPITAL CHARGES STUDIES

Mr. McIntosh has personally prepared over 50 capital charges studies throughout Pennsylvania for both Municipality and Authority owned or operated Sewer and Water systems including the following:

- Mount Pocono Borough
- Hummelstown Borough
- Swatara Township Sewer (3 Districts)
- Cove Privatization Project
- Canton Borough Authority
- Carlisle Suburban Authority - Water
- Carlisle Suburban Authority - Sewer
- Littlestown Borough - Water
- Borough - Sewer
- Penn Township Municipal Authority - Water
- Penn Township Municipal Authority - Sewer
- Valley Forge Sewer Authority
- White Run Regional Municipal Authority

EDUCATION:

B.S., Accounting, York College
of Pennsylvania, 1968

Studies, Finance, York College
of Pennsylvania

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- Wiconisco Township
- Mountaintop Area Municipal Authority
- Woodland-Bigler Area Authority
- Hawley Area Authority
- Borough of Milton/Milton Municipal Authority
- Port Matilda Municipal Authority
- Spring-Benner-Walker Joint Authority
- Suburban Lock Haven Water Authority
- Lower Swatara Township Municipal Authority
- Conoy Township
- Township of South Park
- Cressent-South Heights Municipal Authority
- Municipal Authority of the Township of Morris
- Warwick Township Municipal Authority - Water
- Warwick Township Municipal Authority - Sewer
- Borough of Strasburg - Water
- Borough of Strasburg - Sewer
- Concord Township Municipal Authority
- Mifflinburg Borough - Water
- Mifflinburg Borough - Sewer
- Upper Providence Township Sewer Authority
- Cranberry Township - Sewer
- Cranberry Township - Water
- Slippery Rock Municipal Authority - Sewer
- Slippery Rock Municipal Authority - Water
- South Park Township Sewer Systems
- University Area Joint Authority - Sewer
- Smithfield Township Sewer Systems
- Saxonburg Area Authority - Sewer
- Saxonburg Area Authority - Water
- Honeybook Sewer Authority
- Williamsport Sanitary Authority
- East Lampeter Sewer Authority

In addition, he has directed the preparation of many others and reviewed the accuracy and compliance with the requirements imposed by the Municipalities Authorities Act for several other municipalities, municipal authorities, and developers.

FINANCIAL CONSULTING SERVICES

Financial consulting services provided to municipal clients include a variety of project and clients specific activities. Among these are project financial plans to determine affordability and user charge impacts; project cash flow projections to determine financing requirements and user charge calculations consistent with the financing terms. For many clients, these services are combined in the preparation of an application for financial assistance to the Pennsylvania Infrastructure Investment Authority (PENNVEST) and the subsequent closing activities.

TAX EXEMPT BONDS, BANK LOANS, OTHER AGENCY AND DEVELOPER FINANCINGS

Sewage Facilities for Woodward Township Sewage and Water Authority, Clearfield County, PA - Provided financing assistance for both interim and long-term borrowing for the construction of \$6,000,000 in sewage facilities. Negotiated service agreement with major user, Pennsylvania Department of Corrections.

- Sewer Project, Possum Valley Sewer Authority, Bendersville, PA - Financing plan for this \$4 million project.
- Sewage Treatment Facility, Lower Township MUA, Cape May, NJ - Financing assistance for an \$8 million upgrade and expansion of this facility.
- Central Clinton County Water Filtration Authority, Clinton County, PA - Interim and permanent financing assistance for a \$16 million project.
- Wastewater Project, Township of Conoy, PA - Financial services related to proposed wastewater collection and treatment project.
- Sanitary Sewer System, Cornwall Borough, PA - Developed financial plan for Cornwall Borough Council to provide capital for design and construction of a sanitary sewer system.
- Sewer Project, Hawley, PA - Financing plan for \$6 million sewer project and subsequent re-financings.
- Water Resources, James City County, VA - Economic analysis using discount cash flows to determine optimum strategy for developing/expanding water resources within (Ware Creek Project - \$100 million).

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- Lamar Interchange, PA - Financial services for privatized wastewater project.
- Water System, Media Borough, PA - Consultant for the acquisition of a regional water system, valued at over \$40,000,000.
- Wastewater Treatment System for Penn Township Municipal Authority, Penn Township, PA - Developed and implemented financial strategy for a new \$4 million sanitary sewer system.
- Sewer Project for White Run Regional Municipal Authority, PA - Developed overall financial plan for a \$12 million low-pressure sewer project.

GRANT ADMINISTRATION AND COMPLIANCE

Commonwealth of Pennsylvania, Office of the Budget, Harrisburg, PA - Provides technical and financial review of applications submitted for Redevelopment Assistance Capital Grant Program (RACP/R-CAP Grants). Assignments include the Giant Arena, Hershey, PA; Strand-Capital Performing Arts Center, York, PA; Industrial Park Development, Farrell, PA; and many others.

- Construction Control Reviews, PA - Performs field reviews of construction controls and selected PENNVEST Projects.
- Electronic Disbursements Process, PA - Assisted in the development of PENNVEST electronic (web-based) electronics reimbursement process.

COMPREHENSIVE SYSTEM REVIEWS AND UTILITY VALUATION STUDIES

- Water and Sewer for Mellon Bank - Leisure Equities Utilities, Hazelton, PA - Technical and financial review of utility operations in anticipation of default under financing agreement.
- Water and Sewer Department, Warrington Township, Bucks County, PA - Technical and financial review of water and sewer utilities acquired from municipal authority.
- Water System for Millcreek Township Water and Sewer Authority, Clarion County, PA - Technical and financial evaluation of water system for possible sale or improvements.
- Lancaster Area Sewer Authority, Manheim Township, PA - Valuation and purchase price recommendations and negotiations for the adjacent wastewater collection and conveyance system owned by Manheim Township.
- Media Borough Authority, Delaware County, PA - Valuation and bid preparation for the acquisition of the Media Borough Water System.
- Borough of Pottstown, Montgomery County, PA - Valuation of water system (Chester District).
- Borough of Milton Sewer Authority, Northumberland County, PA - Valuation of wastewater system facilities for sale to a joint regional sewer authority
- Concord Township Municipal Authority, Butler County, PA - Valuation of sewer system for acquisition.
- Upper Providence Township Sewer Authority, Delaware County, PA - Valuation of sewer system for possible sale.

ECONOMIC IMPACT STUDIES

Mr. McIntosh performs a variety of fiscal impact analyses for both residential and non-residential land development projects including:

- Pennterra Developers, Middlesex Township, PA - 1,000-unit mixed use subdivision
- Opus East, South Middleton Township, PA - Commercial Warehouse

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- Wal-Mart Stores, Cornwall Township, PA - Retail Development
- Carlisle Crossing, South Middleton Township, PA - Retail Mall
- Socio-Economic Impact Study for the Mount Pocono Sewer Authority, Mount Pocono, PA

Cranberry Water and Sewer Authority Feasibility Study, Cranberry Township, PA - Using the Ohio River as a Water Source, the study considered the impacts on users and neighboring utilities by the creation of a regional water authority to serve portions of Beaver and Butler Counties.

Carlisle Suburban Authority, Carlisle, PA - Customer Impact Analysis of water and sewer system improvements.

Pennsylvania Main Line Linear Park Task Force, Borough of Swissvale, Allegheny County, PA - Economic benefits study of creating a linear park adjacent to the proposed extension of the Martin Luther King busway.

New Borough, Chilton Borough, York County, PA - Financial services for the proposed creation of a new borough including the estimation and projection of tax revenues, the cost of providing municipal services and ability to undertake and complete capital projects.

Expansion for the Washington Suburban Sanitary Commission, Prince George and Montgomery Counties, MD - Performed EPA financial capability analysis as part of a proposed \$29 million expansion.

REVIEW OF CAPITAL CHARGES STUDIES

- Greens at Greencastle, Antrim Township, PA - Review Municipal Authority Tapping Fee
- Warwick Township Municipal Authority, Lititz Borough, PA - Review Water Tapping Fee
- Spring Grove Area School District, Spring Grove Borough, PA - Review Sewer Tapping Fee
- Pennsylvania Builders Association, PA - Review of HB 444 Legislation
- Builders Industry Association of Lancaster County, Manheim Township, PA - Review Sewer Tapping Fee
- HBA of Metro-Harrisburg, Silver Spring Township, PA - Review Sewer Tapping Fee
- Builders Association of Metropolitan Pittsburgh, PA - Review of Sewer Tapping Fee
- Omega Corporation, PA - Review of Sewer Tapping Fee
- Water and Sewer Authority, Cranberry Township, PA - Review of Sewer and Water Tapping Fee
- PLM Corporation, North Londonderry Township, PA - Review Sewer Tapping Fee
- Walnut Ridge Developers, Penns Creek Borough, PA - Review Sewer Tapping Fee
- Upper Chichester Township, PA - Economic Impact of Revenue to Southwest Delaware County Authority
- Wayne Township Municipal Authority, PA - Evaluation of User Charge System
- Fieldstone Associates, Lower Macungie Township, PA - Review Municipal Authority Tapping

PENNVEST FINANCING

Services include the preparation of over 36 applications for assistance for a total value of \$328,594,395. This represents 5.3% of all PENNVEST financial assistance awarded, statewide.

- Advance Funding for Branch Township Sewer Authority, Schuylkill County, PA - \$550,000.
- Wastewater Collection and Treatment System, Construction Funding of the Branch-Cass Regional Sewer Authority, Schuylkill County, PA - \$19,646,238.
- Advance Funding for Union-Chapman Regional Authority, Snyder County, PA - \$350,000.
- Wastewater Collection and Treatment, Penn Township Municipal Authority, Penn Township, Centre County, PA - \$3,970,000.
- Sewer Extension, Spring-Benner-Walker Joint Authority, Bellefonte Borough, Centre County, PA - \$1,483,000.

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- Wastewater Collection and Treatment, Mountaintop Area Municipal Authority, Centre County, PA - \$6,,800.
- Wastewater Collection and Treatment, Woodland-Bigler Area Authority, Clearfield County, PA - \$4,155,000.
- Water Filtration Facility, Central Clinton County Water Filtration Authority, Clinton County, PA - \$15991,488.
- Wastewater Collection and Treatment, Conoy Township, PA - \$4,513,000.
- Water Main Extension, Suburban Lock Haven Water Authority, Lock Haven, PA - \$850,000.
- Wastewater Collection and Treatment, Wiconisco Township, PA - \$3,438,900.
- Water System Acquisitions and Improvements, Pennsylvania American Water Company, Various Locations, PA - Thirteen separate projects throughout PA totaling \$62,000,000.
- Saxonburg Area Authority, Butler County, PA - \$936,000.
- Millersville Municipal Authority, Lancaster County, PA - <\$1,541,000 Construction Finances for Water System improvements; \$570,900 Advance Funding Water Treatment Facility.
- Milton Regional Sewer Authority, Northumberland County, PA - Construction of Collection System, \$9,900,000.

UTILITY ACCOUNTING AND BUDGETING

Services have been provided for more than 30 municipal and regional authorities including:

- Upper Providence Township Sewer Authority, Delaware County, PA
- White Run Regional Sewer Authority, Adams County, PA
- Borough of Ambridge Sewer Authority, Beaver County, PA

UTILITY RATE STUDIES

Lower Moreland Township, Bucks County, PA - System-wide sewer rate study to consolidate sewer separate districts into a single rate districts.

- Sewer Rates Cost of Service Analysis and Rate Structure for the City of Erie, Bureau of Sewers, Erie County, PA
- Sewer Rates and Rate Structure for the Upper Providence Township Sewer Authority, Delaware County, PA
- Sewer Rates Cost of Service Analysis and Rate Structure for Concord Township Municipal Authority, Delaware County, PA
- Water Rate Study for Dallastown/Yoe Water Authority, Dallastown, York County, PA
- Sewer Rates Study, City of Hagerstown, MD
- Sewer Rates for James City County Joint Sanitary District 1, James City County, VA
- Sewer Rate and Rate Structure for York County Sanitary District 2, York County, VA
- Sewer Rate Study for New Kent County Sewer Department, New Kent County, VA
- Meter-based Sewer Rates, Borough of Hummelstown, Dauphin County, PA

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PUBLICATION(S) AND PAPER(S)

2004 Impact of Act 57 of 2003, The Authority Magazine, February 2004.

Sewer and Water Rate Alternatives, The Authority Magazine, Pennsylvania Municipal Authorities Association, December 1997.

Fundamentals of Project Financing, The Authority Magazine, Pennsylvania Municipal Authorities Association, April 1997.

Overview of Financing Alternatives, The Authority Magazine, Pennsylvania Municipal Authorities Association, August 1993.

State of the Art, an Analysis of Engineering in the 1990's, The Authority Magazine, Pennsylvania Municipal Authorities Association, February 1993.

Act 203 of 1990, a Computational Perspective, The Authority Magazine, Pennsylvania Municipal Authorities Association, June 1991. (Portions of this article were reprinted in the Pennsylvania Township News, December 1991).

PRESENTATION(S) AND LECTURE(S)

Pennsylvania Water Environment Association (PWEA), Conducted grant and financing workshops at their annual Conference each year (2005-2010).

County Commissioners Association of Pennsylvania, presented workshop on the requirements and approaches of GASB 34.

Pennsylvania Municipal Authorities Association, presented talk on GASB 34 at the Financial Officers Luncheon.

National Association of Towns and Townships, presented a workshop in Washington, D.C. on financing water and wastewater facilities.

Pennsylvania Association of Bond Lawyers, presented a summary of Pennsylvania Act 203 and led a discussion of engineering and computational aspects.

Pennsylvania Bar Institute, presented a computational review of Pennsylvania Act 203 as a part of the Institute's seminar of impact fees.

Pennsylvania Builders Association, presented various Pennsylvania Act 203 computational aspects.

Pennsylvania Municipal Authorities Association, provided a discussion of project financing, capital charges, and rates for a new board members workshop.

Pennsylvania Municipal Authorities Association, served as panelist at the 1991 Management Workshop on Pennsylvania Act 203.

Rhoads and Sinon, presented Pennsylvania Act 203 computations and related engineering concepts to bond lawyers.

Cranberry Township, conducted a two-day workshop on Pennsylvania Act 203 computations and related engineering concepts.

Halifax Water Authority, conducted seminar on user charges, tapping fees, and long range capital planning.

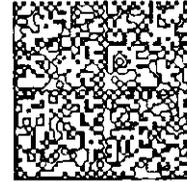
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AWARD(S) AND RECOGNITION(S)

Best Written Technical Paper on the Use of Microcomputers in the Water Industry, Convention of Water Works Operators Association of Pennsylvania

PROFESSIONAL MEMBERSHIP(S)

Pennsylvania Municipal Authority Association



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