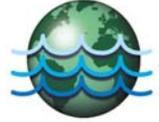


**APPENDIX D**

**GROUNDWATER AND  
FLOODING ANALYSIS**



## Letter Report Groundwater and Flooding Analysis 363-365 Bond Street, Brooklyn, NY

This report has been prepared to address the following issues identified during the scoping process

- 1 The effect of the reconstructed bulkhead on groundwater flow and groundwater elevation
- 2 The potential impact of changes in grade and drainage at the project site on flooding.

As part of my analysis of the hydrologic issues presented at the site, I have reviewed the EIS and Site Plans prepared for the proposed project. My curriculum vitae is attached.

### **BULKHEAD**

The reconstruction of the bulkhead will not have any significant impact on groundwater flow or groundwater elevation. When flowing groundwater encounters a sheet pile structure it flows past the structure by flowing through it since the sheet piling is not water tight, and around it depending upon the depth the sheet pile is driven into the soil and the length of the sheet pile structure.

The flow across the sheet piling is dependent upon the difference in hydraulic head across the sheet pile, the total height of sheet piling and the characteristics of the soils in which the sheet pile is driven. The question here is whether the proposed sheet piling will impede groundwater flow to the extent that it will backup and increase groundwater levels in the area.

The existing average infiltration of storm water to the groundwater for the 3.36 acre site is about 2,504 gallons per day based upon a typical infiltration rate of 22 inches per year for permeable surfaces and 1.53 acres of permeable surface. The proposed development will decrease the infiltration surface area to .41 acres and thereby decrease the infiltration to about 670 gallons per day—a decrease of 1,834 gallons per day.

The typical seepage rate through standard sheet piling is at least 1.5 gallons per hour per square foot of wall per foot of net head across the wall (ref. – Sheet Pile Design by Pile Buck).

For a 550 feet long bulkhead, assuming that a distance of six feet is available for flow (4 feet of canal depth and 2 feet above the canal level) and one foot head difference across the bulkhead resulting from the tidal range, the bulkhead can allow approximately 180,000 gallons per day to flow across it, which is more than enough capacity to accommodate the 670 gallons per day resulting from recharge on site. The reduction in groundwater recharge at the site will actually reduce the groundwater mounding behind the bulkhead that would be experienced at the site without the proposed development.

An analysis of the flow under the proposed bulkhead is not necessary due to the demonstrated capacity of the proposed bulkhead to relieve the water behind it, but will provide additional relief of this water and a greater factor of safety.

### **FLOODING**

This analysis of flooding considers the following three conditions:

- Flooding on-site and adjacent properties due to a tidal surge
- Flooding from excessive rainfall
- Flooding of adjacent properties resulting from the change in drainage patterns at the site.

**FLOODING FROM TIDAL SURGE** – This would be the result of a major coastal storm (hurricane or nor'easter) in which tides may be several feet above normal. The source of this water is the Atlantic Ocean from which for all practical purposes is an unlimited supply. The added displacement

of the fill placed on the property will not increase the tidal surge since this is dependent on tidal elevations from the Atlantic Ocean and New York Harbor. Flooding will be dependent on the height of the tidal surge and the elevation of the properties subject to flooding. The proposed development is designed to meet current FEMA standards with a factor of safety to protect this site from tidal surge damage. The increased elevation will have no impact to adjacent properties during tidal surge events. The water displaced by changing the elevation at the site will be spread over a vast area. To further clarify, since the canal is hydraulically connected to New York Harbor and the Atlantic Ocean the increase in tidal elevation as a result of the fill would be the same whether the fill was placed at this location or in the Atlantic Ocean. Clearly, if the fill was placed in the Atlantic Ocean there would be no measurable impact on the level of the Ocean.

**FLOODING FROM EXCESSIVE RAINFALL** – The proposed storm water system will be constructed to accommodate accepted design storm criteria. This system will also be designed to collect rainfall from the project site and discharge it directly to the Gowanus Canal. The proposed development will actually slightly decrease the amount of storm water generated at the site by increasing the infiltration to the ground over existing conditions. The storm water collection system is designed to capture all the runoff from the site up to and including the design storm. The storm water collection system will also collect rainwater from street areas that are not currently served by a collection system. Consequently, flooding conditions should be improved with the proposed project.

**FLOODING OF ADJACENT PROPERTIES BY CHANGE IN DRAINAGE PATTERNS** – This is flooding that could result from the diversion of runoff from other adjacent sites that currently flows onto this site and is disposed of. While there is a small increase in the elevation of the proposed site over the existing conditions all storm water generated on site will be collected and discharged to Gowanus Canal under a NYSDEC permit. Storm water that would have previously run onto the property from off site areas will now be diverted to new or existing storm drains and sewers for disposal. This should also result in an improvement in flooding conditions.

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## Professional Experience

PWGC: 18 years  
Prior: 14 years

## Education

- PhD, Civil Engineering, Polytechnic University, NY
- ME & BE, Civil Engineering, Stevens Institute of Technology, NJ
- Diplomate, Academy of Environmental Engineers – (DEE)
- Professional Service Firm Leadership (Harvard Business School)

## Certifications

- Licensed Professional Engineer, NY, NJ, MD, IN, NH, MA, FL, WA
- NJDEP-Certified UST Closure, Testing, Investigation
- Certified Groundwater Professional (CGWP)

## Affiliation

- American Council of Engineering Companies (ACEC) - Chairman Environmental Committee (NY); Regional Director & PR Committee (Long Island); Chairman, Environmental & Energy Business Committee (National)
- National Society of Professional Engineers
- Fellow American Society of Civil Engineers
- Long Island Water Conference
- American Geophysical Union
- American Water Works Association
- National Water Well Association
- Riverhead Foundation for Marine Research & Preservation - Board Member
- Stevens Institute of Technology - Alumni Environmental Committee
- Water Environment Association

## Areas of Expertise

- Engineering/Civil Consulting, Planning, Design, QA/QC
- Environmental Compliance & Value Engineering
- Risk Assessment & Management (Health, Solid Waste, RI/FS)
- Natural Resource Management (RI/FS, EIS)
- Groundwater Resources & Contamination
- Surface/Groundwater Modeling
- Petroleum Investigations
- Remedial Design
- Hydrogeology
- Soil Contamination
- Stormwater Management
- Water Supply/Wastewater

## Honors & Awards

- ACEC NY - Engineer of the Year Award 2006
- ACEC NY - New Principal of the Year, 1988
- Engineers Joint Committee, LI - Achievement Award, 2001
- Fellow of the American Society of Civil Engineers, 1997
- Long Island Water Conference - Golden Faucet Award

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## PROFILE

Dr. Grosser is a recognized authority in the fields of civil, environmental, and geological engineering with an extensive knowledge and valuable expertise from over 30 years in the industry. He is responsible for the firm's business and technical operations and served as principal on far more than a thousand projects since he founded PWGC in 1990. Under Dr. Grosser's guidance and drawing from his expertise, PWGC has established a strong, solid reputation for providing quality environmental consulting and engineering services to private, municipal, and federal clients. His realistic solutions for engineering challenges in the public and private sector, provide clients with customized solutions for environmental challenges. His geographical area of expertise is the NY Region, particularly the 5 New York boroughs and Long Island.

Paul is an active member in many national and regionally-based professional societies, and has been a major presence in the regional engineering community for more than 30 years. An advocate for best practices in civil engineering, Dr. Grosser is an avid supporter of value engineering and environmentally-oriented business concepts (i.e. Smart Growth, Brownfields). His financial and intellectual contributions play a vital role in local outreach programs, elevating environmentally-sound management practices into one of Long Island's top priorities. In his role as public speaker, he promotes issues such as the importance of information exchange and multi-level collaboration between professionals business and the community.

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## SELECTED PROJECTS

### Southampton College, Southampton, NY

**Sewage Treatment Alternatives Evaluation** – Dr. Grosser directed the preparation of an engineering report for Southampton College to evaluate various sewage treatment alternatives capable to meet the demands of the existing campus, and a possible expansion of the campus. Knowing the campus' area of location intimately, he led the research of ecologically engineered sewage treatment systems (i.e., Living Machines®, Solar Aquatics®, and Ocean Arks®), to determine their suitability. He coordinated with the Suffolk County Department of Health Services regarding acceptance and computed estimated sanitary flow numbers based on County sanitary code requirements. He worked with PWGC Senior Engineers to design the conceptual layout of sewage treatment locations and associated sewage collection systems and to develop and cost out various viable alternatives. He provided expert recommendations that were included in the report.

### Ross School, East Hampton, NY

**Campus Master Plan -EIS, Draft EIS, Geothermal Well Design & Construction Management-** PWGC prepared a comprehensive project plan, design, and start-up strategy in collaboration with other team consultants, regulatory agencies, utility companies, and regional planners. Dr. Grosser managed all water resource issues of the site's development and the

integration of an ecologically engineered sewage treatment to minimize potential of impacts on nearby environment from the present and anticipated campus population's water use/re-use.

He identified overall impacts on the Town of East Hampton (cultural, socio-economic & quality of life) for the DEIS, led research, analysis, and planning pertaining to water supply, wastewater, irrigation/drainage, turf & integrated pest Management (IPM), and consulted the client on geologic/hydrogeologic aspects, and hazardous materials storage, handling & disposal. In addition, he documented findings and evaluation of various sewage treatments methods that met the client's environmental objectives. As part of the EIS, he researched alternatives to minimize potential impacts on the South Fork groundwater quality, reviewed and oversaw the preparation of designs for to the installation of several geothermal wells

### Village of Sag Harbor, East Hampton, NY

**Municipal Sewage Treatment Plant Engineer of Record** – Dr. Grosser is directing engineering services for the Village's municipal sewage treatment plant a sequential batch reactor (SBR) with a peak design flow of 250,000 gpd). He coordinates on-call technical support to plant operators in troubleshooting operational and process problems, plant effluent data reviews, flow and effluent quality conditions analyses, and PWGC design services as needed.

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### Benjamin/Beechwood Developers, Far Rockaway, NY

**Arverne Urban Renewal Area (URA) Stormwater Management** - PWGC advised the client that a detailed analysis of the impacts on the basin was necessary because the URA drains into the Barbadoes Basin. The initial analysis presented in the DEIS only compared average runoff quantities and nitrogen loadings, without considering tidal flushing from Jamaica Bay and the impact of storm events.

PWGC addressed these two issues and investigated additional remedial measures. PWGC submitted the DEIS to the appropriate NYC authorities for review, including the Department of Housing Preservation and Development (NYCHPD). After PWGC had addressed HPD's and other relevant parties' comments and updated the DEIS accordingly, the DEIS was approved as the Final EIS.

### Pilgrim State Psychiatric Hospital, Brentwood, NY

**Environmental Investigations Supervision** - Directed the time-critical assessment of probable contamination and impacts from coal storage piles on the environmentally sensitive area. He quickly identified a wastewater plume emanating from the recharge basins, and based on his findings, advised the client to connect to a public wastewater treatment system to prevent contamination of the environmentally sensitive area.

### Water Authority of Great Neck North (WAGNN), NY

**Subsurface Investigation, WAGNN Well Fields/Impact Investigation of Proposed Great Neck North Wells** - Served as consultant to evaluate the affect on surrounding wells, provided expert testimony, and prepared an aquifer management plan to identify the most effective way to manage the groundwater resources of the service area.

### Sebonack Neck Holdings, LLP

**Environmental Impact Statement** - Under subcontract to GPI, Dr. Grosser prepared the groundwater and surface water resources sections for the project's EIS. The project consists of an 18-hole golf course, clubhouse, dormitory, cottages and associated structures. A critical issue was the potential nitrogen impacts on Cold Spring pond and Peconic Bay. Dr. Grosser's analysis included the modeling of nitrogen from onsite sewage disposal and fertilization at the course. PWGC also performed the design for water supply infrastructure, including water mains and back-flow prevention devices.

### Town of Southampton, Suffolk County, NY

**Critical Wildlands & Groundwater Protection Study** - In collaboration with AKRF, Inc, Dr. Grosser designed and conducted a case study to institute a land use plan for a largely undeveloped area on the South Fork of Long Island. To evaluate the impact of mounting development pressure on local ground water quality, he used the BURB's model; to depict the relation between housing density and ground water quality. His findings showed that for low-density housing (greater than acre/unit) fertilizer use and amount of cleared area were critical in controlling nitrogen concentrations in groundwater. To allow development with the nitrogen loading constraints, Dr. Grosser recommend to up-zone and restrict clearings and turf.

### Riverhead Water District Expansion, Riverhead, NY

**Master Plan Design** - Designed the master plan to increase RWD's service area and connect a number of existing suppliers along Sound Avenue to Wildwood State Park and Wading River. RWD followed his strategy and implemented his designs for the construction of storage facilities and wells. Dr. Grosser directed the design process and oversaw the installation of wells, storage facilities, and water main installation. Consequently, local residents gained access to safe drinking water (Until then, drinking water was only available from private wells, or poorly maintained supplies of public water, which had been heavily impacted by agricultural chemicals).

### Brentwood Water District, Town of Islip, NY

**Water Supply Design**- Principal-in-charge for developing a cost-effective design to prevent contamination in 2 Brentwood water supply wells. To mitigate the contamination investigation's findings, which revealed a potential for volatile organic compounds (VOC) and nitrate contamination, he designed and implemented an air stripper that includes a 2,600 gpm air-stripping tower and 100,000 gallon clear well.

### Department of Public Works, Nassau County, NY

**Master Water Supply Plan** - Dr. Grosser was responsible for writing the Nassau County Master Water Supply Plan that included an evaluation of the permissive sustained yield of the aquifers utilizing the USGS three-dimensional groundwater model of L.I. Identified areas of groundwater contamination and performed trend analysis of water quality data for majority of the wells. The study investigated various water supply alternatives available to Nassau County to meet its needs.

### Hampton Bays Water District, Town of Southampton, NY

**Master Water Plan** - He served as principal-in-charge for the major water study to bring the district into the 21st century. His contributions to the Master Water Plan were advisory, as well as review of (1) existing water supply wells, (2) storage facilities and water distribution system, and (3) analysis of needs with respect to projected water demands and initiation of Hampton Bays Water District towards a comprehensive Geographic Information System.

### Minmilt Realty, Farmingdale, NY

**Remedial Investigation/Feasibility Study (RI/FS)** - Served as principal-in-charge for an RI/FS to determine the source and extent of soil and groundwater contamination beneath the site. Dr. Grosser reviewed the final design of a pump and treat system installed as an interim remedial measure - the system is operating successfully to date. In addition, Dr. Grosser supervised an extensive fate and transport evaluation for Minmilt, to attest that an off-site investigation was not necessary.

### Dutchess Terminal, Poughkeepsie, NY

**Hydrogeologic Investigation & Remediation Strategy Analysis** - In order to determine the sources of contamination and assess the effectiveness of a groundwater remediation system, he conducted an investigation to identify the spilled product from five different bulk-oil storage companies. Throughout the petroleum spill investigation, Dr. Grosser served as liaison to NYSDEC. Based on the findings of his investigation, NYSDEC identified potential responsible parties and obtained cost recovery.

### Brookhaven National Laboratory, Upton, NY

**Engineering & Environmental Services** - Dr. Grosser works closely with PWGC hydrogeologist and engineering teams to conduct groundwater/soil investigations, remedial actions, and the preparation of engineering designs and specifications. He has been providing services to BNL for over 15 years.

### U.S. Army Corps of Engineers, NY

**Brooklyn/Queens Aquifer Study** - Managed project to evaluate the potential use of aquifers located beneath Brooklyn and Queens for water supply to the City of New York. His recommendations included recharging the aquifers during periods of excess reservoir water and using them for supply during drought periods.

### Harbor Links Golf Course Town of North Hempstead, NY

**Golf Course Irrigation System** - Under a subcontract to GPI, Dr. Grosser evaluated alternatives for the supply of irrigation water to the Harbor Links Golf Course. The three alternatives were (1) use of water from an existing pump and treat system at the adjacent landfill, (2) use of stormwater, on site supply wells, (3) use of ponds as a source of groundwater and public

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water supply. Dr. Grosser recommended that the primary source of water be from the landfill pump and treat system after treatment to near drinking water standards and discharge to a detention pond.

### [NYC Department of Parks and Recreation, NY](#)

**Small Capacity Irrigation Wells Design, Staten Island, Manhattan, Bronx** – Dr. Grosser served as the principal in charge of this project to develop small capacity irrigation wells in selected locations within three boroughs. These included over burden wells in Staten Island and southern Manhattan and bedrock wells in Manhattan and the Bronx.

**Engineering Report, Groundwater Supply for NYC Parks, Pools, and Golf Courses** - Dr. Grosser was the project manager for investigating the feasibility of groundwater use to supply various parks facilities throughout New York City during drought periods. His study identified potential well yields in various locations and provided water quality forecasts.

**Water Conservation Project Golf Course Reconstruction, Bronx, Staten Island, Brooklyn, and Queens, NY** – Worked closely with the NYC PDR and contractors on the new lake designs, which included contours, elevations, inlet and filter well details. He provided consulting and engineering services for the new well installations, such as well design preparation and specifications, wetlands issues, existing well tests, and pond modifications for 12 golf courses in the 4 boroughs.

**Groundwater Feasibility Study (FS) & Engineering Designs for NYC Parks, Pools, and Golf Courses** – Dr. Grosser completed a FS on utilizing groundwater of NY City pools and golf courses to reduce their dependency on public water. Next, he conferred with local park administrators and Conservancy staff members to determine project requirements and constraints as follows: All installations were required to be (1) underground and out of sight, (2) operate with minimal maintenance, and (3) meet the highest aesthetic standards. Based on the FS results and client's objective, Dr. Grosser prepared the designs for irrigation wells and relating structures, mechanical, electrical, and piping systems for Central Park (Conservatory Gardens, Strawberry Fields, and tennis court areas), Prospect Park, Van Cortland Park, Flushing Meadows Park, Silver Lake Park, and Clove Lake Park.

### [Bethpage Water District, NY](#)

**Water Resources Planning Report** – He identified ground water flow and transport models to identify potential areas for groundwater development. He further assessed the risk of potential sources of contamination of water supply wells.

### [North Sea Landfill, Town of Southampton, NY](#)

**Assessment Study** – As principal in-charge, he supervised data research and evaluation of the generation, collection and

removal of leachate at the landfill. Currently, he guides the PWGC Project Manager in evaluating data obtained from gas monitoring wells to determine possible areas of concern.

Suffolk County Dept. of Health Services (SCDHS), NY

208 Study – As SCDHS staff engineer, he was responsible for project review, virus studies, groundwater modeling, and trace organic research. He developed/ utilized computer programs to record and analyze water quality data, evaluate trends, plot data, and perform multiple regression analyses. With the study complete, he oversaw inspection and monitoring of the county-owned sewage treatment plants and solid waste disposal facilities.

### [IBM, Sands Point, NY](#)

**Water Supply Investigation & Project Management** - Prepared an independent analysis of how up zoning the property using data on water use of nearby golf courses and clusters of dense single-family dwellings. Highlights on the project included an analysis of (1) groundwater quality and quantity impacts, and (2) an engineering and hydrogeologic report to support a well permit application. He also managed community relations for IBM, and raised public awareness of the project at hand.

### [Tanger Factory Outlet Center, Riverhead, NY](#)

**Project Management** – Served as project manager for the challenging 2-phase site development plan of the center, which was located in an environmentally sensitive area.

### [Town of North Hempstead - Port Washington Golf Course, NY](#)

**EIS Strategy Development & Oversight for Irrigation Project** - To address project-related irrigation issues, Dr. Grosser selected a computer-controlled irrigation system to closely monitor atmospheric and turf conditions. The result was an effective tool to determine the most efficient means of irrigating the course.

### [Colonial Springs Golf Course, Farmingdale, NY](#)

**Designs, Soil Condition Evaluation for Golf Course Plan** - Based on Dr. Grosser's design for and evaluation of the 225-acre project, PWGC selected and installed a liner for a 12.5-acre lake, prepared details for foundations and floor slabs for housing structures, and electrical and mechanical designs of the irrigation pump station.

### [Nassau County Planning Department, Long Island, NY](#)

**Redevelopment Study** - Project principal for the two-fold planning project to study current water supply availability and wastewater, evaluate different development scenarios and resulting environmental impacts from the proposed redevelopment at the Northrop Grumman site in Bethpage, NY.

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## EXPERT WITNESS TESTIMONY & DEPOSITIONS

- Deepdale Golf Course vs. LIPA Caithness Power Plant, Village of North Hills
- Village of Sag Harbor, NY - KeySpan Manufactured Gas Site
- Land Air Water Environmental Services, Inc, Riverhead Supreme Court, NY -Well Drilling Techniques, Soil Conditions, Dewater Excavation Ability
- Mill Neck; Nassau County Supreme Court, NY - Property Flooding from Inadequate Drainage Channel Maintenance
- Village of Bayville, NY – Compliance Issues with a Village-Operated Well
- Town of Huntington, NY - NYSDEC Hearings on the Town Landfills' Leachate, Fate & Transport
- Dutchess Docks, Poughkeepsie, NY - 100 Oser Avenue, Hauppauge, NY - Petroleum Spills Cost Recovery
- Attorney General, NYSDEC -Appropriateness of Remedial Techniques & Design at Gasoline Spill from Gas Station, Ridge, NY

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## PREVIOUS EXPERIENCE

### Suffolk County Department of Health Services

**Asst Public Health Engineer** (Developed computer programs to optimize recording & analysis of water quality data, trends, plot data, and to perform multiple regression analyses. Achievements: Staff engineer on the Nassau-Suffolk 208 Study, managed project review, virus studies, groundwater modeling and, in particular, trace organic research. To date, Long Island's engineers still use the study to evaluate water resources.

### H2M Group

**Vice President, Hydrogeology/Water Supply Division; Director of Water Resources/Hydrogeology; Project Manager/Engineer**

Prepared water resources planning reports for a number of Long Island towns and water districts to identify potential areas of groundwater development as well as sources of contamination of water supply wells

Designed/developed plans & specifications for water supply, and

treatment facilities (ie: wells, pump stations, elevated/ground storage tanks, auxiliary engines, well, and pump)

Investigated available water supply alternatives to meet the Nassau County needs

Created/managed 3 technical sections (Water Supply Treatment, Water Distribution, Hydrogeology) with a 20+ staff, \$3.3 million revenue for 1988 and \$4.6 million for 1989.

Advised on technical challenges, and was in charge of quality control for business as well as environmental engineering processes Initiated marketing, client and project care programs to enhance H2M's Client Relationship Management.

Outstanding project – Development & planning of the Nassau County Water Supply Plan for the NCDPW

Evaluated the permissive sustained yield of the aquifers, utilizing the USGS three-dimensional groundwater model of Long Island Enabled the identification of groundwater contamination and analysis of water quality trends for many regional wells

## PUBLICATIONS & PRESENTATIONS

**Land Use Planning for Groundwater Protection** (Case study, Land Use Plan Establishment for largely undeveloped area on the South Fork, Long Island, Southampton, NY, Presentation (co-author Robert White, VP, AKRF) NY Water Environment Assoc., 06/04)

**Relationship between Land Use Planning & Groundwater Quality** (Presentation, LIAG Meeting, Lake Grove, NY, 10/01)

**Regulation of Storage Tanks in NY** (NY Environmental Law and Management Update 2000, ABS Group Inc, Melville, NY, 10/01)

**Water Pollution Control in NY** (NY Environmental Law and Management Update 2000, ABS Group Inc., Melville, NY, 10/00)

**Water Treatment Methods to Meet New Volatile Organic Water Quality Standards** (NY & New England AWWA, MA Spring 89)

**Use of Granular Activated Carbon Filters for the Removal of Pesticides from Ground Water** (Presentation, 3rd Groundwater Technology Meeting 09/87, Published: Pollution, Risk Assessment & Remediation in Groundwater Systems (ed Khanbilvardi/Fillos)

**Determination of Groundwater Sampling Frequencies through Bayesian Decision Theory Civil Engineering Systems**, Vol. 2, No. 4, 10/85

**Selection of Cost-Effective Organic Removal Systems for Water Supply** (Presentation with S. McLendon, J. Molloy, ASCE National Conference on Environmental Engineering, MA, 1985)

**Use of Groundwater Modeling in the Selection of Water Treatment Alternatives** (ASCE Specialty Conference, Computer Applications in Water Resources, NY, 06/85)

**A One-Dimensional Mathematical Model of Virus Transport** (2nd Int'l Conference, Groundwater Quality Research, OK, 03/84)

**Application of Groundwater Models to the Identification of Contaminant Sources** (NWWA Conference, Practical Applications of Groundwater Models, OH, 08/84)

**Design of Groundwater Monitoring Systems at Hazardous Waste Disposal Sites** (Spill Control and Hazardous Waste Conference, CT, 09/83)

**A Rational Approach to the Design of Groundwater Monitoring Systems, Using Bayesian Decision Theory** (NWWA, OH, 05/83)

**Design of High Capacity Public Water Supply Wells in Contaminated Aquifer Systems** (ASCE Nat'l Conference, FL, 03/1983)

## MODELING EXPERIENCE

### MODEL – CLIENT & APPLICATION

#### VIRALT

- Southampton Hospital, East Hampton, NY -Evaluated potential impact on public water supply wells from medical waste viruses

#### PLASM Prickett Lonquist Aquifer Simulation Model

- Hampton Bays Water District, Hampton Bays, NY - Water distribution system design & analysis, impact analysis of public water supply wells installation on the Sears Bellows Pond water levels

## PROFESSIONAL TEACHING & COMMUNITY ACTIVISM

### Institutions & Subject Areas

- Polytechnic University, CUNY, NY
- Cooper Union, NY
- Adelphi University, NY
- Hofstra University, NY
- Groundwater Hydrology & Pollution, Water Resources Modeling, Geochemistry, Flow Through Porous Media, Analysis of Stream/Estuary Pollution, Fluid Mechanics, Hydraulic Problems, Geostatistics, Hydraulics & Hydrology,
- PE Review Course

### Community Activism

Director, PWGC Students & Young Professionals Program (features scholarship, students on the job, internship opportunities)

Advocate for Institutional and Associations in their efforts to promote and educate about sustainable environmental and engineering solutions to the public, business and government sector