

STATEMENT OF QUALIFICATIONS

**Water Resources &
Environmental Engineering Group
of**

M&J ENGINEERING P.C.

"INNOVATIVE AND STATE-OF-THE-ART SOLUTIONS"



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M&J Engineering, P.C.

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M&J Engineering, P.C.



M&J Engineering, P.C. (M&J) is a certified Minority (MBE), Disadvantaged (DBE), and Small (SBE) Business Enterprise, as well as a U. S. Small Business Administration (SBA) 8(a) certified multi-discipline consulting engineering firm with approximately 90 employees. Since its inception in 2004, M&J has grown into a diversified provider of engineering, environmental, construction and technology services to a broad range of clients, including federal, state, and city/local agencies, private owners, architects, engineers, and contractors.



M&J, in addition to Small Business Administration (SBA) 8(a), has obtained Disadvantaged Business Enterprise (DBE) and Minority Business Enterprise (MBE) certifications from various state and county/city agencies/authorities:

- New York State Metropolitan Transportation Authority (DBE)
- New York State Department of Transportation (DBE)
- Suffolk County (MBE)
- Nassau County (MBE)
- Port Authority of New York and New Jersey (DBE)
- New Jersey Department of Transportation (DBE/SBE)
- New Jersey Turnpike Authority (SBE)
- Connecticut Department of Transportation (DBE)
- Port Authority of Allegheny County (DBE)
- Massachusetts SOMWBA (MBE/DBE)
- Florida Department of Transportation (DBE)
- Maryland Department of Transportation (MBE/SBE)
- District Department of Transportation Washington, D.C. (DBE)
- Texas Department of Transportation (DBE)
- Pennsylvania Department of General Services (MBE)
- Port Authority of Allegheny County (DBE)
- Pennsylvania Department of General Services (SBA)



M&J is professionally involved in the sectors of Engineering, Technology and Construction Management services.

M&J offers a wide spectrum of services, including:

- Civil Engineering
- Structural engineering
- Transportation
- Water Resources and Environmental engineering
- Electrical Engineering
- Mechanical Engineering
- Technology -- Smart Cities, Intelligent Transportation Systems
- Construction Engineering and Management -- Supervision, Management, and Inspection
- Industrial/Occupational Hygiene -- Anticipation, Recognition, Evaluation, and Controls of hazards
- Condition Evaluations
- CPM Scheduling and Construction Cost Estimating

- **Maqsood Malik, P.E., President, CEO**
- **Albert Pozotrigo, P.E., Executive Vice President**
Director of Construction Management
- **Arnold Rubenstein, P.E., Vice President**
Director of Intelligent Transportation Systems Group
- **Alexandros Constantinides, P.E., Vice President**
Director of Tunneling, Rail & Transit Group
- **Roland Ericsson, MarE, Vice President**
General Manager
- **Asad Malik, Vice President of Operations**
Director of Federal Services
- **Haralambos (Bob) V. Vasiliadis, Ph.D., P.E., DEE, D.WRE, CIH, Senior Vice President**
Director of Water Resources and Environmental Engineering

Board of Advisors:

- George J. Pierson
- Hon. Col USA (Ret.) Alphonso Maldon Jr.



Key Personnel

 **Haralambos (Bob) V. Vasiliadis, Ph.D., P.E., DEE, D.WRE, CIH**
Senior Vice President / Director of Water Resources and Environmental Engineering

Dr. Vasiliadis received his Bachelor of Engineering (B.Eng.) in Rural Engineering from the School of Engineering of the Aristotelian University of Thessaloniki (Salonica), Greece in 1986. In 1984 he received an annual Scholarship by the National Scholarships Foundation (Greece) for his excellent undergraduate performance.

He received his Master of Science (M.Sc.) in 1988 and Doctor of Philosophy (Ph.D) in Water Resources from New York University (NYU) Tandon School of Engineering (previously known as Polytechnic University), New York in 1991. His dissertation was on the application of stochastic optimization and simulation models for the management of water resource projects. In 1991 he received the Outstanding Water Resources Dissertation Award in the Field of Engineering and Physical Sciences by the Universities Council on Water Resources (UCOWR) for his doctoral thesis.

Dr. Vasiliadis is:



Licensed Professional Engineer (P.E.) in the State of New York



Certified Industrial Hygienist (CIH) by the American Board of Industrial Hygiene (ABIH)



Diplomate (Board Certified) of the American Academy of Environmental Engineers (DEE, also designated as Board Certified Environmental Engineer, BCEE)



Diplomate of the American Academy of Water Resources Engineers (D.WRE); an ASCE certification program



Diplomate Member of the Academy of Industrial Hygiene (AHI)

Dr. Vasiliadis is currently an:



Adjunct (full) Professor of Civil and Urban Engineering of NYU Polytechnic School of Engineering



Adjunct (full) Professor of Civil and Environmental Engineering at City College of the City University of New York (CCNY-CUNY).

He has completed a research work (WU 2.3: Flooding Risks on Wastewater Infrastructures) as a Research Professor of the NYU-Tandon team for a New York State (NYS) funded research project administered by the New York State – Resiliency Institute for Storms and Emergencies (NYS-RISE) NYS-RISE. He is also involved as Research Associate at the Center for Water Resources and Environmental Research (CWRER) of CCNY-CUNY.

He is also currently full-time employed by M&J Engineering, P.C., as Senior Vice President and acting as Senior Technical Advisor, Senior Project Manager, Senior Environmental Engineer and Hygienist on various major projects in NYC.

Dr. Vasiliadis is also:

- Member of the American Society of Civil Engineers (ASCE),
- Member of the Sigma Xi Scientific Research Society,
- Member of the American Industrial Hygiene Association (AIHA),
- Member of the American Conference of Governmental Industrial Hygienists (ACGIH),
- Member of the New York Academy of Sciences,
- SSPC-C3/C5 certified competent person for deleading of industrial structures,
- OSHA HAZWOPER certified for hazardous waste operations and emergency response,
- OSHA certified for confined spaces, etc.

He has served as an expert witness in various legal cases, has published over thirty articles and papers on water resources and environmental engineering, stochastic (probabilistic) optimization, occupational/industrial hygiene, and extreme events risk analysis and assessment on infrastructure including mitigation means and structures for resiliency.



Teng Zhang

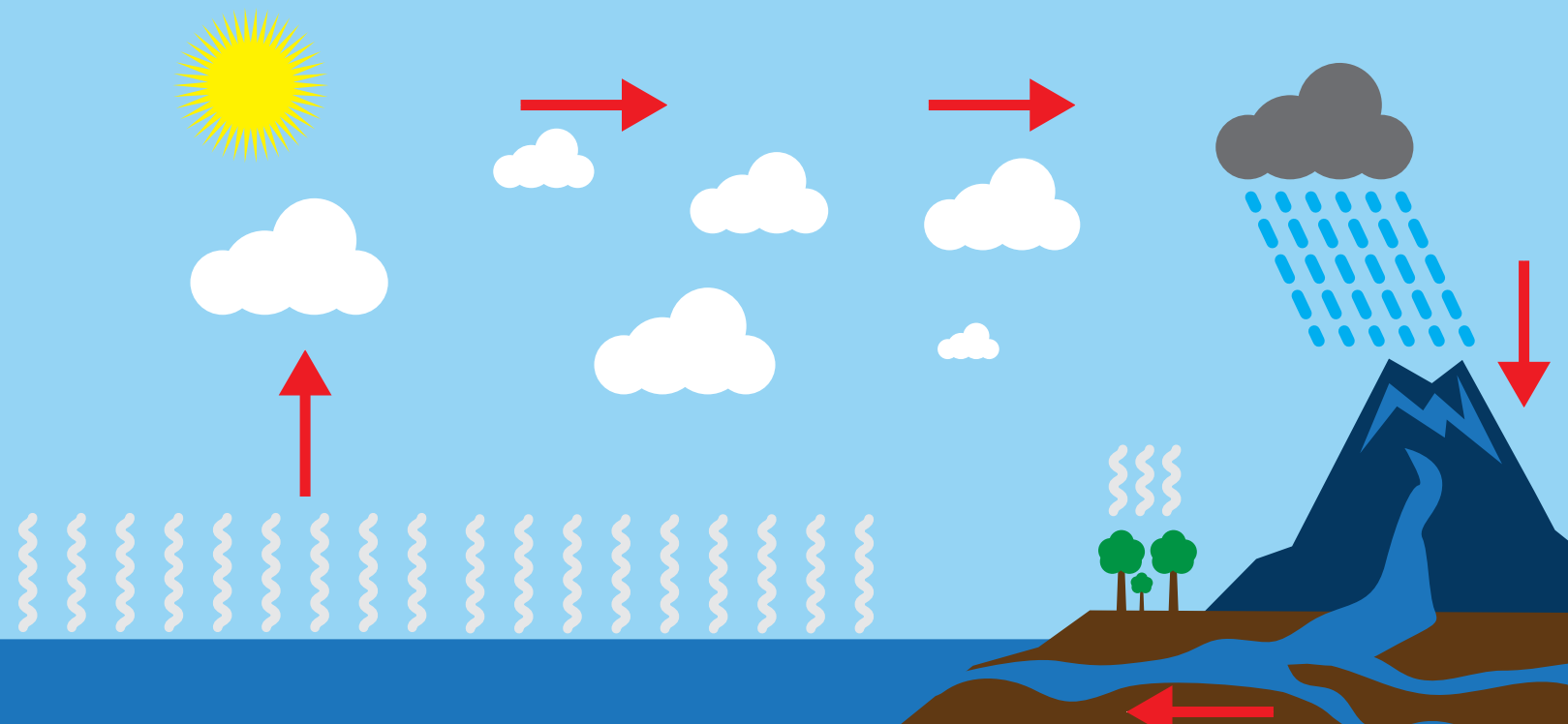
Mr. Zhang received his Bachelor of Engineering (B.Eng.) in Environmental Engineering from Wuhan University of Science and Technology (China) in 2013. He received his Master of Science (M.Sc.) in 2015 in Environmental Engineering from New York University (NYU) Tandon School of Engineering.


Mr. Zhang specializes in performing ArcGIS data analysis, map producing, ArcGIS Toolboxes programming, and general Python programming. He is good with various engineering softwares, such as AutoCAD, HEC-RAS, etc.

He has completed a research work (WU 2.3: Flooding Risks on Wastewater Infrastructures) as a Junior Research Scientist of the NYU-Tandon team for a New York State (NYS) funded research project administered by the New York State – Resiliency Institute for Storms and Emergencies (NYS-RISE) NYS-RISE.

At M&J Engineering, P.C., Mr. Zhang has conducted several Environmental Site Assessments, and Noise Monitoring under the supervision of a professional engineer.

Water Resources Engineering




 Water Resources Engineering is the quantitative study of the hydrologic cycle (the distribution and circulation of water linking the earth's atmosphere, land and oceans) and involves the design and analysis of engineering structures, systems, and operations/processes a) to manage water resources in order to ensure a continuous supply of clean water for all required purposes, and b) for collecting and transporting stormwater and wastewater. It also focuses on uses, protection, conservation and restoration of water resources and addresses methods for controlling water to avoid water-related damage and catastrophes.

What we offer:

- Water resources systems design, analysis, management and optimization
- Surface and groundwater hydrology and floodplain analysis
- Hydraulics and hydraulic structures
- Wetlands and erosion control studies

Hydraulic Engineering is the application of fluid mechanics to a natural or manmade water transportation system.

Environmental Engineering

 Environmental Engineering is the integration of mathematics, sciences and engineering principles to improve the natural environment, to provide clean water, air, and land for human habitation and for other organisms, to clean up pollution sites, and to control wastes using the properties of matter and energy for a sustainable environment.


What we offer:

- Ambient air quality monitoring (as per EPA/NAAQS for TSP, TSP-Lead, PM_{10} / $PM_{2.5}$, NO_2 , SO_2 , CO , O_3 , etc.) and control
- Indoor and workplace air quality monitoring (as per OSHA, NIOSH, ACGIH, ASHRAE, etc.) and control
- Environmental, community and occupational noise monitoring, exposure assessment and control
- Potable water and wastewater treatment and pollution control
- Surface water, stormwater and groundwater sampling, analysis and contamination remediation
- Surface and subsurface soil investigation
- Environmental audits and site assessments
- Environmental Impact Statements



Industrial Hygiene




 Industrial Hygiene is defined as the science dedicated to the anticipation, recognition, evaluation, communication and control of environmental stressors in, or arising from, the work place that may result in injury, illness, impairment, or affect the well-being of workers and members of the community. These stressors are divided into the categories physical, chemical, biological, ergonomic and psychosocial. Industrial hygiene is the science of protecting and enhancing the health and safety of people at work and in their communities. The profession of industrial hygiene uses strict and rigorous scientific methodology and often requires professional experience in determining the potential for hazard and evaluating exposures or risk in workplace and environmental studies.

What we offer:

- Personal exposure assessment
- Implementation of engineering, administrative and hygiene controls
- Microbial investigation
- Site Specific Health and Safety Plans (HASP)
- Environmental, hygiene and safety oversight and compliance certification
- Industrial hygiene program management
- Hazard recognition, evaluation and control
- Engineering Preparedness and response
- Industrial hygiene performance metrics
- Hazardous waste operations and emergency response (HAZWOPER)
- Incident response

Engineering Management

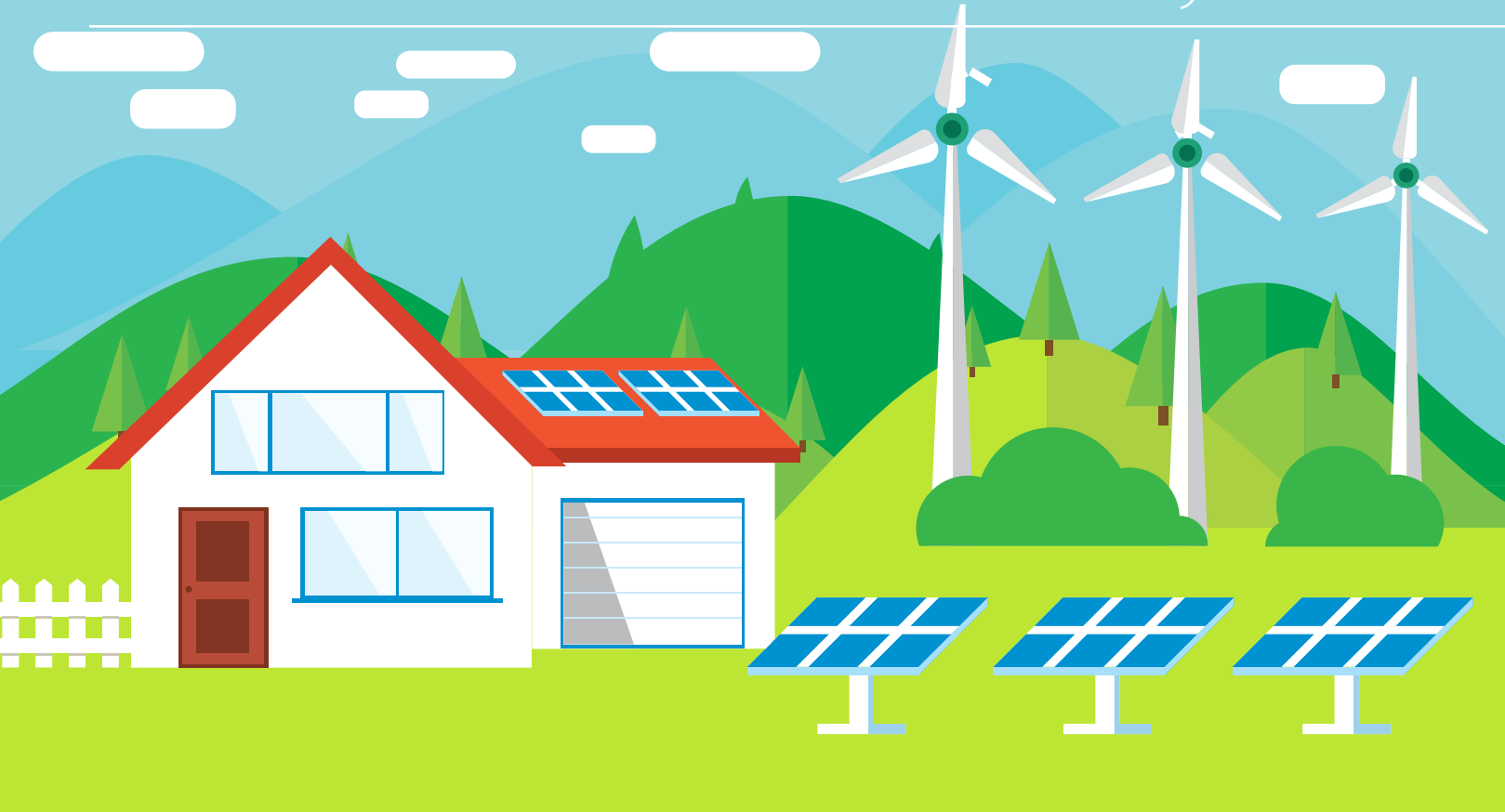
 Engineering Management is the process of reaching organizational goals by working with and through people and other organizational resources, and has the following characteristics: a) it is a process or series of continuing and related activities, b) it involves and concentrates on reaching organizational goals, c) it reaches these goals by working with and through people and other organizational resources. The basic management functions that make up the management process are planning, organizing, influencing and controlling.

What we offer:

- Environmental permitting, reviews, inspections and decision making as per NPDES/SPDES, SEQR/CEQR and SWPPP
- Quality assurance and quality control
- AST/UST permitting, design and abatement
- Hazardous operations emergency response
- Hazardous, universal, municipal, medical/infectious waste management
- Toxic and hazardous materials management
- Grant writing



Environmental Sustainability



Environmental **S**ustainability is a state in which the demands placed on the environment can be met without reducing its capacity to allow all people to live well, now and in the future. It can be achieved at rates of renewable resource harvest, pollution creation and non-renewable resource depletion that can be continued indefinitely.

- For renewable resources - the rate of harvest should not exceed the rate of regeneration (sustainable yield);
- For pollution - the rates of waste generation from projects should not exceed the assimilative capacity of the environment (sustainable waste disposal); and
- For nonrenewable resources - the depletion of the nonrenewable resources should require comparable development of renewable substitutes for that resource.

What we offer:

Sustainability assessment of the feasibility of alternatives considering factors such as

- Risk/Reliability
- Resiliency
- Life Cycle Analysis
- Value Engineering
- Energy Conservation
- Constructibility
- Schedule Certification

The initiative areas of **S**ustainability are:

- Energy – green procurement implementation
- Waste – and pollution prevention
- Water – resource management

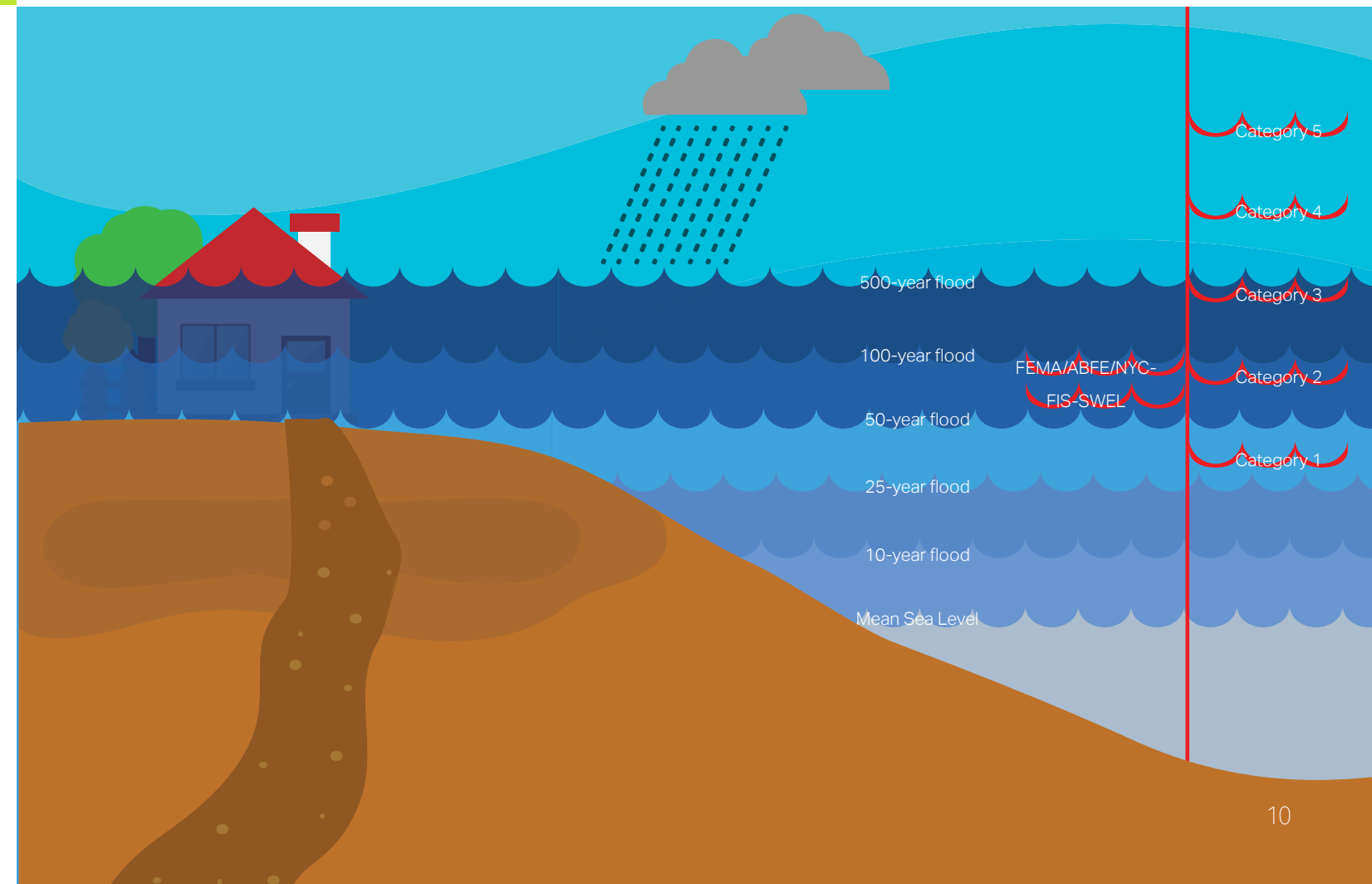
Engineering Resiliency



Resiliency is the capacity to adapt to stress and change, tolerate changes, and reduce the magnitude and/or duration of disruptive events while maintaining their original state. No matter how well designed and constructed a structure or a system product is, failure of one sort or another is inevitable eventually. Resiliency is a measure of a system's ability to bounce back from a failure to continue to offer some level of performance (possibly not the original level of performance).

What we offer:

- Coastal and inland (riverine) flood impact analysis and mitigation
- Extreme events risk analysis and assessment
- Planning of flood control structures





What we offer:

- Inspections
- Investigations
- Assessment
- Sampling
- Monitoring
- Oversight

What we offer:

Compliance with all site -, and project - specific applicable federal, state and city/local codes, rules and regulations, as well as contract specifications.

- Worker Protection Plan / Health and Safety Plan
- Spill Response Plan
- Emergency Demobilization Plan
- Environmental Protection and Project Cleanup Plan
- Waste Management Plan
- RCRA Emergency Contingency Plan
- RCRA Hazardous Waste Area Closure Plan
- Hazardous and Universal Hazardous Waste Management Plan
- Noise and Dust Mitigation Plan
- Regulatory Compliance Management Plan
- Risk Assessment Plan
- Hazardous Materials Assessment

- RCRA hazardous Waste Management, Contingency and Closure Plans
- NYSDEC
 - Protection of Waters Permits
 - Coastal Erosion Management Permits
 - Freshwater Wetlands Permits
 - Tidal Wetlands Permits
 - State Pollution Discharge Elimination Systems (SPDES)
 - Stormwater
 - Water Withdrawal Permits
 - Long Island Well Permits
 - Air Facility Permits
 - Solid Waste Management Permits
 - Hazardous Waste Management Permits
 - Radiation Control
- NYCDEP
 - Construction Noise Mitigation Plan (CNMP)
 - Alternative CNMP
 - Construction Dust Plan



Projects

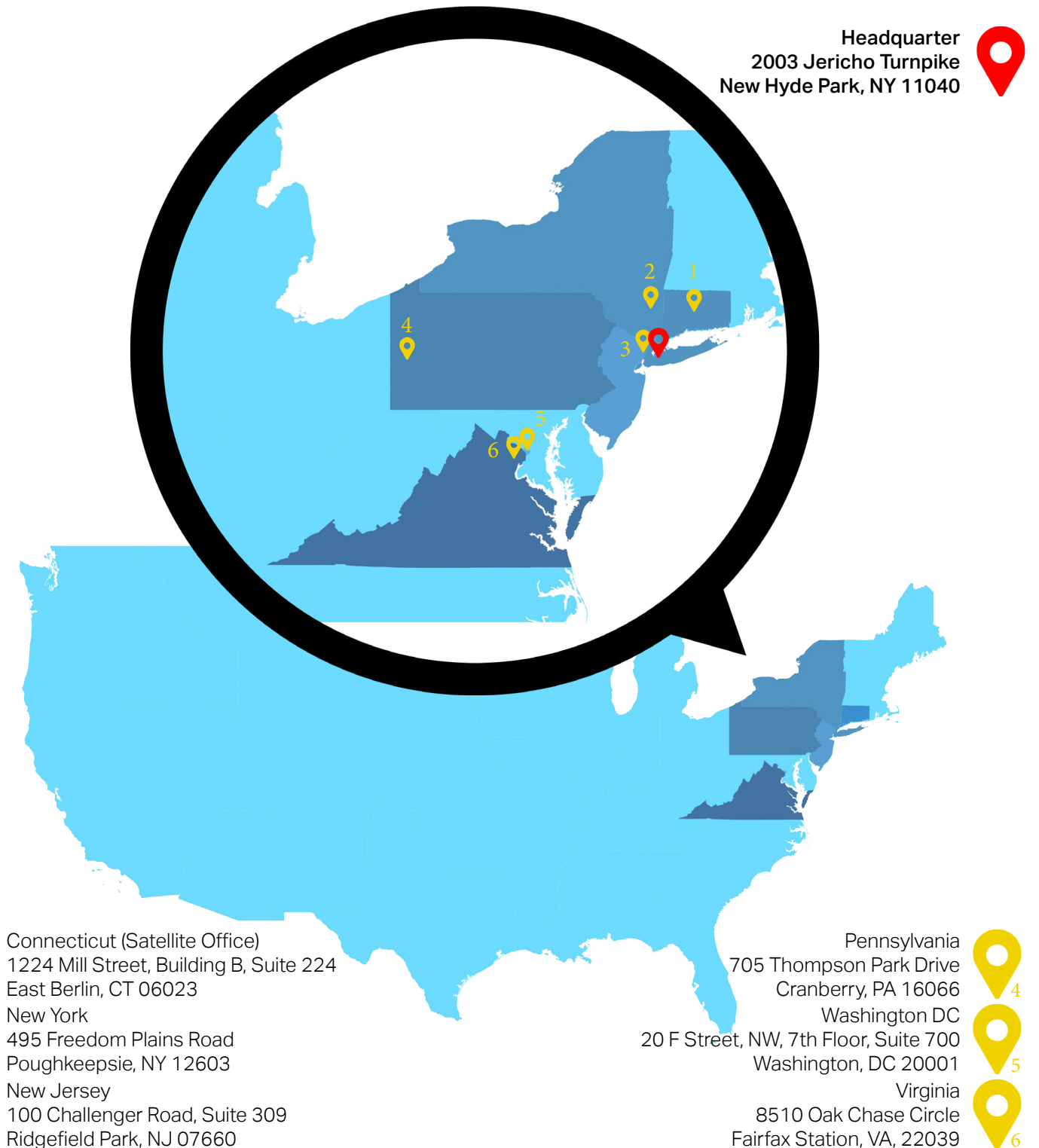
All of the below tasks were performed for the projects listed below.

Environmental compliance oversight according to the provisions of all state laws and all federal and local statutes, ordinances and regulations that they are applicable to the performance of the project and to the safety of the workers, the community, and the environment. Human resources management and project planning to ensure compliance with all pertaining financial, technical, legal processes and commitments. Responsible for overall environmental and occupational hygiene compliance and quality assurance and quality control. Certification of environmental, hygiene and safety compliance with all local, state, and federal agencies. Review of federal, state, city, and other pertaining environmental and safety laws, codes, and regulations. Design and overseeing of hazardous materials management, including abatement, handling, storage, transportation, and disposal as per the US-EPA's 40CFR261. Ambient air quality monitoring for Total Suspended Particulates (TSP) and Particulate Matter (PM10 and PM2.5) as per the US-EPA's 40CFR50. Management of hazardous materials. Responsible for soil, river and groundwater protection and restoration. Personal exposure monitoring for airborne contaminants, biological monitoring and occupational noise exposure as per the US-OSHA's 29CFR1910 and 1926. Environmental quality review as per the State Environmental Quality Review Act (SEQRA) as set forth in 6NYCRR617 and the New York City Environmental Quality Review (CEQR). Exterior and interior noise abatement and control as per the US-HUD's 24CFR51 and the NYC-DEP's noise code. Sampling and monitoring data evaluation and analysis. Microbiological identification and remediation. Responsible for asbestos abatement. Writing protocols and procedures for the engineering inspectors.

- NYCDOT Brooklyn Bridge, Manhattan/Brooklyn, NY, 2010-2015, Contract Nos.: BRC270C/P (aka #6): Rehabilitation of Approaches and Ramps and Painting of the Entire Bridge
- NYCDOT Williamsburg Bridge, Manhattan/Brooklyn, NY, 1988-2010, Contract Nos. 253BBA (aka #6): Reconstruction of the BMT Structure, BRC253C (aka #7): Reconstruction of the North Roadways, and BRC253CC (aka #8): Miscellaneous Rehabilitation of the Main Bridge Rehabilitation
- NYCDOT Manhattan Bridge, Manhattan/Brooklyn, NY, 2004-2013, Contract NO.s: BRC156A (aka #11) and BRC156C (aka #10)
- NYSDOT, D015647, Rehabilitation of Alexander Hamilton Bridge Manhattan/Bronx, NY, 2009
- NYSDOT, D259766, Brooklyn-Queens Expressway – Reconstruction of I287 (BQE), Rehabilitation of the Park Avenue and Nassau Concord Viaducts and Tillary Street On Ramp, 2005-2009
- GSA, Brooklyn General Post Office and Federal Court House Redevelopment, Brooklyn, NY, 2005-2006
- City Island Bridge
- Remediation of Fresh Creek Basin, Pennsylvania Avenue Landfill
- NYCDOT Five Bridges over BQE/GCP (in Astoria, Queens)
- NYCDOT Roosevelt Island Bridge
- NYCDOT Reconstruction of Seven Bridges on the Shore (Belt) Parkway
- TBTA, Various Triborough Bridges and Tunnel Authority projects, such as:
 - RFK (aka Triboro) Bridge, TB-64B, Manhattan/Queens/Bronx, NY, 2005-2008
 - RFK (aka Triboro) Bridge, TB-64A, Deck Replacement of the Suspended Span and Queens Viaduct, Manhattan/Queens/ Bronx, NY, 2005
- Marine Parkway Bridge, MP-01, Brooklyn/Queens, 1999-2002
- Various NYC Transit (NYCT) projects in all 5 boroughs, NY, such as:
 - NYCT, CM-1093, CM-1182, CM-1183 and CM-1185, 2003-2008
 - NYCT, CM1275 FTSC, 190 Broadway, Manhattan, NY, 2006-2007
 - NYCT, CM-1093, Jerome Avenue Line, Bronx, NY, 2001-2003
 - NYCT, CM-1093, Jamaica Swing Bridge, Queens, NY, 1999-2002
- NYCDEP, Pennsylvania and Fountain Avenue Landfills at Fresh Creeks, Brooklyn, NY, 2000-2002
- Port Authority of NY and NJ, Lincoln Tunnel Bus Ramps, 2000
- Various New York Metropolitan Transit Authority projects

Our Locations

M&J has offices located in New York, New Jersey, Connecticut, Pennsylvania, Virginia and Washington DC. Our Headquarter is located in Nassau County, NY at 2003 Jericho Turnpike, New Hyde Park, NY 11040, Telephone (516) 821-7300, Fax (516) 233-1041.





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