MARK X. HALEY, P.E.

Senior Vice President

Over 35 years of experience as a senior consultant and project manager for a wide variety of projects.

Education
Massachusetts Institute of Technology, M.S. Civil Engineering, 1975
Northeastern University, B.S. Civil Engineering, 1971

Professional Registration
1978/Professional Engineer: Washington (Reg. No. 17453)
1984/Professional Engineer: Massachusetts (Reg. No. 31969

Professional Societies
American Society of Civil Engineers
Boston Society of Civil Engineers Section, ASCE

Conservation Associations
Save The Harbor Save the Bay, Sponsor
The Boston Harbor Association, Former Board of Trustees
Belmont Conservation Commission, Former Chairman

Mr. Haley has been senior consultant and project manager for a wide variety of projects dealing with the geotechnical and environmental aspects of project design and construction in his 36 years of experience with Haley & Aldrich. Areas of geotechnical experience include investigations of foundations for low- to high-rise structures involving spread footings, caissons, piles, and mat foundations; lateral earth support systems involving internally and externally braced slurry walls, steel sheet piles, and soldier piles and lagging. **Particular expertise relative to waterfront developments involving anchored bulkheads, pile supported wharf structures, and shore protection structures.**

Relevant Project Experience

Geotechnical Engineering Design: Beach Dewatering Wells and Coastal Bank/Beach Stabilization Project, Nantucket, MA. From 2000 through 2012, served as Officer-in-Charge for all geotechnical engineering design support related to a coastal intertidal zone beach dewatering pilot study; coastal bank/vegetated terrace reinforcement and sacrificial sand bank installation; slope failure study and root cause analysis; slope stability analyses under crane loading; gabion mattress placement and earth anchor design on behalf of the Sconset Beach Preservation Fund. Provided technical oversight of engineering analyses, groundwater modeling, engineering design, documentation, and cost estimating to support project permitting performed by others.

Confidential Client, Coastal Slope Failure Reconstruction, Plymouth, MA. Served as Officer-in-Charge and professional mediation expert for geotechnical engineering design analyzing a failed mechanically-stabilized earth (MSE) coastal slope originally designed and installed by others. Performed proximate cause analysis of the previous engineering design and construction methodology. Redesigned a slope stabilization method that was constructed using "long-reach equipment" that enabled keeping all construction equipment in the coastal beach resource area. Secured an Emergency Certification Permit under Wetland Protection Act regulations to allow emergency stabilization construction, thereby avoiding incipient loss of several residential structures.

Coastal Slope Restoration, Private Residence, Wellfleet, MA. Provided geotechnical engineering design for restoration of eroded coastal bank, using enhanced toe-of-slope armoring, stone-filled gabion baskets, erosion control matting, coir fiber logs, geotextile fabrics, and sand nourishment burial combined with beach grass plantings.

Fan Piers/Pier 4 Development, Boston, MA. Project engineer for master plan studies including site exploration and assessment of foundation requirements and construction considerations for a 19-acre, mixed-use waterfront development supported on deep pile foundations. The work included evaluation of vertical seawalls and sloped revetments.

Tank Farm, Chelsea, MA. Engineering design services relative to an emergency action implemented following the collapse of a seawall and marginal wharf into an active waterway. Construction involved dredging to remove material that had fallen into the active channel and stabilization/construction of shore protection elements. Following construction, permits for the work, including site remediation, were obtained from various federal, state and local authorities.

The Knob, Woods Hole, MA. Evaluation of the condition of a rock revetment following a storm event constructed to protect a public causeway.

John F. Kennedy Library, Dorchester, MA. Development of design and preparation of contract drawings for rehabilitation of the existing sloped rock-faced revetment.

Relevant Publications and Papers

"The Use of a Geotechnical Surveillance Program in a Civil Engineering Project," M.S. Thesis, M.I.T., 1974.

"Behavior of Shallow Footings Near a Diaphragm Wall," with E. G. Johnson and D. G. Gifford, *ASCE Annual Convention, San Francisco, CA,* October 1977.

"Design, Construction and Performance of a Cellular Cofferdam in Deep Water," with Max D. Sorota and Edward B. Kinner, *11th Annual Ohio River Valley Soils Seminar*, October 1980.
"Cellular Cofferdam for Trident Dry-dock – Performance," with Max D. Sorota and Edward B. Kinner, *Journal of the Geotechnical Engineering Division*, ASCE Vol. 107, No. GT-12, Proc. Paper 16733, December 1981, pp. 1657 – 1676.

"Up-Down Construction - Decision Making and Performance," with Dr. James M. Becker, presented at *ASCE Specialty Conference Design and Performance of Earth Retaining Structures*, Cornell University, Ithaca, NY, June 1990.

"Use of and Design Parameters for High Capacity Foundation Elements in Boston Bedrock," with Marya E. Gorczyca, *Deep Foundations Institute 19th Annual Members' Conference and Meeting*, October 1994.

"Transforming a Paint Factory to Playing Fields: a Case Study," with D.H. Gevalt, M.X. Haley, and B. F. Monahan, Presented at Battelle Remediation of Chlorinated and Recalcitrant Compounds Conference, Monterey, CA, 2004.

"Atlantic Wharf: Redevelopment of a Historic Site on Boston's Waterfront," with L. S. Vanzler, and R. B. Higgins. Presented at the Annual DFI Conference, Boston, MA, 2011.

RUSSELL A. SCHUCK, P.G.

Sediment Practice Leader | Vice President

Mr. Schuck is a key member of our Contaminated Sediments Management Team

Education
University of Vermont, M.S. Geology/Water Resources, 1995
Hartwick College, B.A. Geology, 1986

Professional Registration
2002/Licensed Professional Geologist: New Hampshire (Reg. No, 557)
1995/Certified professional Geologist: American Institute of Professional Geologist
(Reg. No. 9555)

Professional Societies
National Groundwater Association
Sediment Management Work Group (SMWG)
American Institute of Professional Geologists
Environmental Business Council: Board of Directors, Chair Remediation Committee

Special Studies and Courses
Geochemical Evaluations of Metals in Environmental Media, 2011
The User of Radionuclides & Chemical Markers in Understanding Sediment Contamination, 2011
Evaluating Sediment Transport; Tools, Techniques, and Application to Site Management, 2006
DNAPLs in Fractured Geologic Media (University of Waterloo), 2003
DNAPL Site Characterization & Remediation (University of Waterloo), 1996
Remote Sensing Interpretation, 1992
Certified Hazardous Waste General Site Worker (OSHA 29CFR1910.120), 1988

Mr. Schuck is a Vice President with 25 years of experience on contaminated site investigation and remediation projects. His areas of expertise include hydrogeology, sediment studies, glacial geology, lake studies, engineering geology, geochemistry, chlorinated solvent contamination, and subsurface investigation techniques.

Relevant Project Experience

Industri-Plex Superfund Site Woburn, MA. Lead scientist of a team involved in critically evaluating the remedial action selected in the Record of Decision issued by the Environmental Protection Agency (EPA) for Operable Unit 2 (OU2), and developing an alternate remedial approach for the site. Mr. Schuck's involvement also included participating in extensive strategy development with the potentially responsible party (PRP) team and negotiations with the EPA and other stakeholders in the public sector. The site soils, groundwater, surface water, and sediments are contaminated with arsenic, ammonia and, to a lesser extent, volatile organic compounds (VOCs). Based on our interpretation of site conditions, alternate remedial approach, and subsequent negotiations with the EPA, the EPA is revising the remedy for the site at a cost savings of several million dollars for the PRPs. Site geology consists of organic sediments, glaciofluvial deposits, and glacial till deposits overlying crystalline bedrock at depth.

Former Pigment Manufacturing Facility, Wellesley, MA. Project manager involved in the remedial investigation and remediation of over 180,000 cu yd of soils and sediments (wetland, fluvial, and lacustrine environments) contaminated with chromium (hexavalent and trivalent), lead, arsenic, and other metals associated with pigment waste. Remediation included on-site treatment by chemical reduction, of approximately 35,000 cu yd of soluble hexavalent chromium containing pigment wastes (i.e., calcium chromate) which were identified using Scanning Electron Microscopy/ Energy Dispersive X-ray (SEM/EDX). Dredging of sediments involved the use of a GPS guided environmental clamshell dredge bucket, which allowed for precise excavation of contaminated sediments to achieve risk-based remedial goals. Remediation also included on-site consolidation, and capping of soils and sediments with an engineered barrier. Site geology consists of organic sediments, glaciofluvial deposits, and glaciolacustrine deposits overlying crystalline bedrock at depth.

Responsible for managing the investigation to locate sources of hexavalent chromium-contaminated groundwater. Developed a groundwater profiling program which identified several previously unknown sources of hexavalent chromium, which were subsequently remediated. Responsible for managing the investigation and developing remedial strategy for lead- and chromium-impacted sediment along approximately 2,500 ft reach of a stream and adjacent wetlands. Remedial approach incorporates both human health and ecological risk-based goals.

Sage Laboratories Inc., Natick, MA. Project manager for a site with chlorinated solvent contamination. The site is located in an industrial park with many other potential sources of chlorinated solvent. Designed and implemented a groundwater profiling program using the Waterloo Profiler and an on-site analytical laboratory to define the limits of contamination as well as segregate the contamination from

the site from the other sources in the area. Site geology consists of glaciolacustrine and glaciofluvial deposits overlying crystalline bedrock.

Former Leaking Underground Storage Tank Site, Griffith, IN. Project manager providing third party review of failed remedial project. Effective solubility calculations on soil samples collected by previous consultant indicated the presence of gasoline non-aqueous phase liquid (NAPL) that had not previously been recognized. Developed exploratory program to evaluate the limits of NAPL and developed remedial strategy to remove source material. Following source removal the proposed remedy is monitored natural attenuation to address the remaining dissolved plume. Site geology consists of glaciolacustrine deposits.

Pine Street Canal Superfund Site, Burlington, VT. Team member evaluating remedial opportunities at site contaminated primarily with waste related to a former manufactured gas plant. Conducted field investigation which included sampling of biota (fish) and surface water and bottom sediments from the canal for chemical analysis and bioremediation pilot studies. Assisted in geotechnical analysis of the canal sediments, including sediment sampling using an Eckman dredge, undisturbed piston corer, sediment strength probes, and field vane shear tests. Site geology consists of alluvial, lacustrine, marine and glacial deposits.

Expertise in arsenic fate and transport in aquatic systems

Industrial Facility (Adhesive Manufacturing and Coating), Bourg-de-Thizy, France. Responsible for developing and completing a comprehensive field investigation, interpreting data collected, and evaluating remedial options for a site contaminated with chlorinated solvent dense non-aqueous phase liquid and petroleum light non-aqueous phase liquid. Site investigation activities consisted of soil vapor survey, surface geophysics, test pits, installation of drive point piezometers, mini-piezometers, and decommissioning of existing monitoring wells. Soil, groundwater, and surface water samples were collected and analyzed using innovative sampling and field gas chromatography analytical techniques. Site geology consists of alluvial deposits overlying severely weathered limestone bedrock. Groundwater exists at the site as both a perched water table and a confined aquifer.

Technical Review Industrial Facility (Metal Machining and Manufacturing), Goirle, Netherlands. Reviewed existing subsurface information from previous investigation and remediation efforts for a site contaminated with chlorinated solvents and petroleum hydrocarbons. Developed a conceptual model and provided investigation and remedial recommendations. Site consists of multiple aquifers in alluvial deposits located in a rural environment with extensive groundwater usage.

Brownfields Site Investigations, Lynn, MA. Provided environmental services at two former industrial sites, a tannery and an industrial laundry, for redevelopment under the Brownfields initiative. Completed background review, initial screening assessment, and remedial investigations at both sites. Remedial investigations were completed using innovative techniques and on-site field analysis for VOC and petroleum compounds. Chlorinated solvents, petroleum, and metals are present in the subsurface at both sites. Based on the findings of the remedial investigations, a Site Assessment Report, Risk Assessment Report, and Remedy Evaluation Report were completed for each site. Site geology consists of alluvial and marine deposits.

Publications and Papers

"Risk Management: The Key To A Cost Effective Sediment Remedy In A Northeastern Lake Severely Impacted By Lead And Chromium," S. Clough and R. Schuck, SETAC North America 34th Annual Meeting, Nashville, TN, November 2013

"Internal and External Improvements in the Sediment Quality Triad for Metals-Impacted Sediments", S. Clough and R. Schuck, SETAC North America 34th Annual Meeting, Nashville, TN, November 2013

"Making Sense of the Sediment Quality Triad: Who's on First" with Stephen Clough, PhD, Presented at Seventh International Conference on Remediation of Contaminated Sediment, Dallas, TX, February 2013

"Monitoring of a Northeastern Lake Fishery Following the Removal of Sediments Containing Lead Chromate", S. Clough & R. Schuck National Environmental Monitoring Conference, Washington, D.C., August 2012

Program Chair, EBC Contaminated Sediment Site Management Series Part 1 - Advances in Sediment Site Characterization, Boston, MA, September 2011

Program Chair, EBC Contaminated Sediment Site Management Series Part 2 - Advances in Sediment Site Remediation, Boston, MA, October 2011

"In Situ Sediment Capping" Presented at the NEWMOA Remediation of Contaminated Sediments Workshop, April 2010

"Assessing Fate and Transport of Chromium (VI) in a Wetland," Holden,

Thomas J., Schuck Russell A. Fourth International Conference on Remediation of Contaminated Sediments Savannah, GA, January 2007

"Successful Remediation of Lead and Chromium Impacted Sediments Using XRAY Fluorescence (XRF) Analysis to Guide Sediment Dredging," with Tom Holden and Rich Rago, Presented at Third International Conference on Remediation of Contaminated Sediment, New Orleans, LA, January 2005

"Risk-based Remediation of Lead and Chromium Impacted Sediments in Lake Waban, Wellesley, MA: A Case Study," with D. H. Gevalt, J. A. Mullen; Haley & Aldrich Inc. Boston, MA, and C. Menzie, K. Fogarty; Menzie Cura & Associates, Inc. Chelmsford, MA, USA. Presented at Remediation of Chlorinated and Recalcitrant Compounds: The Fourth International Conference, Monterey, CA, 2004

"An Historical Record of Arsenic Contamination in the Sediments of Arrowhead Mountain Lake, Milton, Vermont," Master's Thesis, University of Vermont, 1995

"The Concentrations of Arsenic and Other Metals in the Sediments of Arrowhead Mountain Lake, Milton, Vermont," with A.S. Hunt, R. Fuller, and C.M. Lassell, GSA Abstracts with Programs, Northeast Section, 1995

"Origin of Arsenic in Northwestern Vermont," The Green Mountain Geologist, Volume 22, No 2, pp.12-13, 1995

"A Study of Metals in Arrowhead Mountain Lake, Milton, Vermont," The Green Mountain Geologist, Volume 21, No. 1, pp. 13-1, 1994

SARAH M. BOUDREAU, EIT

Engineer

Education
Tufts University, B.S., Civil Engineering, 2012

Professional Registration
2012/Massachusetts: Civil Engineer (EIT)

Special Studies and Courses
Haley & Aldrich Loss Prevention Training, 2014
MBTA Right of Way Training, 2013
8-Hour OSHA HAZWOPER Refresher Training, 2014
8-Hour OSHA HAZWOPER Refresher Training, 2013
40-Hour OSHA HAZWOPER Health and Safety Training, 2012
Nuclear Density Gauge Training, 2012

Professional Societies
American Society of Civil Engineers, 2009 - Present
Society of Women Engineers, 2009 - Present

Since joining Haley & Aldrich, Ms. Boudreau has gained field experience logging underpinning pits; monitoring ground improvement installation, support of excavation and sub-grade preparation and soil management programs; and performing nuclear density field tests and capturing soil and groundwater samples. She has gained office experience writing field reports and submitting weekly transmittals, analyzing subsurface data reports such as boring and test pit logs, designing support of excavation systems and structural bridge design, reviewing contractor submittals, writing proposals, calculating and writing geotechnical recommendations, settlement and seismic analyses, specifications, and survey data reports, and drafting and creating clear figures and tables. She is currently in the Real Estate business unit and enjoys working on design and development, as well as renovation and repair projects.

Relevant Project Experience

Squibnocket Farm Access Road, Chilmark, MA. Project engineer for design of road improvement project on Martha's Vineyard involving erosion control, town permitting, structural and geotechnical design. Responsibilities included writing a basis of design memo, conducting site and project research, performing structural and geotechnical conceptual designs for a bridge, and communicating with clients and town government members throughout the proposal and permitting process about project and municipal needs and desires.

180 Rustcraft Road, Dedham MA. Project engineer for the design phase of an office development outside of Boston. Prepared a health and safety plan and prepared for an exploration program, worked on site seismic assessment, coordinated fieldwork and laboratory tests, and assembled and helped write the geotechnical data report and associated attachments.

Emerald Corporate Center, Chelsea MA. Project engineer for 8-story office building development in Chelsea. Responsibilities included attending project team meetings, communicating with a large project team and difficult non-local client, performing settlement calculations, drilled shaft design, and steel sheeting design, researching and designing crash barrier walls/fences, writing specifications, and coordinating contract drawings.

Partners Healthcare Administrative Campus, Somerville MA. Office engineer for multi-building healthcare campus in Somerville's Assembly Row. Responsible for historic data collection, exploration program preparation, new data management, creating and assembling the geotechnical report, site seismic and settlement analyses, writing of specifications, and coordination with other internal work at Assembly row.

River's Edge II Development, Medford, MA. Project engineer for the design phase of an office and residential development in Medford. Organized existing data from previous work on site, planned and prepared an exploration program, worked on site seismic and settlement assessments, coordinated between two clients on one site, and assembled and helped write the geotechnical report and associated attachments.

50+60 Binney Street, Cambridge, MA. Provided geotechnical and structural services related to the design of a 3-ft thick slurry wall for the support of a 6-level below-grade parking garage. Assisted in performing staged analysis using the software program WALLAP and created a panel layout scheme using AutoCAD.

Copley Square Hotel, Boston, MA. Office engineer during the underpinning of a prominent hotel in downtown Boston. Responsible for biweekly survey scope design, survey data management and analysis, and filing of underpinning progress reports.

The Davenport, Cambridge, MA. Office and field engineer during the underpinning of an office complex in Cambridge. Responsible for field observations, including logging and sketching underpinning pits to create weekly transmittal packages.

St. Mark's School New Student Housing Building, Southborough, MA. Project engineer for the design of a new dormitory building at an independent high school. Assisted in designing site investigations, managing data and creating logs, and creating a geotechnical report with appropriate text, figures, and tables.

Chelsea Clock New Location, Chelsea, MA. Project engineer for the design of an expansion to an existing warehouse building in Chelsea. Assisted in designing site investigations, managing data and creating logs, and creating a geotechnical memo with appropriate text, figures, and tables.

Bowery Bay Wastewater Treatment Plant, Queens, NY. Provided services related to the support of excavation design for the renovation of below grade utilities at an existing wastewater treatment plant. Assisted in constructability planning and prepared drawing sets for submittal.

New England Executive Park, Burlington, MA. Project engineer for the design of renovations and new construction at an existing office park. Assisted in designing and monitoring site investigations, managing new and historic data and creating a master exploration plan, and writing and assembling several geotechnical memos.

Assembly Row Development, Somerville, MA. Project Engineer for ongoing, multi-phase, integrated services project involving a mixed-use, 45-acre development. Project included geotechnical and environmental aspects of all new infrastructure, several blocks of retail/residential/commercial use, and a new Massachusetts Bay Transportation Authority train station. Responsible for data, figure, and field report management for multiple subsurface exploration programs and multiple phases of construction monitoring and geotechnical instrumentation programs; construction monitoring coverage and field coordination; writing and assembling of geotechnical reports and specifications as well as reviewing of contractor submittals; working with environmental data and soil management; and performing settlement calculations.

255 Waltham Street Development, Watertown, MA. Project engineer for development of a suburban housing complex. Office responsibilities included data management and analysis during site classification phase, geotechnical report, figure, and graphics preparation, and communication with the field engineer to create accurate and timely field reports for a particularly detailed site and schedule-driven client.

491-499 Huntington Avenue Monitoring Program, Boston, MA. Office and field engineer during the underpinning of a 3-story residential housing complex in downtown Boston. Responsible for preparing the Request for Proposal, survey data management and analysis, instrumentation reporting, field observations (including logging and sketching underpinning pits to create weekly transmittal packages), and preparation of a final report documenting all survey data and repairs.

US Stratcom Replacement Facility, Bellevue, NE. Provided geotechnical and structural services related to the design of a 3-ft thick slurry wall for the support of several levels of below grade space. In the design phase, assisted in determining appropriate soil properties, performing staged analysis using the software program WALLAP, evaluating the loads on the slurry wall from construction surcharging, and determining appropriate reinforcing and bracing schemes for the wall. Additionally, wrote a proposal for suplemental services, and prepared several drawing sets and calculation packages for submittal. In the construction phase, responded to field queries and updated design calculations to reflect real time site conditions.

Former MGP Site, Dansville, NY. Provided services related to the design of a steel sheet pile wall for the support of several levels of below grade space. Assisted in instrumentation design and prepared several drawing sets and calculation packages for submittal.

275 Albany Street, Boston, MA. Provided geotechnical consulting services for the design of a high-rise building in downtown Boston. Design phase responsibilities included project data and site history organization, test pit program planning, site seismic and geotechnical analysis, and report work. Construction phase responsibilities included pile driving and heave data management, pile driving progress tracking, vibration monitoring, field staff coordination, and load test and field report writing.

Central Heating Plant, Tufts University. Medford, MA. Provided construction monitoring services for the installation of a soldier pile and lagging support of excavation system and removal of several underground storage tanks at Tufts University. Observed support of excavation system installation and tank removal, and communicated with project team to provide project scheduling updates.

45 West Third Street, Boston, MA. Provided design phase geotechnical consulting services for a mid-rise building in South Boston. Assisted in creating cost estimates for excavation and soil disposal, and writing and assembling geotechnical memos and specifications.

Interdisciplinary Science and Engineering Building, Northeastern University, Boston, MA. Project engineer for design of classroom and laboratory building at Northeastern University. Responsibilities included data management, analysis, and log creation during site investigations, and geotechnical report, figure, and graphics preparation during the design phase.

505 Washington Street, Boston, MA. Provided geotechnical consulting services for a mid-rise remodeling project in downtown Boston. Responsibilities included creating cost estimates, making site visits with clients and contractors, logging and sketching test pits and managing field data during the investigation phase, geotechnical report writing and preparation in the design phase, and field report and data management in the construction phase.

Sailing Center, Roger Williams University, Bristol, RI. Project engineer for the design of a sailing pavilion at Roger Williams University. Assisted in designing site investigations, managing data and creating logs, and creating a geotechnical report with appropriate text, figures, and tables.

Publications and Papers

"New Bedford South Terminal Marine Commerce Port: Design for Offshore Wind Turbine Use," S. Boudreau, Tufts University Cataldo Scholars Program, Tufts University, Medford, Massachusetts, April 2012.

Conferences and Presentations

"Slurry Wall 101: Design and Construction Considerations," S. Boudreau, Haley & Aldrich Technical Symposium Series - The Evolving Practice of Geotechnical Engineering: Haley & Aldrich's Differentiation, Waltham, Massachusetts, June 2013.

"EDS Process, Standards: Why Follow EDS Process?," Richard Farson, June Yi, George Chambers, Sam Lucido, Sarah Boudreau, Wally Kurzeja, Haley & Aldrich Technical Symposium Series - Remediation: Technical Advances and H&A Differentiation, Chicago, Illinois, October 2013.

Lisa A. Standley, PhD, Role: Senior Level Review and Strategy Development

Dr. Standley is a Principal and Chief Environmental Scientist in VHB's Watertown, Massachusetts headquarters with over 35 years of professional experience. Her experience encompasses the diverse range of environmental and permitting issues that affect transportation and development projects. She has worked extensively in vegetation studies in coastal and inland sites, has published numerous scientific articles in peer-reviewed journals, presented seminars at universities and national scientific meetings, and has been the recipient of grants from the National Science Foundation, the Nature Conservancy, and the Massachusetts Natural Heritage Program. Dr. Standley has extensive permitting experience under Massachusetts jurisdictions including, among many others, the Wetlands Protection Act, Department of the Army under the Clean Water Act and the Massachusetts Endangered Species Act.

Dr. Standley has successfully completed public and private projects on the Cape and Islands for the Town of Nantucket, National Park Service and other private land owners. She has been responsible for several major interdisciplinary projects, coordination environmental investigations (including wetlands and historic/cultural resources), Geographic Information System (GIS) mapping and analysis of resources, aerial mapping and ground survey, engineering, traffic studies, and public participation for a diversity of efforts. Dr. Standley is a long-standing member and currently serves as chairperson of the Needham Conservation Commission.

Daniel J. Padien, Role: Project Manager and Permitting Lead

Mr. Padien is a Senior Environmental Scientist and Project Manager on VHB's Boston Integrated Services Team and has over 22 years of professional experience in the environmental analysis and permitting arena. Mr. Padien's practice focuses on coastal and waterfront projects requiring approvals under the Massachusetts Environmental Policy Act (MEPA), Massachusetts Wetlands Protection Act, M.G.L. Chapter 91 Waterways Licensing, Coastal Zone Management (CZM) Federal Consistency Certifications and Department of the Army Permitting under the Clean Water Act. Mr. Padien leads VHB's Chapter 91 licensing practice. He has worked closely with the Massachusetts Department of Environmental Protection Waterways staff on a long list of projects including due diligence efforts, permitting, licensing and license modifications.

Mr. Padien routinely engages senior Program and Department staff on complex regulatory issues and negotiates detailed license conditions critical to project success. Mr. Padien's experience on the Cape and Islands includes successfully completing Chapter 91 Amnesty Licensing for public and private docks, pilings and moorings in Gosnold, a golf course bridge over a tidal waterbody at Willowbend Country Club, federal permitting for a National Park Service visitor center and various commercial land development projects. Mr. Padien has permitted projects on the Boston Harbor Islands and obtained local Conservation Commission approval for redevelopment projects on a barrier beach in Salisbury, Massachusetts.

Christopher Joseph Wagner, Role: Endangered Species Permitting Specialist

Mr. Wagner is an Environmental Scientist in VHB's Watertown, Massachusetts and has over 13 years of professional experience in the environmental area and 8 years permitting a broad range of land development, transportation and restoration projects. These studies and permitting efforts range from wetland and endangered species permitting for single family homes to large complicated transportation corridor studies. Mr. Wagner has extensive field experience, and has performed hundreds of wetland delineations in a wide variety of habitats at both natural and disturbed sites. He has participated in rare species studies and associated permitting efforts at both inland and coastal sites for residential developments, as well as for multiple bicycle/pedestrian path projects including the Hummock Pond Road Multi-Use Path on Nantucket. He has also created wetland replication designs and planting plans to mitigate for wetland impacts, as well as to enhance wildlife habitat at previously altered areas. Mr. Wagner's work involves coordination with multiple local, state and federal environmental resource agencies, municipal officials, residents and project abutters on a routine basis.

CURRICULUM VITAE

PETER S. ROSEN

Coastal Geologist

Office:

Department of Marine and Environmental Sciences

14 Holmes Hall

Northeastern University

Boston, MA 02115

617-437-4380

Home:

30 Mann Street

Hingham, MA 02043

781-740-1340

EDUCATION

College of William and May, Virginia Institute of Marine Science;

Ph.D. in Marine Science, Concentration in Geological Oceanography

Dissertation: Morphology and Processes of the Virginia Chesapeake Bay Shoreline

University of Massachusetts, Amherst;

M.S. in Geology

Thesis: Evolution and Processes of Coatue Beach, Nantucket Island, Massachusetts: A Cuspate Spit Shoreline

State University College, Potsdam, New York;

B.A. in Geology

PROFESSIONAL AND HONORARY MEMBERSHIPS

Society for Sedimentary Geology (Member)
The Explorer's Club (Fellow)
The Coastal Society (Charter Member)
Association of Engineering Geologists, New England Section (Member)
American Shore and Beach Preservation Association (Member)
Boston Society of Civil Engineers (Member)
Massachusetts Association of Wetlands Scientists (Member)

CERTIFICATIONS

Licensed Geologist, No. 247, State of North Carolina
Certified Geologist, No. 193, Commonwealth of Virginia
Professional Geologist, No. 741, State of South Carolina
Professional Geologists, No. 304, State of Florida

EXPERIENCE

September, 1979 – Present, Partner, GEO/PLAN Associates, Environmental consultants dealing with coastal, marine and wetlands processes and permitting.

September, 1979 - Present, Assistant/Associate Professor, Department of Geology, Northeastern University, Boston; Current research includes shore morphology studies in central Massachusetts, Holocene evolution of Boston Harbor, and endangered shorebird habitat/barrier beach studies in Duxbury, Massachusetts.

September, 1987 - Present, Director, Marine Studies Program, Northeastern University; Directs the on-campus marine education program.

July, 1997 – June 2008, Chairman, Department of Earth and Environmental Sciences, Northeastern University (Acting Chairman for seven half-quarters 1981 - 1991)

August, 1984 - 1998, Conservation Commissioner, Town of Hingham. (Vice Chairman 1995-1998) As part of a seven-member board, enforces state and local wetlands regulations and manages conservation lands.

December, 1976 - December, 1978, Research Fellow, Geological Survey of Canada, Bedford Institute of Oceanography, Nova Scotia. Completed investigations on aeolian dynamics of barrier island systems, coastal processes of central Labrador, effects of ice on shore processes, oil-spill contingency plan for Groswater Bay, Labrador.

July, 1975 - September, 1976, Assistant Marine Scientist, Virginia Institute of Marine Science.
Completed wave refraction studies of the middle Atlantic Continental Shelf and the Chesapeake Bay, with emphasis on the effects of wave refraction on shoreline changes.

April, 1973 - July 1975, Research Assistant, Virginia Institute of Marine Science.
Developed shoreline morphology and use inventories in the Chesapeake Bay.

October, 1972 - June 1976, (intermittant), Consultant, Coastal Environmental Associates, Inc., Studied sites for offshore sewage outfall on the south shore of Long Island, New York.

OTHER

Northeastern University Excellence in Teaching Award
Clemens Herschel Award, Boston Society of Civil Engineers
Environmental Achievement Award, Move Massachusetts 2000
Notary Public, Commonwealth of Massachusetts
NAUI-certified SCUBA diver
Over 100 professional publications including two books.

REPORTS AND PUBLICATIONS

PETER S. ROSEN

1. Rosen, P.S. 1972. Evolution and Processes of Coatue Beach, Nantucket Island, Massachusetts: A Cuspate Spit Shoreline: University of Massachusetts unpub. M.S. Thesis, 203 p.

2. Rosen, P. S., 1973. Processes of Development of a Cuspate Spit Shoreline (abs.), in, Program, annual meeting, Geological Society of America, Northeast section, Allentown, Pennsylvania, March 22-25.

3. Rosen, P. S., 1973. Origin and Processes of Shoreline Reorientation Features (abs.): Virginia Journal of Science, v. 4, No. 3.

4. Sallenger, A. and P. S. Rosen, 1974. Beach Ridges on a low Energy Beach,

VIMS Beach, Gloucester Point, Virginia (abs.): Virginia Journal of Science, v. 25, No. 2.

5. Rosen, P. S., 1975. Origin and Processes of Cuspate Spit Shorelines, p. 72-92, in Cronin, L. E. (ed.), Estuarine Research, Volume 2: Academic Press, New York, 585 p.

6. Rosen, P. S. and others, 1975. Shoreline Situation Report: Stafford County, Virginia: Virginia Institute of Marine Science SRAMSOE No. 79, 55 p.

7. Rosen, P. S. and others, 1975. Shoreline Situation Report: James City County, Virginia: Virginia: Institute of Marine Science, SRAMSOE No. 81.

8. Rosen, P. S. and others, 1975. Shoreline situation Report Accomack County, Virginia: Virginia Institute of Marine Science, SRAMSOE No. 80.

9. Rosen, P. S. and others, 1975. Shoreline Situation Report: King William, King and Queen and New Kent Counties, Virginia: Virginia Institute of Marine Science, SRAMSOE No. 85.

10. Rosen, P. S. and others, 1975. Shoreline Situation Report: Prince George County, Virginia: Virginia Institute of Marine Science, SRAMSOE No. 87.

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