

MARK T. MATTSON, Ph.D.**Vice President/Principal Aquatic Ecologist**

Dr. Mattson is a Vice President and Principal Aquatic Ecologist at Normandeau who has supervised or conducted more than 75 fisheries and aquatic ecology projects over the past 32 years. He is a specialist in aquatic ecology/ fisheries field sampling design and in the application of population and community level statistics to measure anthropogenic effects on aquatic ecosystems. Dr. Mattson has also presented testimony on Clean Water Act §316 issues and on the development and application of periphyton and benthic macroinvertebrate community biocriteria to narrative water quality classification including designated uses and antidegradation.

SELECTED PROJECT EXPERIENCE

Entergy Nuclear Northeast, Inc. (2010-Present) – Laboratory flume and field studies to evaluate the effectiveness of cylindrical wedgewire screens as the best technology available (BTA) to reduce entrainment of fish eggs and larvae at the Indian Point Nuclear Power Plant located on the Hudson River (NY). Project Manager and report author.

Entergy Nuclear Northeast, Inc. (2006-Present) – Provided technical assistance and litigation support in the areas of fisheries and aquatic ecology of the Hudson River for the Nuclear Regulatory Commission (NRC) Environmental Report, Environmental Site Audit, and Environmental Impact Statements for the §401 certification of the Indian Point Nuclear Power Plant located on the Hudson River (NY). Project Manager and Report Author.

Entergy Nuclear Northeast, Inc. (2009-present) – Impingement abundance and survival performance studies of newly installed Ristroph traveling screens, and hydroacoustic and fisheries monitoring for an alternative technology assessment specified by a renewed SPDES permit for the James A. FitzPatrick Nuclear Power Plant located on Lake Ontario (NY). Project Manager.

Entergy Nuclear Vermont Yankee, Inc. (2005-Present) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at the Vermont Yankee Nuclear Power Generating Station located on the Connecticut River (VT). Project Manager and Report Author.

Entergy Nuclear Northeast, Inc. (2009-2011) – Estuarine tri-axial thermal plume survey to measure and map water temperature distribution and tidal current speed and direction among 50 fixed stations in the Hudson River (NY) near the thermal discharge from the Indian Point Nuclear Power Plant. Project Manager.

Entergy Nuclear Northeast, Inc. (2010) – Tri-axial thermal plume survey to measure and map water temperature distribution in Lake Ontario (NY) near the offshore thermal discharge from the James A. FitzPatrick Nuclear Power Plant. Project Manager.

Olympus Power Operations, Inc. (2010-present) – Entrainment characterization study to evaluate the effectiveness of 2 mm cylindrical wedgewire screens at reducing the entrainment of fish eggs and larvae from the East River into the Brooklyn Navy Yard Cogeneration facility, Brooklyn, NY. Corporate Officer.

AES Somerset, LLC (2011) – Tri-axial thermal plume survey to measure and map water temperature distribution in Lake Ontario near the offshore thermal discharge from the Somerset Generating Station (NY). Program Manager.

EDUCATION

Ph.D. 1979, Zoology (Limnology),
University of New Hampshire
M.S. 1975, Zoology, University of New
Hampshire
B.A. 1973, Biology, University of
Connecticut

PROFESSIONAL EXPERIENCE

1981-Present Normandeau Associates
1979-1981 Texas Instruments Inc.,
Ecological Services

PROFESSIONAL AFFILIATIONS

American Fisheries Society
American Society of Limnology and
Oceanography
International Limnological Society
Hudson River Environmental Society

AES Westover, LLC (2010) – Tri-axial thermal plume survey to measure and map water temperature distribution in Susquehanna River Lake Ontario near the thermal discharge from the Westover Generating Facility (NY). Program Manager.

American Sugar Refining Company (2009-2010) – Estuarine tri-axial thermal plume survey and 316b compliance services for the Domino refinery located on the Hudson River near Yonkers (NY). Report Author.

Entergy Nuclear Northeast, Inc. (2006-2008) – Provided technical assistance in the areas of fisheries and aquatic ecology for the Nuclear Regulatory Commission (NRC) Environmental Report and Environmental Site Audit for the re-licensing of the James A. FitzPatrick Nuclear Power Plant located on Lake Ontario (NY). Project Manager.

Entergy Nuclear Northeast, Inc. (2005-2008) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at the James A. FitzPatrick Nuclear Power Plant located on Lake Ontario (NY). Project Manager and Report Author.

Entergy Nuclear Northeast, Inc. (2005-2008) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at the Pilgrim Nuclear Power Station located on the Atlantic Ocean (Cape Cod Bay) (MA). Project Manager and Report Author.

Public Service Company of New Hampshire, Inc. (2005-2009) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at Merrimack Station located on the Merrimack River (NH). Report Author.

Public Service Company of New Hampshire, Inc. (2005-2008) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at Newington Station located on the Piscataqua River (Great Bay Estuary) (NH). Report Author.

Newburgh Yacht Club (2010) – Prepared an Essential Fish Habitat (EFH) assessment and Shortnose Sturgeon Habitat Assessment and Conservation Plan for a proposed dredging project at the marina on the Hudson River at Newburgh, NY. Program Manager.

Cornwall Yacht Club (2008) – Prepared an Essential Fish Habitat (EFH) assessment and Shortnose Sturgeon Habitat Assessment and Conservation Plan for a proposed dredging project at the marina on the Hudson River at Cornwall-on-Hudson, NY. Program Manager.

Tarrytown Former MGP Site Remediation Project (2004) – Prepared and implemented a Shortnose and Atlantic Sturgeon Conservation Plan that deployed and maintained a barrier net exclusion device during dredging and shoreline stabilization construction on the Hudson River at Tarrytown, NY. Corporate Officer.

Public Service Company of New Hampshire, Inc. (2005-2008) - Preparation of a Clean Water Act Section 316(b) Proposal for Information Collection (PIC) and Comprehensive Demonstration Study (CDS) in response to the regulations governing operation of the cooling water intake structure at Schiller Station located on the Piscataqua River (Great Bay Estuary) (NH). Report Author.

Broadwater Energy (2005-2008) – Provided field sampling, laboratory services, and technical advice for an entrainment and impingement assessment during the FERC licensing of the proposed Broadwater Floating Storage and Re-gasification Unit (FSRU) LNG terminal located in the Central Basin of Long Island Sound (NY). Corporate Officer.

Public Service Company of New Hampshire (1994-1996; 2003-Present) – Merrimack Station hydrothermal demonstration in support of NPDES requirements for accessing potential impacts on yellow perch, American shad Atlantic salmon, and other representative important species. Project Biologist.

Entergy Nuclear Vermont Yankee, Inc. (2002-Present) - Environmental support services for NPDES, indirect discharge, solid waste and biological monitoring programs at the Vermont Yankee Nuclear Power Generating Station (VT). Project Manager.

Entergy Nuclear Operations, Inc. (2001-Present) - Hudson River Striped Bass Program (NY). Project Manager.

Entergy Nuclear Operations, Inc. (2001-Present) - Hudson River Atlantic tomcod Program (NY). Project Manager.

Entergy Nuclear Operations, Inc. (2001-Present) - Hudson River Ichthyoplankton and Juvenile Fish Surveys field and laboratory services (NY). Corporate Officer.

Entergy Nuclear Vermont Yankee, Inc. (2002-2008) – Preparation of a Clean Water Act Section 316(a) Demonstration and litigation support for a request for increased discharge temperatures at the Vermont Yankee Nuclear Power Generating Station (VT). Project Manager and Report Author.

Covanta Mid-Connecticut, Inc. (2003-2005) – Connecticut Resource Recovery Authority generating station evaluation of existing and proposed new Clean Water Act Section 316(b) rules for existing facilities – an entrainment and impingement evaluation (CT). Project Manager.

Somerset Operations (MA) (2001-2004) – Two-year evaluation of impingement, entrainment and the thermal plume at this existing generating station. Corporate Officer.

New York Power Authority (NY) (2001-2003) – Charles Poletti Power Plant Effects of Entrainment and Impingement Program. Ichthyoplankton, Juvenile Fish Trawl Surveys; Cunner and Tautog Mark-Recapture Program in Long Island Sound, New York Harbor, and the Hudson River. Project Manager and Technical Director.

Pratt and Whitney East Hartford (CT) (2000 - 2003) – Two-year evaluation of impingement, entrainment and the thermal plume at the Wilgoos facility on the Connecticut River (CT). Project Manager.

Bridgeport Energy LLC Facility (CT, Bridgeport Harbor) (2000 - 2003) – Two-year evaluation of impingement, entrainment and the thermal plume at this new generating station. Corporate Officer.

Vermont Yankee Nuclear Power Corporation (VT) (1996-2002) - Environmental support services for NPDES, indirect discharge, solid waste and biological monitoring programs at the Vermont Yankee Nuclear Power Generating Station. Project Manager.

Shering-Plough Corporation (NJ) (1999-2001) - Biological assessment of the endangered Dwarf Wedge Mussel (*Alasmodonta heterodon*) in the Paulins Kill River (Sussex Co., NJ). Project Manager.

New York Department of Environmental Conservation (NY) (1998-2008) - Hudson River Herring Spawning Stock Assessment. Technical Director.

New York Department of Environmental Conservation (NY) (2001-2005) - Hudson River Recreational Fisheries Creel Surveys, 2001-2002 and 2005. Corporate Officer.

New York Department of Environmental Conservation (NY) (2003-2004) - Hudson River Blue Crab Overwintering survey. Corporate Officer.

New York Department of Environmental Conservation (NY) (2003-2005) - Hudson River American Shad and Striped Bass Age and Growth Laboratory Study. Corporate Officer.

New York Department of Environmental Conservation (NY) (1999-2001) - Aquatic Biological sample collections for contaminants analysis from New York Harbor and the Hudson River. Corporate Officer.

New York Power Authority (1984-1994; 1997-2001) - Hudson River Striped Bass Stock Assessment Program (NY). Project Manager.

New York Power Authority. (1982-1994; 1997-2001) - Hudson River Atlantic Tomcod Spawning Stock Survey (NY). Project Manager.

Consolidated Edison Company of New York, Inc. (1988-1989, 1991-2001) - Hudson River Ichthyoplankton Laboratory Program (NY). Corporate Officer.

Consolidated Edison Company of New York, Inc. (1984-1989, 1991-2001) - Hudson River Ichthyoplankton and Juvenile Surveys (NY). Corporate Officer.

Pratt and Whitney Middletown (CT) (2000) – Cooling water intake screen evaluation to determine applicability of Best Management Practices (BMP) to demonstrate the use of Best Technology Available (BTA) with respect to impingement and entrainment at the Middletown manufacturing facility on the Connecticut River (CT). Project Manager.

Public Service Electric & Gas Company (1996-2000) - Salem Station (NJ) Delaware Bay-wide monitoring fisheries studies for the Estuarine Enhancement Program. Corporate Officer.

Public Service Electric & Gas Company (1996-1998) - Hudson Station (NJ) supplemental 316(a) and 316(b) biological studies. Project Manager.

Eckenfelder, Inc. (1995-1998) - Phase II RFI studies for adjacent surface water sediments AOC for the Ciba-Geigy site located on the Hudson River in Glens Falls (NY). Project Manager.

Wisconsin Public Service Corporation (1996) - Oconto Electric Hydroelectric Project (WI) Fish Entrainment and Turbine Mortality Study. Project Manager.

Dairyland Power Reservoir Productivity Study (1995-1996) - Reservoir productivity study in support of hydropower relicensing on the Flambeau River (WI). Project Manager.

Wisconsin Public Service Corporation (1994-1995) - Wausau Hydroelectric Project (WI) Fish Entrainment and Turbine Mortality Studies. Project Manager.

Wisconsin Public Service Corporation (1992-1994) - Grand Rapids Hydroelectric Project (WI) Fish Entrainment and Turbine Mortality Studies. Project Manager.

Great Northern Paper Co. (1986-1992) - Penobscot Mills and Ripogenus Dam Hydropower Relicensing Projects (ME). Project Aquatic Ecologist.

Empire State Electric Energy Research Corp. (1990-1991) - Demonstration of an Acoustic Fish Deterrence System at the James A. Fitzpatrick Nuclear Power Plant Cooling Water Intake (NY). Project Manager.

Niagara Mohawk Power Corp. (1990-1991) - Fish Guidance Study at Albany Steam Station (NY). Project Manager/Technical Advisor.

Central Hudson Gas and Electric Corp. (1989-1991) - Roseton and Danskammer Point Stations Impingement Monitoring Program (NY). Project Manager.

Consolidated Edison Company of New York, Inc. (1984-1986, 1989-1991) - Indian Point Impingement Studies (NY). Project Manager.

Consolidated Edison Company of New York, Inc. (1985-1991) - Indian Point Nuclear Generating Station Ristroph Screen Impingement Mitigation Study (NY). Project Manager.

Wisconsin Public Service Corporation (1990) - Nine Hydroelectric Facilities (WI) Fish Turbine Entrainment/Mortality Study Plans. Project Manager.

New York Power Authority (1990) - Indian Point Unit 3 Nuclear Power Plant Zebra Mussel Monitoring Project. Project Manager.

Central Hudson Gas & Electric Corp. (1990) - Zebra Mussel Monitoring at Roseton and Danskammer Point Stations. Project Manager.

Central Hudson Gas & Electric Corp. (1990) - Survey of Hudson River Marinas for the Presence of Zebra Mussels. Project Manager.

The Upjohn Company (1982, 1987-1990) - Quinnipiac River Study (CT). Project Aquatic Ecologist.

New York Power Authority (1986-1990) - Indian Point Fish Deterrence Studies (NY). Corporate Officer/Technical Reviewer.

Consolidated Edison Company of New York, Inc. (1989) - Relative Probability of Entrainment Study for Indian Point Station (NY). Project Manager.

Consolidated Central Hudson Gas and Electric Corp. (1986-1988) - Danskammer Point Station Fine Mesh Fish Impingement Studies (NY). Project Manager.

Consolidated Edison Company of New York, Inc. (1986-1987) - Special Studies to Examine Fish Abundance in Unsampled Areas of the Hudson River (NY). Project Manager.

Consolidated Edison Company of New York, Inc. (1986-1987) - Indian Point Entrainment Abundance Studies (NY). Technical Advisor.

Consolidated Edison Company of New York, Inc. (1984-1985) - 1982 and 1983 Year Class Reports for the Hudson River Monitoring Program (NY). Technical Reviewer.

Orange and Rockland Utilities, Inc. (1983-1985) - Hudson River White Perch Stock Assessment Study (NY). Project Manager.

Great Northern Paper Company (1981-1985) - Hydroelectric Development Project (ME). Project Aquatic Ecologist.

New York Power Authority (1980-1985) - Hudson River Gear Evaluation Studies (NY). Project Manager.

Bangor Hydro Basin Mills Hydroelectric Project (ME) (1983-1984) - Project Aquatic Ecologist.

Consolidated Edison Company of New York, Inc. (1981-1984) - Sampling Design Evaluation for Indian Point Fish Impingement Programs (NY). Project Manager.

Metropolitan District Commission (1982-1983) - Water Supply Alternatives (MA). Project Aquatic Ecologist.

Bangor Hydro Telos Dam Reconstruction Project (ME) (1982) - Project Aquatic Ecologist.

Consolidated Edison Company of New York, Inc. (1981-1982) - Indian Point Juvenile Fish Entrainment Study (NY). Project Manager.

Chicopee Falls Hydropower Project (MA) (1981) - Project Aquatic Ecologist.

Town of Concord (MA) (1981) - Water Supply Study. Project Aquatic Ecologist.

SPECIAL TRAINING

NAUI Certified SCUBA diver

U.S. Fish and Wildlife Instream Flow Incremental Methodology Negotiations and Strategies, 1981; Conducting Field Studies, 1984

SELECTED PRESENTATIONS

Mattson, M.T., J.R. Young, B.P. Lindsay, and J.L. Black. 2011. Larval Avoidance Enhances the Entrainment Reduction Performance of Cylindrical Wedgewire Screens. 141st Annual Meeting of the American Fisheries Society, Seattle, WA, 1-8 September 2011.

Mattson, M.T., D.G. Trested, R. Simmons, C. Swanson, and A.G. Palmer. 2011. Atlantic salmon smolt downstream migration past Merrimack Station's thermal plume. EPRI Third Thermal Ecology and Regulations Workshop: October 11-12, 2011, Maple Grove, MN.

Gurshin, C.W.D., M.T. Mattson, and K. Hattala. Spawning stock characteristics of alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*) in the Hudson River estuary. American Fisheries Society 136th Annual Meeting. Lake Placid, NY. 10-14 Sep 2006.

Smith, J.D., M.T. Mattson, and V. Thompson. 2006. Using computational fluid dynamics to determine the hydraulic zone of influence for ichthyoplankton and juvenile fish sampling areas in the vicinity of the James A. FitzPatrick Plant cooling water intake structure in Lake Ontario. Presentation at the EPRI and UWAG conference on 316(b) issues, to be held in Atlanta, Georgia, 6-7 September 2006.

Mattson, M.T. and D.J. Dunning. 2004. Mitigation value of a striped bass hatchery in the Hudson River Estuary. Presentation at the Symposium on Ecological Restoration under Section 316(b) of the Clean Water Act: Issues in Implementation. 134th Annual Meeting of the American Fisheries Society, Madison, Wisconsin, 22-26 August 2004.

Mattson, M.T. J.R. Young, K.A. Hattala, and A. Kahnle. 2003. Abundance index trends in alewife and blueback herring populations of the Hudson River Estuary. Presentation at: Hudson River Fishes & Their Environment. Hudson River Environmental Society conference held 20-21 March 2003 at Marist College, Poughkeepsie, NY.

Mattson, M.T. J.R. Young, and Q.E. Ross. 2002. Atlantic tomcod in the Hudson River Estuary. Presentation at the Symposium on Hudson River Fisheries. 132th Annual Meeting of the American Fisheries Society, Baltimore, Maryland, August 2002.

Geoghegan, P., M. T. Mattson, D. J. Dunning and Q. E. Ross. 1986. Effects of water temperature, collection gear, and tag type on handling mortality of striped bass. Presented at the 1986 Northeast Fish and Wildlife Conference, Hershey, Pennsylvania USA.

Mattson, M. T., D. J. Dunning and Q. E. Ross. 1985. Relative catch efficiency of a 3 m beam trawl, 6.2 m high-rise trawl and 1.0 m epibenthic sled for sampling young of the year striped bass and other fishes in the Hudson River Estuary. American Fisheries Society, August 1985.

Mattson, M. T. and J. B. Waxman. 1985. Movements of spawning Atlantic tomcod (*Microgadus tomcod*) in the Lower Hudson River, Northeast Fish and Wildlife Conference; May 1985.

SELECTED PEER-REVIEWED ARTICLES AND PUBLICATIONS

Dunning, D.J., J.R. Waldman, Q.E. Ross and M.T. Mattson. 2006. Dispersal of age 2+ striped bass out of the Hudson River. Pages 287-294 in J.R. Waldman, K.E. Limburg, and D.L. Strayer, editors. Hudson River fishes and their environment. American Fisheries Society, Symposium 51. Bethesda, Maryland.

Dunning, D.J., Q.E. Ross, M.T. Mattson, and D.G. Heimbuch. 2006. Distribution and abundance of bay anchovy eggs and larvae in the Hudson River and nearby waterways. Pages 215-226 in J.R. Waldman, K.E. Limburg, and

D.L. Strayer, editors. Hudson River fishes and their environment. American Fisheries Society, Symposium 51. Bethesda, Maryland.

Dunning, D.J., J.R. Waldman, Q.E. Ross and M.T. Mattson. 1997. Use of Atlantic Tomcod and other prey species by striped bass in the lower Hudson River estuary during winter. *Trans. Am. Fish. Soc.* 126(5): 857-861.

Dunning, D.J., Q.E. Ross, W.L. Kirk, J.R. Waldman, D.G. Heimbuch and M.T. Mattson. 1992. Post juvenile striped bass studies after the settlement agreement. In: C.L. Smith ed., *Estuarine Research in the 1980s*. State University of New York Press. p.338-347.

Geoghegan, P., M.T. Mattson, J.J. Reichle and R.G. Keppel. 1992. Influence of salt front position on the occurrence of uncommon marine fishes in the Hudson River Estuary. *Estuaries* 15(2): 251-254.

Geoghegan, P., M. T. Mattson, and R. Keppel. 1992. Distribution of the shortnose sturgeon in the Hudson River Estuary, 1983-1988. In: C.L. Smith ed., *Estuarine Research in the 1980s*. State University of New York Press. p. 217-227.

Mattson, M.T., M.L. Hutchins, P.L. Harmon, and C.J. Swanson. 2004. Probability-based impact assessment for a §316(a) demonstration: an example from Entergy Nuclear Vermont Yankee. Chapter 13 in *Proceedings from the EPRI Workshop on 316(a) Issues: Technical and Regulatory Considerations: October 16-17 2003*, EPRI Palo Alto, CA and American Electric Power Company, Columbus, OH: 2004. 1008476.

Mattson, M.T., P. Geoghegan, D.J. Dunning. 1992. Accuracy of catch per unit effort indices of Atlantic tomcod in the Hudson River. In: C.L. Smith ed., *Estuarine Research in the 1980s*. State University of New York Press. p. 323-338.

Waldman, J. R., D. J. Dunning, and M. T. Mattson. 1991. Long-term retention of anchor tags and internal anchor tags by striped bass. *North American Journal of Fisheries Management*, 11: 232-234.

Humphreys, M., M. T. Mattson, R.E. Park, J.J. Reichle, D.J. Dunning and Q.E. Ross. 1990. Stocking checks on scales for identifying hatchery striped bass in the Hudson River. *American Fisheries Society Symposium* 7: 78-83.

Waldman, J. R., D. J. Dunning, Q. E. Ross, and M. T. Mattson. 1990. Range dynamics of Hudson River striped bass along the Atlantic coast. *Transactions of the American Fisheries Society* 119: 910-919.

Waldman, J. R., D. J. Dunning and M. T. Mattson. 1990. A morphological explanation for size-differential anchor tag loss in Hudson River striped bass. *Transactions of the American Fisheries Society* 119: 920-923.

Mattson, M.T., J.R. Waldman, D.J. Dunning, and Q.E. Ross. 1989. Abrasion and protrusion of internal anchor tags in Hudson River striped bass. *American Fisheries Society Symposium* 7:121-126.

Dunning, D.J., Q.E. Ross, M.T. Mattson, P. Geoghegan, and J.R. Waldman. 1989. Reducing mortality of striped bass captured in seines and trawls. *North American Journal of Fisheries Management*, 9(2): 171-176.

Geoghegan, P., M.T. Mattson, D.J. Dunning and Q.E. Ross. 1989. Improved data through quality control and quality assurance in a large scale striped bass tagging program. *American Fisheries Society Symposium* 7: Fish Marking Techniques.

Mattson, M.T., D.J. Dunning, Q.E. Ross and B.R. Friedman. 1989. Magnetic tag detection efficiency in a Hudson River striped bass hatchery evaluation program. *American Fisheries Society Symposium* 7: 267-277.

Mattson, M.T., J.B. Waxman and D.A. Watson. 1988. Reliability of impingement sampling designs: an example from Indian Point Station. *American Fisheries Society Monograph* 4:161-169.

Dunning, D.J., Q.E. Ross, J.R. Waldman, and M.T. Mattson. 1987. Tag retention and tagging mortality in Hudson river striped bass. *North American Journal of Fisheries Management*, 8(4): 535-538.

Mattson, M. T. 1980. Diel and seasonal horizontal movements in a population of the predatory cladoceran *Polyphemus pediculus*. American Society of Limnology and Oceanography, December 1980.

Mattson, M. T. and J. F. Haney. 1980. Factors influencing intrazooplankton predation by *Polyphemus pediculus*, Research Report No. 29. Water Resources Research Center, University of New Hampshire, Durham, NH. 149 pp.

In addition, Dr. Mattson has contributed to over 30 technical reports in the areas of aquatic ecology and sampling design.

RICHARD A. SIMMONS

Fisheries Biologist

Mr. Simmons has over 34 years of experience as an environmental consultant and is one of Normandeau's senior fisheries biologists. He is the Group Manager of the New England Division's Fisheries Department with responsibility for managing all fisheries work in the Northeast. Mr. Simmons' primary area of expertise is upstream and downstream fish passage at hydroelectric projects. He has managed the environmental studies for six FERC relicensing efforts since 2000. He has authored or co-authored more than 75 technical reports over his career in fisheries.

EDUCATION

B.S. 1975, Freshwater Fisheries
Biology, University of
Massachusetts

PROFESSIONAL EXPERIENCE

1978-Present Normandeau Associates
1976-1978 Ichthyological Associates
1975 Normandeau Associates

PROFESSIONAL AFFILIATIONS

American Fisheries Society

SELECTED PROJECT EXPERIENCE

NextEra Energy/Long View Associates (2010-Present) Habitat Conservation Plans (HCP's) and Incidental Take Permits (ITP's) for five hydroelectric Projects on the Kennebec and Androscoggin River systems, ME using the Endangered Species Section 10 process. Assisting NextEra and Long View in the development of HCP's and ITP's for endangered Atlantic salmon, shortnose sturgeon and Atlantic sturgeon at three hydro projects on the Kennebec River and two on the Androscoggin River.

FPL Energy Maine Hydro LLC./Long View Associates (2007-Present) Brassua Hydroelectric Project Relicensing. Assisted FPL and LVA with environmental expertise in support of the relicensing of the Brassua Hydro Project, Moose River, ME. Studies conducted included IFIM, salmonid telemetry study, smelt assessment, reservoir wide habitat survey, terrestrial studies, RTE studies, macroinvertebrate and mussel studies, entrainment study and fish passage review.

Public Service of New Hampshire (2006-Present) – Canaan Hydroelectric Project Relicensing. Provided relicensing support for the ILP process for Canaan Dam (VT/NH), including attending stakeholder meetings and designing and conducting flow, fisheries and habitat studies on the upper Connecticut River. Project Manager

Massena Electric Department, NY/PB Power (2006-Present) – Grasse River Hydropower Project License. Assisted MED with environmental expertise in support of a new FERC license application using the Integrated License Process (ILP). Studies conducted included an assessment of the state threatened lake sturgeon using radio telemetry, RTE searches for fish and mussels, IFIM study, water quality, aquatic habitat, general fisheries, macroinvertebrates and fish passage. Project Manager

Upper Peninsula Dead River Fish and Mussel Surveys, Marquette, MI (2005) - Project goal to assess the effects of the Silver Lake Dam breach on downstream fish and mussel communities. Managed the aquatic and habitat surveys in the Dead River Recovery Area, including a multi-phase freshwater mussel and fisheries survey along 32 miles of the Dead River. Project Manager

Public Service of New Hampshire (2002-Present) – Conducting 316(a) and (b) studies at Merrimack Station on the Merrimack River, NH and at Newington and Schiller Stations (estuarine) on the Piscataqua River, NH. Program Manager.

Public Service of New Hampshire (2000-Present) - Merrimack River Hydroelectric Project Relicensing (NH) - Assisting with relicensing of the Merrimack River Hydro Project. Work included scoping and conducting environmental studies in support of the relicensing effort for three dams. Studies included IFIM in bypass reaches, RTE searches for mussels, upstream and downstream fish passage studies for salmon, river herring and

eels, including underwater camera studies in existing fish ladder and habitat surveys in the bypasses of the three dams. Project Manager.

Lowell Hydroelectric Project, Merrimack River (MA) (1989-1996) – Conducted multiple fish passage studies for Consolidated Hydro, Inc, including upstream and downstream passage studies for adult and juvenile American shad; survival and downstream effectiveness studies were conducted for salmon smolts, and an internal fish lift efficiency study was conducted on the projects fish lift system.

Yadkin Relicensing Project, Yadkin River (NC) (2002-2005) – Normandeau was contracted to provide environmental services for the relicensing of the Yadkin Hydroelectric Project (FERC #2197 NC). Services included designing and conducting aquatic, terrestrial/wetland and water quality assessments requested during the relicensing process. Studies included RTE searches, impacts to natural resources due to fluctuating water levels, habitat surveys and fish passage evaluations. Project Manager.

Missisquoi Bay Bridge Project, Lake Champlain (VT) (2000-2004) – Normandeau conducted a multi-year study on the movements of the state threatened spiny-soft shell turtle in relation to an existing causeway and a proposed new bridge. Ten turtles were radio-tagged to monitor their movements before and during construction of the bridge. Project Manager.

Tapoco Relicensing Project, Little Tennessee River (NC & TN) (2001-2003) - Designed and conducted aquatic resource studies in support of the Tapoco FERC relicensing effort. Studies included assessments of impacts of flows and fluctuating water levels on fish and other aquatic biota in the four project reservoirs and tailwater areas. Also managed two IFIM studies in project bypass reaches. Project Manager.

MA DEP (2001-present) - Fish Tissue Study (MA) - Collected water quality data and fish tissue samples annually to determine levels of mercury in selected fish species from ponds and lakes across Massachusetts for the past 10 years and have secured the contract to continue the study through 2015. Project Manager.

Consolidated Edison (2000-2001) - Deerfield River (MA) - Conducted radio-telemetry studies at the Gardners Falls Hydro project to evaluate the effectiveness of a louver array at guiding Atlantic salmon smolts to a downstream fish bypass. Project Manager.

New York DEC (1999-2001) - Hudson and Mohawk Rivers (NY) - Conducted a stock assessment study to monitor the size, age structure, incidence of repeat spawning, sex ratio, mortality rates and species composition of alewife and blueback herring spawning populations in the Hudson and Mohawk River Systems. Project Manager.

Bath Iron Works (1998-2000) – Kennebec River (ME) - Conducted an ultra-sonic telemetry evaluation on the movements of endangered shortnose sturgeon and Atlantic sturgeon in the vicinity of the Bath Iron Works proposed expansion to their shipbuilding facility. Project Manager.

Public Service Co. of NH (1997-2000) – Merrimack River (NH) - Set up a radio-telemetry study at the Garvin's Falls Hydroelectric Project. Objectives were to evaluate the effectiveness of a Louver array at guiding emigrating Atlantic salmon smolts to a fish bypass system. Project Manager.

Town of Dartmouth (MA) (1998-1999) - Paskamanset River - Developed a fisheries and aquatic habitat assessment plan and conducted the field work to assess the potential effects of water withdrawal from municipal supply wells near the Paskamanset River, Dartmouth, MA. Project Manager.

Consolidated Edison of New York (1998) - East River (NY) - Conducted a large mark and recapture study at four fossil fuel generating stations on the East River and the Arthur Kill. Objectives involved releasing at least 6,000 marked juvenile alewives per plant at several locations to determine the best location for fish return pipes. Project Manager.

Connecticut Light and Power Co. (1997-1998) - Housatonic River IFIM (CT) - Conducted an instream flow study in support of relicensing the Falls Village Hydroelectric Project (FERC #2597) and the Housatonic Hydroelectric Project (FERC #2576). Main objectives were to evaluate effects of fluctuating flows on fish habitat and determine minimum flows that would protect and enhance fishery resources. Project Manager.

Massachusetts Water Resources Authority (1997-1998) - Swift River IFIM (MA) - Conducted an instream flow study on the Upper Swift River (downstream of Quabbin Reservoir). Objective was to determine an adequate minimum flow to protect a valuable trout fishery during periods of drought. Project Manager.

Northeast Utilities, Service Company (1996, 1998) - Connecticut River (MA) - Conducted radio-telemetry investigations to determine feasibility of a barrier net to exclude emigrating Atlantic salmon smolts from being entrained at the Northfield Pumped Storage Project. Project Manager.

State of Maine (1995-1998) - Maine Shad Egg Program - Collected fertile shad eggs from Connecticut River for a hatchery in Maine. Program Director.

Consolidated Hydro, Inc (1994-,1996) Saranac Hydroelectric facility, Saranac River, NY Conducted an evaluation of downstream passage routes of radio-tagged salmon and steelhead smolts, after the bypass system was modified to pass more attraction flow. Survival of these species through the project's fish bypass pipe was also determined. Project Manager.

Consolidated Hydro, Inc (1992-1995) Lawrence Hydroelectric Project, Merrimack River, MA. Radio telemetry studies to determine percent use of downstream bypass by salmon smolts and adult shad (1992,1993, 1994). Conducted downstream juvenile clupeid studies to determine bypass effectiveness . Conducted an underwater camera study coupled with radio telemetry and streamer tags to determine fish lift efficiency for adult shad

Public Service Gas and Electric Co. (1994-1995) - Fish Ladder Feasibility Study (NJ and DE) - Teamed with Rivers Engineering Corp. Responsible for recommending the type, size and placement of fish ladders at five impoundments in NJ and DE. Technical Advisor.

Alice Falls Corp. (1994) - Ausable River (NY) Bypass Survival Study - Conducted downstream fish bypass tests using brown trout at the Alice Falls Hydroelectric Project in Keesville, NY. Project Manager.

Consolidated Hydro, Inc. (1994) - Saranac River (NY) Telemetry Study - Conducted radio-telemetry study to determine the downstream passage routes of Atlantic salmon and steelhead smolts at the Lower Saranac Lawrence Hydroelectric Project, Merrimack River (MA) (1992-Present) – Conducted multiple fish passage studies for Consolidated Hydro, Inc.

Northeast Utilities (1994) – Connecticut River Telemetry Studies (MA) - Conducted radio-telemetry investigations to determine downstream passage routes of Atlantic salmon smolts at two hydroelectric facilities and a principal storage project on the Connecticut River. Project Manager.

Pennsylvania Power & Light (1993-1994) - Connecticut River Shad Egg Program (MA) - Collected fertile shad eggs and transported them to hatcheries in PA to restore the Susquehanna runs. Program Manager.

Turner Falls (MA) (1991) - Connecticut River Juvenile Shad Study. Technical Director.

Farmington River (CT) (1991) - IFIM Study. Senior Field Biologist.

Peshtigo River (WI) (1990) - IFIM Study. Senior Field Biologist.

Floods Pond (ME) (1989) - Sunapee Trout Study. Fisheries Biologist.

East and West Outlet (ME) (1989) - IFIM Study, Moosehead Lake. Senior Field Biologist.

Seabrook (NH) (1978-1989) - Environmental Studies. Senior Field Biologist.

Rapid River (ME) (1988) - IFIM Study. Senior Field Biologist.

Salem Wetland Study, Danvers River Estuary (MA) (1988). Senior Field Biologist.

Seabrook Wastewater Treatment Facility (NH); (1987-1988). Field Operations Manager.

Pontook IFIM Study (NH) (1987) - Androscoggin River. Senior Field Biologist.

Pulsifer Rips IFIM Study (NH) (1987) - Androscoggin River. Senior Field Biologist.

Ripogenus Dam (ME) and Penobscot Mills Hydropower Relicensing Projects (1986-1987). Senior Field Biologist.

Sturbridge and Wales (MA) (1985-1986) - Trout Surveys. Fisheries Biologist.

Basin Mills (ME) (1983) - Hydroelectric Project. Senior Field Biologist.

American Shad Restoration Project; Susquehanna River. Project Leader.

Peach Bottom Nuclear Plant IPA (1977-1978) - Post-Operational Studies. Field Leader.

Impingement/Entrainment Studies, Delaware River (1976-1977). Crew Leader.

SELECTED PRESENTATIONS

Farrell, S. and R.A. Simmons. 2002. Mitigation measures for impacts to fish habitat; *Maine Turnpike Modernization and Widening: A Case Study*. Presented at the Society of Wetland Scientists Regional Wetland Conference, Worcester, MA.

Simmons, R.A. 1997. Improvements in downstream passage efficiency for emigrating juvenile clupeids by modifying the bypass entranceway at the Lowell Hydroelectric Project. EPRI Workshop, May 1997, Milwaukee, WI.

Simmons, R.A., and W.E. Hearn. 1991. Radio telemetry assessment of a downstream fish bypass and turbine mortality of Atlantic salmon smolts at the Lowell hydroelectric facility. Annual Atlantic Salmon Workshop, Rockport, ME.

Simmons, R.A., and W.E. Hearn. 1991. Mark and recapture technique to assess juvenile alewife movement through a downstream fish bypass at the Lowell Hydroelectric Project. 47th Northeast Fish and Wildlife Conference, Portland, ME.

SELECTED PEER-REVIEWED ARTICLES AND PUBLICATIONS

Simmons, R.A. 2000. Effectiveness of a fish bypass with an angled bar rack at passing Atlantic salmon and steelhead trout smolts at the Lower Saranac Hydroelectric Project *IN* Mufeed Odeh (Ed.), *Advances in Fish Passage Technology: Engineering Design and Biological Evaluation*. Published by American Fisheries Society, Bethesda, MD. P. 95-102.

Nelson, W.E., R.A. Simmons and A.E. Knight. 1992. Differential Turbine Passage Survival of Atlantic Salmon Smolts and Post Smolts Progress Report. Proceedings of the Atlantic salmon workshop, Rockport, ME.

DREW G. TRESTED

Fisheries Biologist

Mr. Trested is a trained fisheries biologist. After spending two years working in a state agency, he received a master's degree at Clemson University. While there, he gained extensive experience in fisheries work, specifically with radio and acoustic telemetry with fish in a large river system. Mr. Trested is highly proficient in surgical and non-surgical tagging procedures, including internal radio transmitters and a wide variety of external tags. Mr. Trested has extensive experience operating boats in riverine and reservoir systems. Since joining Normandeau, Mr. Trested has gained experience and knowledge in a wide variety of fisheries sampling techniques. Mr. Trested has recently completed his Ph.D. through Clemson University studying the ecology and biology of lake sturgeon.

EDUCATION

Ph.D. 2010, Ph.D. Fisheries Biology, Clemson University
M.S. 2003, Fisheries Biology, Clemson University
B.S. 1999, Zoology, University of New Hampshire

PROFESSIONAL EXPERIENCE

2003-Present Normandeau Associates
1999-2001 New Hampshire Fish and Game Department (Marine Division)

PROFESSIONAL AFFILIATIONS

American Fisheries Society

SELECTED PROJECT EXPERIENCE

FPL Energy Maine Hydro LLC./Long View Associates (2007-Present) - Brassua Hydroelectric Project Relicensing. Assisted FPL and LVA with environmental expertise in support of the relicensing of the Brassua Hydro Project, Moose River, ME. Studies conducted included IFIM, salmonid telemetry study, smelt assessment, reservoir wide habitat survey, terrestrial studies, RTE studies, macroinvertebrate and mussel studies, entrainment study and fish passage review. Task Manager.

Massena Electric Department, NY/PB Power (2006-Present) – Grasse River Hydropower Project License. Assisted MED with environmental expertise in support of a new FERC license application using the Integrated License Process (ILP). Studies conducted included an assessment of the state threatened lake sturgeon using radio telemetry, RTE searches for fish and mussels, water quality, aquatic habitat, general fisheries, macroinvertebrates and fish passage. Task Manager.

Public Service of New Hampshire (PSNH) (2008-2010) – Fisheries and aquatic community studies to address Sections 316(a) and 316(b) of the Federal Clean Water Act. Task Manager.

New Hampshire Department of Transportation (NHDOT) (2006-2007) - Bald Eagle winter roost surveys. Field Biologist.

Public Service of New Hampshire (PSNH) (2006-2007) – Impingement and entrainment program at Newington Station. Field Biologist.

Public Service of New Hampshire (PSNH) (2006-2007) – Impingement and entrainment program at Schiller Station. Field Biologist.

Public Service of New Hampshire (PSNH) (2005-2007) – Impingement and entrainment program at Merrimack Station. Field Manager.

Vanasse Hangen Bruslin, Inc. (VHB) (2003-2007) – Radio telemetry of spiny softshell turtles in Lake Champlain. Assisted with deployment and removal of turtle basking platforms. Field Biologist.

Penobscot River Mercury Study (2006-2007) – Large scale clean hands collection of sediment, water, and biota for methyl mercury analysis. Field Biologist.

Ice Harbor Turbine Tag Project (2006) – Assisted in salmon smolt passage studies on Snake River in Washington for USACOE. Field Biologist.

Public Service of New Hampshire (PSNH) (2006) – Canaan Hydroelectric Project Bypass IFIM study. Field Biologist.

Hyla Ecological (2006) – Backpack electrofish survey on Nashua River. Project Manager.

NHDES: Lamprey River Habitat Study (2005-2006) – Cooperative Project with UNH & UMass. Assisted with collection of and Summary Report for IPUOCR's

Massachusetts Department of Environmental Protection (2003-2010) – Collection of tissue for use in mercury and pollutants assessment. Field Biologist.

Rock Island Turbine Tag Project (2005) - Assisted in salmon smolt passage studies on Columbia River in Washington for Chelan County PUD. Field Biologist.

Wanapum Turbine Tag Project (2005) – Assisted in salmon smolt passage studies on Columbia River in Washington for Grant County PUD. Field Biologist.

Merrimack Generating Station (PSNH) (2004-2005) – Fyke net and electrofishing surveys. Field Biologist.

Public Service of New Hampshire (PSNH) (2003, 2005) – Radio telemetry studies at Amoskeag Hydro (Atlantic Salmon smolt downstream passage). Field Biologist.

NHDES: Souhegan River Habitat Study (2004) – Cooperative project with UNH & UMass for State of NH – assisted with microhabitat classifications, macroinvertebrate, and flow sampling. Field Biologist.

Santee Cooper Power (SC) (2004) – Assessment and monitoring of Bendix hydroacoustic system used to monitor anadromous fish passage. Field Biologist.

Amoskeag Dam (PSNH) (2004) – Instream flow study in dam bypass reach. Field Biologist.

Alcoa (NC) (2003-2004) – Tailwater fisheries survey (gillnet and electrofishing) as part of FERC relicensing. Field Biologist.

Hudson River (NY) (2003-2004) – Laboratory taxonomic sorting of ichthyoplankton trawls. Laboratory Biologist.

CHI Energy, Inc. (MA) (2003) – Assessment of Canavac pump system for moving American Shad out of fish lift system. Field Biologist.

Public Service of New Hampshire (PSNH) (2003) – Garvins Falls downstream bypass efficiency for juvenile clupeids. Field Biologist.

SPECIAL TRAINING

State of NH – Safe Boater Certified (Current)

40 Hour OSHA Training (Current)

Red Cross Standard First Aid and Adult CPR (Current)

Workshop on the Aging and Sexing of American Eels – University of Massachusetts, Dartmouth (2006)

River 2D Hydrodynamic and Habitat Modeling Workshop (2007)

PHABSIM 40-Hr Certification, Utah Water Research Laboratory, Utah State University (2008)

SELECTED PEER-REVIEWED ARTICLES AND PUBLICATIONS

J.J. Isely, D.G. Trested and T. Grabowski. 2004: Tag Retention and Survivorship of Hatchery Rainbow Trout Marked with Large Format Visible Implant Alphanumeric Tags. North American Journal of Aquaculture 66: 73-74.

D.G. Trested, R. Goforth, J.P. Kirk, J.J. Isely. 2010. Survival of shovelnose sturgeon following abdominally-invasive endoscopic evaluation. North American Journal of Fisheries Management 30: 121-125.

D.G. Trested, J.J. Isely. 2010. Age, growth, mortality and abundance of lake sturgeon in the Grasse River, New York, USA. Journal of Applied Ichthyology. *In press*.

SELECTED PRESENTATIONS

D. G. Trested, J. J. Isely, R. Bakal, K. Ware. 2003. A Behavioral Comparison of Hatchery-reared and Wild Shortnose Sturgeon in the Savannah River, South Carolina-Georgia. Annual Meeting of the American Fisheries Society, Baltimore, MD.

D. G. Trested, R. Goforth, J. P. Kirk, J. J. Isely. 2009. Survival of shovelnose sturgeon following abdominally-invasive endoscopic evaluation. Annual Meeting of the American Fisheries Society, Nashville, TN.

ROBERT W. VARNEY

Senior Vice President

Considered one of the nations most experienced and respected environmental leaders, Robert Varney is a former Environmental Protection Agency (EPA) New England Regional Administrator, who joined Normandeau Associates as a Senior Vice President in 2009. He was the longest-serving regional administrator and the top environmental official in New England and is recognized for instituting many innovative approaches and policy initiatives that have served as national models. Prior to EPA, Mr. Varney was one of the longest-serving state environmental commissioners, appointed by three Governors.

He is nationally recognized for his efforts on global climate change; energy efficiency and renewables; homeland security and preparedness; clean air, clean water and safe drinking water; superfund and brownfields cleanup and redevelopment; environmental justice and healthy communities; restoration of rivers, lakes and coastal areas; strong and consistent enforcement and compliance assistance; strengthening partnerships and improved agency management and performance. He has excellent relationships with all New England Governors and the New England Congressional Delegation, EPA's regional and HQ staff, state environmental commissioners and their staff, local officials as well as business, health and environmental organizations.

SELECTED PROJECT EXPERIENCE

EPA, Region 1; New England (2001-2009) – Mr. Varney managed a staff of 700 employees and a budget of \$532 million. He was responsible for implementation of numerous federal environmental laws and programs such as the Clean Water Act, Clean Air Act, Safe Drinking Water Act, Superfund, brownfields redevelopment, hazardous waste management, emergency response and preparedness, environmental justice, children's health, wetlands permitting and protection, stormwater controls, enforcement and compliance assistance, environmental sampling and laboratory analysis and grants to state and local governments. He also undertook many initiatives regarding energy efficiency and renewables, climate change, environmental justice, creation of a Healthy Communities Grant Program for disadvantaged communities, collaborative efforts to clean up the Mystic River and the Charles River, elimination of chronic beach closures, designation of all coastal waters as "no-discharge" areas, and development of innovative stormwater controls in significantly impaired watersheds. He helped achieve several high-

EDUCATION

- M.S. 1979, Urban Planning, Michigan State University
 B.A. 1977, Economics, University of New Hampshire

PROFESSIONAL EXPERIENCE

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| 2009-Present | Senior Vice President, Normandeau Associates |
| 2001-2009 | Regional Administrator, EPA, Region 1: New England, Boston, MA |
| 1989-2001 | Commissioner, New Hampshire Department of Environmental Services, Concord, NH |
| 1989 | Director, New Hampshire Office of State Planning, Concord, NH |
| 1987-1989 | Executive Director, Nashua Regional Planning Commission, Nashua, NH |
| 1983-1987 | Executive Director, Upper Valley-Lake Sunapee Council, Lebanon, NH |
| 1979-1983 | Planner, Economic and Community Development Director, Lakes Region Planning Commission, Meredith, NH |

PROFESSIONAL AFFILIATIONS

- President*, Environmental Council of the States
Chairman, New Hampshire Energy Facility Evaluation Committee
Chairman, New Hampshire Water Resources Council
Chairman, Federal Ozone Transport Commission
Chairman, Governmental Advisory Committee (advisory committee to EPA Administrator Carol Browner on environmental effects of NAFTA)
Chairman, State/EPA Superfund Policy Forum, representing National Governors' Association
Board Member, EPA/ECOS Climate Change Forum
Chairman, New England Governor's Conference Environment Committee (3 terms)

profile settlements to clean up and restore the Charles River, South Boston beaches, Mt. Hope Bay, Portsmouth Harbor, and portions of the Connecticut, Merrimack, and Assabet rivers.

New Hampshire Department of Environmental Services (1989-2001) – As one of the nation’s longest-serving state environmental commissioners, Mr. Varney was appointed by three governors of both political parties. He managed a state agency with over 450 employees and an annual budget of \$100 million. The Department of Environmental Services is responsible for solid and hazardous waste management, air quality, dam inspections as well as operation, maintenance and reconstruction of State-owned dams, wetlands permitting and protection, water supply systems, wastewater treatment plants, septic system design and installation, laboratory analysis, rivers and lakes management, groundwater protection, geological studies, permitting and enforcement, emergency oil spill and chemical response and other associated environmental programs. During difficult economic times, Mr. Varney significantly increased revenue generated by the agency to make it more self-supporting, greatly improved internal management, successfully undertook several legislative initiatives including new State grant programs for municipal wastewater and drinking water infrastructure, landfill closures and protection of local water supply lands. He also greatly improved communication with the legislature, municipalities and professional groups. He was elected by his peers as President of ECOS, the national association of state environmental commissioners and served as chairman of numerous federal, regional and state commissions, boards and committees. He was widely credited with instituting many innovative approaches and policy initiatives that served as national models.

New Hampshire Office of State Planning (1/89-7/89) – As State Planning Director, Mr. Varney managed 40 employees and an \$8.6 million annual budget and served in the Governor’s Cabinet. Agency was responsible for local, regional and statewide planning, growth management and interagency coordination. Also responsible for Coastal Zone Management Program, Great Bay National Estuaries Research Reserve program, Community Development Block Grant Program (housing, water, sewer, community facility, and economic development grants), coordination with regional planning commissions and local boards and officials, monitoring of federal funds in New Hampshire, administration of state’s intergovernmental Review Process, statewide database management, preparation of population estimates and projections. Also initiated and designed Governor’s Recycling Grants Program.

Nashua Regional Planning Commission (1987-1989) – Mr. Varney directed New Hampshire’s largest regional planning agency in one of the fastest growing areas of the country. NRPC is responsible for the regional Transportation Improvement Program, regional database management, water resource mapping and protection, development of local and regional plans, coordination of household hazardous waste collections and the solid waste district. Initiatives included preparation of the state’s first Regional Recycling Plan and development of the

PROFESSIONAL AFFILIATIONS (cont’d)

Chairman, New England Interstate Water Pollution Control Commission (1994-1996)
Secretary, New Hampshire Water Well Board
Chairman, State/EPA Superfund Policy Forum, representing National Governors Association
Chairman, New Hampshire Water Supply Task Force
Chairman, New Hampshire Council on Resources and Development
Chairman, New Hampshire Community Development Block Grant Advisory Committee
President, New Hampshire Planners Association
Chairman, New Hampshire Regional Planning Directors
Chairman, Route 101-A Bypass Study Steering Committee
Chairman, Hanover-Lebanon Area Highway Study Committee
Board Member, National Environmental Justice Advisory Committee (NEJAC)
Board Member, Federal Coastal Response Research Center (oil spill cleanup research)
Board Member, New Hampshire Water Supply and Pollution Council
Board Member, New Hampshire Wetlands Board
Board Member, New Hampshire Bulk Power Site Evaluation Committee
Board Member, New Hampshire Rivers Management Advisory Committee
Board Member, New Hampshire Land Conservation Investment Program
Board Member, Loon Mountain Expansion Joint Review Committee
Board Member, New Hampshire Nuclear Waste Policy Advisory Committee
Board Member, Governor’s Information Technology Advisory Committee
Liaison, National Association of State Fire Marshals (phase out of flame retardants and other issues)

Merrimack River Management Plan, the first such plan completed pursuant to the state's new river management and protection program. Other projects included the Nashua-Boston Passenger Rail Feasibility Study, an impact fee handbook and evaluation of Nashua's bus system, local water resource management and protection plans, and local conservation plans. Chaired Route 101-A Bypass Study Steering Committee composed of federal, state and local officials. Also initiated and chaired the Water Supply Task Force, a public/private partnership formed to prepare a long-range water supply plan for the rapidly growing southern tier of New Hampshire. A high percentage of these plans and proposals have been implemented.

Upper Valley-Lake Sunapee Council (1983-1987) – Mr. Varney directed a unique bi-state regional planning agency serving 31 communities in New Hampshire and Vermont. Recruited to revitalize a troubled agency contemplating abolishment. Within 18 months, membership doubled from 15 to 30 communities, and staffing grew from two to fourteen. Responsible for directing all council activities including local and regional planning, preparation and administration of grants for housing rehabilitation, economic development, community facilities, and wastewater and drinking water systems, environmental protection, historic preservation, transportation, downtown revitalization, industrial development, recreation planning and water resource management. Chaired Hanover-Lebanon Area Highway Study Committee.

Lakes Region Planning Commission (1979-1983) – Mr. Varney worked as a regional planner, economic development specialist and community development director at a regional planning commission serving 32 communities in the Lakes Region of New Hampshire. Duties included preparation of local master plans, downtown revitalization strategies, zoning ordinances and subdivision and site plan review regulations, regional economic development strategy, regional tourism plan and environmental impact assessments, coordination of the Concord-Lincoln Rail Study; and management of Franklin's CDBG loan program in the central business district.