

Lawrence J. Murphy, P.E.

Vice President/Officer-in-Charge

Mr. Murphy has over 30 years of experience in civil and environmental engineering projects across the country. Starting his career at the Connecticut Department of Transportation, Mr. Murphy worked for several years in their Highway Design Unit. He has managed and designed a wide range of transportation projects, including highway reconstruction, ITS improvements, multi-modal facilities, bridge/tunnel reconstruction, local roads and roundabouts. As a part of this work he has been involved in the value engineering (VE) of several large projects. Currently Mr. Murphy is an Area Manager in CDM Smith's Northeast Region

Project Manager, University of Hartford – Dam Replacement/Roadway and Bridge Construction Design-Build Project, West Hartford, Connecticut. Mr. Murphy is the project manager for a dam replacement project on the campus of the University of Hartford. This project involves development of an alternative analysis study, permitting, preliminary design, final design and construction engineering. The existing dam built for architectural purposes in the 1960s will be replaced with a bridge. The existing hydraulics of the dam result in frequent overtopping of the roadway and extensive maintenance over the years has been required. In 2011 a combination of back-to-back tropical storms inundated the dam. In addition, the existing dam has a roadway and sidewalk that is critical to traffic and pedestrian movement on campus making long term impacts to these facilities undesirable. As a result the project had to be permitted, designed and constructed in a short time period. To accommodate the schedule this fast-track project is being performed via Design-Build procurement. The 80 foot single span bridge and accompanying 1000 foot of roadway will be completed in the spring of 2013. CTDEEP, Hartford Flood Commission, and ACOE permits have been obtained for this work. The construction cost estimate is \$4million.

Senior Technical Reviewer, MassDOT On-Call Services for Hydrologic and Hydraulic Analyses and Review, Massachusetts. Mr. Murphy provides technical review as a part of the 3-year contract for on-call hydrologic and hydraulic analyses. The work varies from short- to long-term assignments, providing the expertise needed to perform specialized computer modeling and to prepare engineering designs related to hydrologic/hydraulic/scour safety studies.

Project Manager, Westside Subway Extension– Hydraulics and Hydrology Design for the Advanced Conceptual Design and Preliminary Design Phase, Los Angeles County Metropolitan Transportation Authority (Metro). Mr. Murphy is serving as CDM Smith's project manager, as a subcontractor to PB America's, Inc., and overseeing engineering in support of advanced conceptual engineering and the preliminary design of hydrology and hydraulics for the Westside Extension subway project. The Westside Extension will be a 9-mile extension of the Metro subway line including seven new stations. The project also includes evaluation and design of Low Impact Development components to be incorporated as a part of the proposed improvements.

Education

B.S. - Civil Engineering,
University of New
Haven, 1990

B.S. - Management,
Ferris State University,
1984

A.A.S. - Civil
Engineering,
Michigan Technological
University, 1982

Registration

Professional Engineer:
Connecticut (1990),
Massachusetts, Maine,
Michigan, and New York

Training

Vermont Agency of
Transportation
Stormwater
Management Training

Professional Activities

Member, American
Society of Civil
Engineers

Member, American
Public Works
Association

Member, Institute of
Traffic Engineers

Member, Water
Environment
Federation

Member, Women's
Transportation Seminar

Member, Engineers
Without Borders

Project Manager, Highway Design On-Call, Connecticut DOT (CTDOT). CDM Smith has an on-call contract with the CTDOT for their Highway Design Unit. For this 3 year \$6 million contract, Mr. Murphy is the Project Manager, where he is responsible for client meetings, scope development, fee negotiations, assigning staff to work on projects, senior design review, and public interface. Our goal is to be a seamless addition to the CTDOT staff and to provide efficient, high quality work. To date assignments include the following: Route 1/53 Widening in Norwalk, CT, Expansion of the Bethel Train Station Parking Lot, Route 2 Traffic Analysis, and Rt. 2 Resurfacing and Bridge Rehabilitation, East Hartford. The construction value of these projects is approximately \$41.5 million.

Transportation Project Manager, Edenwald Houses Green Infrastructure, New York City Department of Environmental Protection (NYCDEP). Mr. Murphy is serving as CDM Smith's Transportation Project Manager, overseeing staff preparation of the Maintenance and Protection of Traffic for the site development. The Edenwald project will provide a variety of green infrastructure in an urban setting including pervious concrete, porous asphalt, permeable pavers, and rain gardens. The plans and specifications associated with this work were developed to New York City Department of Transportation standards.

Project Manager, Heroes Tunnel Rehabilitation, Connecticut Department of Transportation (ConnDOT), New Haven, Connecticut. Mr. Murphy managed the investigation and rehabilitation recommendations for this interesting project. The Heroes Tunnel located on the Wilbur Cross Parkway was originally constructed in 1949 and has been determined to need some structural repairs and code upgrades. This project involves geophysical testing, field assessment of existing structure, ventilation, and lighting systems. CDM Smith coordinated all inspections, ensuring they were in compliance with Federal Highway Administration guidelines for highway and rail transit tunnel inspections. CDM Smith submitted a feasibility study detailing the results, including the recommended rehabilitation work and associated construction costs.

Project Manager/Engineer, Improvements to Route 116 and Bay Road (Atkins Corner) Amherst, Massachusetts. Mr. Murphy managed the reconstruction of a 1-mile section of roadway. The construction cost was estimated at \$6 million. The project involves relocating Route 116 and improvements to the intersections of Bay Road and West Bay Road. A design charrette was conducted with local residents and key stakeholders. The proposed design of a twin roundabout configuration developed in the charrette was successfully carried through the design phase and into construction. This project involved numerous stormwater BMPs including vegetative swales, country (non-piped) drainage, water quality swales, and porous pavement.

Matthew J. Ashe, P.E.

Senior Vice President/Structural Engineer

Mr. Ashe has 32 years of experience as a structural engineer with an emphasis on designing environmental engineering structures. He has developed design criteria, provided analyses, prepared and reviewed contract documents, performed structural condition surveys and evaluations, carried out value engineering studies, provided peer reviews, and performed engineering services during construction for water, wastewater, and hazardous waste facilities in the public and industrial sectors.

He has managed all aspects of structural engineering on numerous projects of diverse sizes. He is experienced in design planning, modifying and repairing existing structures, designing deep and shallow foundation systems, designing new structures, designing unusual structures, and performing design-build.

Structural Engineer, Spillway Reconstruction, Saugus, Massachusetts. For the Lynn Water and Sewer Commission, Mr. Ashe was responsible for the design of a new cast in place concrete retaining wall and slab invert at the Walden Pond Outlet Dam Spillway. The new wall replaced a failing portion of the existing masonry wall. The design included some reconstruction of a portion of the masonry wall near the interface with the new wall, which was founded on rock.

Structural Engineer, Wall and Apron Design, Brockton, Massachusetts. Mr. Ashe designed a permanent wall and apron to replace an existing flashboard structure at the Reservoir Dam.

Structural Engineer, Stop Log Structure, Attleboro, Massachusetts. For the Manchester Pond Dam Mr. Ashe designed a stop log structure that increased the depth of impounded water by as much as 2 feet. The structure had been built on top of the concrete spillway, and he investigated the stability of the spillway structure for the increased hydrostatic pressure.

Structural Engineer, Training Wall Failure Investigation, Framingham, Massachusetts. For the Massachusetts Metropolitan District Commission, Mr. Ashe evaluated the condition of the wall of the Stearns Dam. It was determined that movement and tilting of the wall were attributable to several interdependent factors: loss of mortar in the joints of the granite block wall; poor backfill material (fine sands and silts); freezing and thawing of saturated backfill soils; and erosion of backfill soils through the open joints between the granite blocks. Mr. Ashe developed recommendations for repairs that included replacing poor backfill soils with free draining material and geotextiles for reconstruction of the failed portion of the wall.

Lead Structural Engineer, Water Pollution Control Facility (WPCF) Upgrade, South Windsor, Connecticut. Mr. Ashe was the lead structural engineer for upgrades to South Windsor's water pollution control facility. New structures include an administration building addition (one-story steel frame, about 142-feet by 25-feet in plan dimensions), the blower building (one-story masonry bearing/shear wall building, about 77-feet by 24-feet in plan dimensions), aeration tanks, secondary clarifiers, a sludge pump station, and sludge storage tanks. Several existing structures were modified, including the conversion

Education

M.S. - Civil Engineering, Northeastern University, 1989

B.S. - Civil Engineering, Southeastern Massachusetts University, 1982

Registration

Massachusetts (1988), Connecticut, Rhode Island, Ohio, Indiana

Professional Activities

Member, American Concrete Institute

Member, American Society of Civil Engineers

of the existing primary and secondary clarifiers from square tanks to circular tanks. This conversion couldn't be accomplished in the traditional way (adding concrete fillets in the corners) due to concerns over increased foundation settlement. Mr. Ashe developed a design that utilized new circular walls and cover slabs to minimize the added weight.

Lead Structural Engineer, WPCF Upgrade, Stratford, Connecticut. Mr. Ashe was responsible for the design of modifications to existing tanks and the design of all new tanks. These included the new 120-foot diameter pile supported secondary clarifiers, the ultraviolet disinfection facility, and the design to extend the walls of the existing primary clarifiers 10 feet in height for conversion to sludge storage tanks.

Lead Structural Engineer, WWTP Expansion Design, Waterbury, Connecticut. Mr. Ashe provided structural design for the 30-mgd expansion of a wastewater treatment plant. The first phase of this project includes an addition to the screenings facilities; new aerated grit tanks; a new pumping station excavated into bedrock utilizing rock anchors to resist buoyant forces due to groundwater; new 700-foot long anoxic/aeration tanks and blower building; a new chemical storage building; and new chlorine contact tanks. Also, the sidewater depth of the existing secondary clarifiers was increased by 2-feet. The staged construction of the addition to the screenings facilities was planned as part of the design to maintain plant operation during construction. Residuals were handled in a second phase of the project and include converting an incinerator building to one housing belt filter presses and gravity thickeners. The existing floors were incapable of supporting the loads from the new presses, which are now supported independently by a new framing system extending down to the foundation level.

Structural Engineer, Reservoir Investigations, Brockton, Massachusetts. Mr. Ashe conducted structural investigations and evaluations of the Twin Reservoirs. The reservoirs, 4-mg each, were built in 1911. Each reservoir was a partially buried reinforced concrete tank, approximately 160 feet in diameter and 26-feet high, with about 21-feet above grade. A reinforced concrete dome roof was added to each reservoir in 1965. External deterioration of the tank facing prompted the city to request a structural investigation. Mr. Ashe investigated the external and internal condition of the reservoirs and initiated a concrete core sampling program. The sample cores were fractured throughout their length; petrographic examination revealed that the concrete had been severely damaged by freezing and thawing cycles. The damage was so severe that the tanks were not fit for continued service. Mr. Ashe evaluated repair and reinforcement options, which, in this case proved to be more expensive than replacement.

Structural Engineer, Reservoir Design, Cambridge, Massachusetts. Mr. Ashe designed the new Payson Park Reservoir. The original reservoir, located in a residential area of the neighboring Town of Belmont, was built in 1896. It consisted of an earth embankment dam surrounding the site and was divided into two basins by a granite block wall. The new reservoir consists of two 16-mg buried reinforced concrete tanks constructed within the original basins. This project was complicated by the irregular plan layout of the existing basins and the size of the new tanks, each approximately 400 feet in maximum dimension.

Neill J. Hampton, P.E.

Principal/Technical Specialist

Mr. Hampton is a principal engineer and technical specialist experienced in the design of pipelines, pumping systems, hydroelectric and water control facilities. As one of CDM Smith's valued technical resources, Mr. Hampton provides leadership and mentoring on water resources infrastructure projects nationwide. A broad understanding of welding, metalworking, materials science, corrosion engineering and closed conduit hydraulics complement Mr. Hampton's technical expertise in water control, conveyance and storage.

Project Manager, Cobble Mountain Reservoir Dam Diversion Tunnel Outlet Works Improvements Project, Granville, Massachusetts. For the Springfield Water and Sewer Commission, Mr. Hampton managed the design and served as resident engineer during construction of improvements to the Cobble Mountain Reservoir Dam outlet works. The project increased the discharge capacity of the existing outlet works, which is now capable of releasing up to 600-mgd, by free discharge under 200 feet of head, into a 12-ft diameter tunnel to the Little River Gorge. The design tasks included hydraulic analysis of the existing diversion tunnel and outlet works; design of mechanical improvements for two 40-inch diameter steel rotary (ball) valves; custom design of an innovative non-entry medium-pressure pneumatic plugging system, which was installed through the 40-inch rotary valves, under 200-ft of reservoir head, into the upstream conduit, allowing isolation and dewatering of the rotary valves during disassembly and re-assembly; custom design of a leather seal system for the rotary valves; replacement of two 42-inch differential needle-valves with two hydraulically operated Bureau of Reclamation style 30-inch diameter jet-flow gates, fluid power controls, outlet piping, and appurtenant equipment. The Cobble Mountain Reservoir Dam Outlet Works Improvements Project won the 2007 ASDSO National Rehabilitation Project of the Year Award, 2008 ACEC Massachusetts and Connecticut Grand Conceptor Award, and 2008 National ACEC Grand Award.

Mechanical Design Task Manager, Central City Project Flood Closure Structures, Samuels Avenue Dam and Lock Facilities, Fort Worth, Texas. For the Tarrant Regional Water District and U.S. Army Corps of Engineers Fort Worth District, Mr. Hampton is serving as task manager for the mechanical design and layout of a navigation lock for the new Samuels Avenue Dam; and mechanical design and layout of three flood control gate facilities on the Trinity River in the Fort Worth Area. The lock facility will provide an 8.5' navigation lift for recreation boat traffic between the Trinity River and Marine Creek. The preliminary design includes layout of the lock and approach channels, 14'W x 18'H hydraulically operated steel miter gates, operating machinery and controls; mechanically cleaned bar screen and side-ported-flume for lock filling, and low lift axial flow pumping system for lock draining. The flood control structures will protect the canals, harbor and adjacent residential and commercial structures, planned for this major urban re-development project, from flood waters in a new bypass channel on the Trinity River. Each flood control facility will have several passages for pedestrian and small boat traffic, each with a flood closure structure. The preliminary design includes layout of each gate facility including 10'W x 12'H and 17'W x 24'H vertical lift gates, stop-logs, electric gate hoist machinery and controls.

Education

M.S. –
Environmental
Engineering,
University of
New Haven,
1997

B.S. – Civil
Engineering
Technology,
Wentworth
Institute of
Technology,
1994

Registration

Professional
Engineer (Civil):
Massachusetts,
Connecticut
(2001), New
Jersey and
Wisconsin

Certifications

NACE CP-1
Cathodic
Protection
System Tester

8-hour OSHA
Confined Space
Entry

Project Manager, Water Transmission Pipeline River Crossing Emergency Repair, Springfield, Massachusetts. For the Springfield Water and Sewer Commission, Mr. Hampton managed the design and construction of repairs to a ruptured steel water transmission pipeline under the Connecticut River. The project involved development of plans and specifications and construction services for replacement of a 40 ft segment of 36-inch diameter girth-riveted straight-seam welded steel pipe with new all welded steel pipe. The design and construction included construction of a cofferdam, plugging the existing pipeline, and installation of the welded pipe segment, non-destructive weld testing and inspection, site work, cleaning by commercial divers, and disinfection of 2,000 ft of the transmission pipeline.

Design Task Manager, PCCP Water Transmission Pipeline Rehabilitation, Waterbury, Connecticut. For the City of Waterbury, Connecticut Bureau of Water, Mr. Hampton is served as design manager for the slip-lining of a 13,000-L.F. 24-inch diameter pre-stressed concrete cylinder water transmission pipeline, which had a major structural failure in 2003. The design includes development of plans and specifications for installation of a 20-inch diameter HDPE slip-liner, hydrant assemblies, valve manifolds, special fittings, disinfection and testing.

Project Manager, Forestville Flood Control and Sanitary Sewer Overflow (SSO) Abatement Project, Bristol, Connecticut. For the City of Bristol, Connecticut, Mr. Hampton is serving as project manager for the evaluation, analysis and upgrade of the Broad Street and East Main Street Wastewater Pumping Stations and their force mains. The project involves the development of a hydraulic model of the pumping stations and force mains in the KY-PIPE SURGE2000 and PIPE-FLO computer software programs, and simulation of steady state flows and hydraulic transient analysis. The project objective includes increasing the firm capacity of Broad Street Pumping Station to 20-mgd prevent future dry weather overflows, and design of a second 6,000-L.Ft. 24-inch ductile iron force main; and increasing the East Main Street Pumping Station capacity to 2-mgd and design of a new 4,700-L.Ft. 12-inch diameter forcemain. The study and design involves an inspection and evaluation of both pumping stations; vibration analysis, pump tests and forcemain friction evaluation; and replacement of pumping units, drives valves, controls, catenary bar screen, stand-by generator; and rehabilitation and expansion of the surge control systems.

Project Manager, Airport Road Wastewater Pumping Station Design, Hartford, Connecticut. For the Hartford Metropolitan District Commission Mr. Hampton is serving as project manager for the design of a new 1.0-mgd wastewater pumping station. Project involves the design of a duplex submersible pumping station including 20-hp non-clog centrifugal pumps; 12-inch diameter wet tap and 12-inch linestop in the existing force main to permit bypass and tie-in; diesel powered emergency generator; custom designed programmable logic controller (PLC)-based controls and radio based alarm system.

Design Task Manager, PCCP Water Transmission Pipeline Rehabilitation, Waterbury, Connecticut. For the City of Waterbury, Connecticut, Bureau of Water, Mr. Hampton is serving as design manager for the slip-lining of a 13,000-L.F. 24-inch diameter pre-stressed concrete cylinder water transmission pipeline, which had a major structural failure in 2003. The design includes development of plans and specifications for installation of a 20-inch diameter HDPE slip-liner, hydrant assemblies, valve manifolds, special fittings, disinfection and testing.

Michael S. Schultz, P.E.

Senior Vice President/Geotechnical Engineer

Mr. Schultz is a geotechnical engineer and senior vice president with 38 years of experience. He currently manages the geotechnical and tunnel engineering services division of CDM Smith and provides consulting, project and program management, senior technical review and direction on complex geotechnical engineering efforts including those involving geotechnical engineering aspects of water, water resources, wastewater, environmental remediation, transportation and facilities projects. Projects he is called in to assist on often involve deep excavation support systems, deep shafts and pump stations, tunneling, soil improvement systems including jet grouting, ground freezing and other grouting techniques, dams and levees and foundation designs in all market sectors. Recent experiences and a sampling of project experience with an emphasis on projects in Florida are shown below.

Project Manager, Dam Rehabilitation Project, Saugus, Massachusetts. Mr. Schultz served as the project manager for the study, design and construction of improvements for the Griswold Pond Dam Rehabilitation project in Saugus, Massachusetts. The study included the evaluation of the stability of the dam, erosion of the dam face, and capacity of the spillway. Improvements designed included raising the crest of the dam, increasing the dam width to allow roadway widening, and making hydraulic improvements to the spillway.

Senior Technical Consultant, Geotechnical Issues and Erosion Control at Former Gravel Pit, Sparks, Nevada. Mr. Schultz was involved with a project to stabilize and control the erosion on a 120-foot high, 200-acre former gravel pit face in Sparks, Nevada, which the city plans to develop into a new tourist and casino development by stopping the dewatering pumps that maintain the elevation of water at the bottom of the pit. The pit slope face is as steep as 1 vertical to 1 horizontal in places, and averages approximately 1 vertical to 2 horizontal. Submergence of the slope would potentially destabilize the slope. Environmental issues being addressed include the impacts of construction on flora and fauna that have developed at the bottom of the pit and control of a plume exiting the slope from a nearby terminal.

Project Manager, Bluff Stabilization Design, Hull, Massachusetts. For Allerton Bluff in Hull, Massachusetts, Mr. Schultz was the project manager for the design of a bluff stabilization project. Erosion of 110-foot high bluff had advanced to the point where it threatens the houses on top of the bluff. Extensive analyses were carried out to predict the rate of erosion of the bluff face. These analyses were then compared to estimated rates from historic surveys of the bluff. A stone face was determined to be the most cost-effective approach to stabilization of the very steep (1 vertical to 3/4 horizontal) face.

Senior Technical Consultant, Geotechnical Engineering and Tunneling Alternatives Study, Waterbury, Connecticut. For the City of Waterbury Connecticut's Main Carrier Relief Sewer (MCRS) project, Mr. Schultz directed the geotechnical engineering studies that included the evaluation of alternatives for tunneling, pipe jacking and deep open construction techniques through downtown Waterbury. Major design considerations included reducing construction impacts to traffic, drilling and blasting in deep rock cuts next to numerous brick buildings and utilities, water control, tunneling and pipe jacking alternatives along portions of the alignment, river crossings, etc. This project is currently under construction.

Education

M.S. – Civil Engineering, Massachusetts Institute of Technology, 1981

B.S. – Civil Engineering, Worcester Polytechnic Institute, 1975

Registration

Professional Engineer: Massachusetts (1981), Connecticut, New Hampshire, Maine, Texas, New York, Rhode Island, Louisiana, Florida, New Jersey, Washington, D.C.

Professional Activities

Member, American Society of Civil Engineers

Member, Boston Society of Civil Engineers (BSCES Journal Editorial Board)

Member, Geotechnical Group Chairman, 1994-1995

Member, Tunneling Journal Board

Engineer of Record and Lead Geotechnical/Tunnel Engineer, Confidential Client, Intake Structure, Tunnel and Deep Pump Station Design, Rockland County, New York.

Mr. Schultz is currently serving as the geotechnical and tunneling lead for the design of a raw water line intake structure, pipeline and conveyance system by tunneling and deep pump station (approx. 85' deep) as part of CDM Smith's design for a water treatment system and plant. The intake structure is being designed to pull raw water from the Hudson River in water depths in excess of 40 feet. The subsurface conditions include very soft river sediments and deposits at depths greater than 75 feet and will require pile support. The conveyance tunnel will include a raw water line and chemical and air lines to be used for maintenance of the intake screens. The pump station will be constructed beneath the pump station building and will pump raw water to the treatment plant.

Value Engineering Team, Geotechnical, Shaft and Tunnel Team Member, Austin, Texas.

Mr. Schultz has served as a Value Engineering (VE) Team member for CDM Smith's program management support contract. He has provided consulting and VE services on the raw water intake tunnel and the Intake Structure, shafts and pump station related to the geotechnical engineering, shaft and tunneling aspects. Recently he served on the review team to evaluate the contractor's proposed approach for the construction and foundations for the three proposed intake towers. The design calls for a series of three intake structures or towers to be installed in Lake Travis to draw water from three different levels in the reservoir. The water will flow to a drop shaft and exit in a 9 foot diameter tunnel connected to the raw water pump station.

Senior Quality Reviewer, WASA CSO Tunnels, Washington, D.C. Mr. Schultz served as a senior quality reviewer and as part of the team for the preparation of the risk register, facility planning and the preliminary design of 13 miles of 15 and 23ft inside diameter (ID) combined sewer overflow (CSO) tunnels in the nation's capitol. The project involves design and implementation of an exploration program of 47 borings including three marine borings. Borings drilled in this phase of the program were extended to depths ranging from 125- to 250-feet, to develop sufficient subsurface data to make geotechnical recommendations on the various tunnel alignment options and to develop preliminary costs for the selected alignment. In addition to the borings, the exploration program included geophysical testing, in-situ testing with pressuremeter, and slug testing. Sampling was performed using both pushed, drilled and driven tube samples for laboratory testing. As a result of the hydraulics and geotechnical evaluations the tunnels are expected to be both in rock and soil.

Project Director, New York City Economic Development Commission, Harbor Siphons Project, New York, New York.

Mr. Schultz is currently serving as the project director for a CDM Smith/HMM Joint Venture for the design and construction services of a 1.75-mile long water pipeline between Brooklyn and Staten Island, New York. The pipeline will be constructed in a 12-foot diameter tunnel crossing underneath the entrance to New York Harbor located north of the Verrazano Bridge. The tunneling will be accomplished using an earth pressure balanced shield tunnel boring machine (EPB TBM) and will use gasketed concrete liners as the primary support. The joint venture, worked closely with all stakeholders, evaluated cut-and-cover options and tunneling options to complete the project. Shafts on Staten Island and in Brooklyn, New York, will be constructed using either slurry wall or ground freezing for temporary support.

Timothy J. Dupuis, P.E., BCEE, ENV SP

Vice President/Municipal Engineering Specialist

Mr. Dupuis has extensive experience in the management of large municipal infrastructure programs. He has relevant experience in regulatory consent order driven programs for wastewater treatment facilities, sanitary sewer overflow (SSO) compliance and combined sewer overflow (CSO) compliance. A highly skilled negotiator, Mr. Dupuis has worked on behalf of municipal clients to gain reasonable compliance conditions for regulatory orders with EPA Region 1 and the relevant New England Departments of Environmental Protection

With over 20 years of experience, Mr. Dupuis has additional extensive experience in diverse areas of municipal engineering, including treatment plant design, site design, design-build delivery of systems, hydraulic modeling, sewer design, pump station design, stormwater reviews, subdivision reviews, comprehensive permitting, construction management, value engineering, and dispute resolution. Currently, he is CDM Smith's Program Management Practice Leader for major projects in the New England area.

Chief of Program Management, The Metropolitan District (MDC), Hartford, Connecticut. From January to September 2013, Mr. Dupuis was responsible for the management and execution of all engineering, planning and construction projects for the MDC. His responsibilities included managing the court ordered \$2.1B Clean Water Project. The Clean Water Project is a multi-year program that will achieve compliance with a CSO consent order, a SSO consent decree and reduce Nitrogen discharges from the MDC's four Water Pollution Control Facilities (WPCFs). The Clean Water Project is currently on time and on budget as the program has reached year 7. A few details of the program are included below:

- All consent order and decree milestones have been achieved to date including minimal annual expenditures of \$40M goal and the running 3 year annual average expenditure of \$90M. This was accomplished after the MDC was typically averaging \$20M in annual capital expenditures prior to 2006.
- Management of over 20 separate consulting firms on various components of the Clean Water Project including the development and negotiation of scopes, schedules and budgets to ensure compliance with regulatory conditions.
- Development of standards, policies and procedures to help streamline the design and construction processes both in-house and out-of-house. Standards are provided to consultants for consistency in the presentation of materials to contractors with the goal of reducing liability and claims.
- Development and management of a master program wide budget and schedule to track compliance vs. the regulatory orders and monitor spending within the 2 \$800M voter approved referenda.
- The four phase \$400M Hartford WPCF Program is currently on schedule with the first 2 phases coming in under budget. The Program includes utility relocation, a new influent pump station, new headworks, new dual use primary clarifiers, a new effluent pump station and a new wet-weather disinfection system.

Education

M.S. - Environmental Engineering, University of New Haven, 1996

B.S. - Civil Engineering, Tufts University, 1992

Registration

Professional Engineer: Connecticut (1997) and Massachusetts

ENV SP accreditation (2014) - Envision™ rating system

Honors/Awards

Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers

Professional Activities

Member, American Society of Civil Engineers

Member, American Public Works Association – New England Chapter

Member, Water Environment Federation

Member, New England Water Environment Association - Collection System Committee

Member, Connecticut Water Pollution Abatement Association

- The two phase deep rock tunnel system is currently on schedule and within budget. The first phase, South Tunnel, is at 30% design with the key components of easement acquisition, permitting and public outreach well underway. Construction of the South Tunnel is scheduled to begin in 2015. The second phase, North Tunnel Extension, has just completed the consultant selection and will be in design by 2014.
- The SSO program is well underway with over \$60M in construction contracts completed to date and \$100M more scheduled to go to construction in 2013-2015. Projects have included a unique private property pilot program that will evaluate the effectiveness of various rehabilitation approaches to help tailor the remainder of the SSO elimination program. The technologies for evaluation in separate control sewersheds are lateral replacement, lateral lining, top-hat lining, mainline CIPP lining, manhole rehabilitation, sump pump removal through drain extensions and sewer replacement. The pilot program will be complete in 2014 after one year of flow monitoring to gauge the effectiveness of each technique.

He was also responsible for directing in-house and consultant design and inspection services including over 50 in house and 70 consultant staff for the Clean Water Project and annual water & sewer Capital Improvement Programs.

Program Manager, On-Call Program Management Services, Hartford Metropolitan District (MDC), Hartford, Connecticut. Mr. Dupuis has been working with the MDC for more than 20 years. He provided on-call program management services, supported the MDC in setting policy and direction, assisted with regulatory negotiations, managed multiple project teams, and acted as the MDC's day-to-day contact. In this role, Mr. Dupuis set the direction of the overall \$2.1 billion Clean Water Project with the MDC. He developed scopes, budgets, schedules and staffing plans for more than 60 active project assignments and 25 subconsultants. Key assignments include management of:

- \$400 million SSO program
- \$500 million wastewater treatment plant program
- \$1.2 billion CSO program that includes 2 deep rock storage tunnels, CSO separation in congested urban environments and the addition of numerous green components

He was also the primary author of the original 2005 CSO Long-Term Control Plan (LTCP). The LTCP included a significant public outreach and participation plan including the creating of a stakeholder based Citizens Advisory Committee (CAC). Mr. Dupuis was charged with working collaboratively with the over 20 member CAC to gain consensus on the alternatives analysis portion of the LTCP. These efforts were successful as the plan was ultimately approved by DEP with minimal changes. The CAC was also a major proponent of the Clean Water Program and were instrumental in the passage of the 2 \$800M voter approved referenda in 2006 and 2012. Both referenda were overwhelming approved by a 3 to 1 margin signaling the success of educating the public early and often about the elements of the Clean Water Project.