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# Michael T. Lannan, P.E.
## President

**Education**
B.S. Chemical Engineering
Northeastern University, 1991

M.S. Environmental Engineering
Northeastern University, 1993

**Certification**
Professional Engineer:
Maine
Vermont
Massachusetts
New York

**Affiliations**
New England Environmental Business Council, Air Quality Committee Past Chair

Northeast Biosolids and Residuals Association, Board of Directors

Fiberglass Reinforced Plastics Institute, Board of Advisors Chair

New England Environmental Business Council, Solid Waste and C & D Committees

Water Environment Federation, Air Quality Committee

New England Water Environment Association Residuals Management Committee

Air and Waste Management EE-6 Odors Committee, Past Chair

Air and Waste Management AE-2 Odors, Solvents, and Gases Committee

SWANA Air Quality Committee

Michael T. Lannan is an environmental engineer who has identified nuisance conditions for owners, operators, and regulators alike for close to 30 years. He started his career exploring proposed projects for airborne nuisance, or for facilities experiencing nuisance complaints, but over the years, his expertise has expanded into all types of compliance concerns. He has testified at dozens of hearings and court cases on ordinances, regulations, due diligence, and compliance. He has assisted many cities and towns with ordinance development, and is currently assisting about six municipalities and public organizations with specific procedures for compliance with state and their local ordinances.

He has presented seminars on nuisance science and control to colleges, regulators, facility operators, consultants, and neighbors. He has trained MaineDEP, NHDES, MassDEP, Allegheny County Health officials, the Puget Sound Clear Air Agency in Seattle, and the Oregon DEQ, on nuisance monitoring and response procedures. Most training results in changes to nuisance, zoning, or permitting regulations. The training for the Oregon DEQ resulted in a very proactive 10-year project for the regulators to completely revamp their approach to compliance, and to proactively employ scientific monitoring with facilities, before the issues become political and legal concerns.

He has worked on hundreds of nuisance related projects and can quickly and effectively identify areas of concern. He has provided site assignment and nuisance testimony for facilities or proposed regulations predominantly focused in Maine, New England, throughout the northeast, but also throughout the country at request. He assisted Maine DEP when a specific nuisance policy was required, after a legislative initiative was passed. He is currently assisting one Maine area with seafood processing odor concerns, and another with a noise assessment for refrigerated seafood transfer and trucking operation.

Recently, he trained a number of federal contractors on odor detection procedures at a federal facility in Colorado that is biologically degrading old mustard gas munitions. It was important that the procedures not only address the science of the concern, but the potential public outcry detectable emissions from an old nerve gas munition facility could produce. He recently also provided training for those odor nuisance monitoring thresholds and odor complaint response procedures personnel in September at, or near, NYSDEC headquarters in Albany and at another location in upstate NY.

For over a decade he has been reviewing potential air, odor, noise, dust, lighting, and vibration adverse impacts on a fast track basis for residential, commercial, and industrial mixed used projects for compliance with a regional planning commission's Industrial Performance Standards. The commission has been tasked with redeveloping an old Air Force base that spans three municipalities.

**Noise and Blasting - Impact Analysis for Gilboa Dam Reconstruction Project, Gilboa, NY.** The Gilboa Dam, on the Schoharie Reservoir collects and supplies nearly 10% of the total fresh water to New York City. The dam located upstate, in Gilboa, New York, required extensive repairs. Mr. Lannan was asked to perform noise, vibration, and impact sound analyses caused by the reconstruction of the dam, from building roads during site preparation, blasting, jack hammering and demolition, on-site cement production, trucking and spoils disposal, since the dam was going to be reconstructed 24 hours a day in a rural area for a number of years. Mr. Lannan's sound assessments included a mixture of standard and site specific usage factors for various construction activities, and an extensive noise compliance monitoring program that covered all surrounding residences and municipal structures (e.g. schools and museums). Mr. Lannan was able to work directly with the contractor to determine the maximum amount of construction flexibility for day and night operations over the different project phases. The noise impact analysis included a variety of noise sources that were modeled with the CadnaA model and the Federal Highway Administration Transportation Noise Model (TNM).

**Odor - Public Testimony for Addressing Odor Control at a Municipal Landfill in Newfoundland.** Mr. Lannan was retained by the City of St. John's, Newfoundland to examine odor emissions from its older downtown landfill and to develop an odor reduction strategy to eliminate a public odor concern. Mr. Lannan was brought in as an outside expert on odor control. Mr. Lannan's testimony was presented at a press conference where local groups and lawmaker's grilled him on his approach. Mr. Lannan was able to identify the cause of the spike in odor, and recommended a number of operational changes and public outreach programs to eliminate the concern. Mr. Lannan developed a comprehensive odor control strategy and defended it in a confrontational environment that was broadcast on TV to the province.

**Vibration - Residential Impact Study for Train Sound.** A new residential development was proposed in Massachusetts for a site adjacent to an area where Amtrak and commuter trains travelled, and commuter trains typically idled all night. The developers were concerned that potential sound and vibration from train traffic, especially the idling, would adversely affect potential future residents. Mr. Lannan used Tech Environmental's database of noise factors and train schedules to examine the acoustic impacts of train traffic within the proposed residential dwellings. Although the initial findings were excessive low frequency sound potential, Mr. Lannan specified a sound mitigation wall solution specifically for the low vibrational frequencies of concern.

**Air Pollution Control - Industrial Interceptor Emission Estimation and Reduction for 80 Chemical Processing Industries.** Mr. Lannan used chemical fate modeling to determine the potential emissions from the largest industrial sewer in Houston, TX. The BIOSAN interceptor collects wastewater from Houston's chemical processing and manufacturing clients and transports it to its own industrial wastewater treatment plant. Mr. Lannan discovered many air emission hotspots during the fate modeling and recommended a combination of covering and ventilation, siphon systems, and air pollution control technologies to reduce the air emission potential to a low level so complete covering, ventilating, and air pollution control of the entire system was not necessary.

**Air Emissions Assessment - Department of Energy Emissions Inventory.** Mr. Lannan performed an emissions inventory for approximately 200 emission points at the Department of Energy's Savannah River (GA) Site in Georgia. He examined emission operating and monitoring data for boilers and emergency generators, and estimated vapor phase chemical transport for research laboratories and batch chemical facilities using chemical properties and EPA-approved emission models. The emission inventory proved the facility's claim that total annual air emissions had been reduced by an order of magnitude in recent years

## Employment History

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| 2018 to present | Tech Environmental, Inc., Belfast, Maine<br>President |
| 2015 to 2018 | Tech Environmental, Inc., Waltham, Massachusetts<br>President |
| 2004 to 2015 | Tech Environmental, Inc., Waltham, Massachusetts<br>Vice President, Air Quality and Nuisance Services |
| 2002 to 2004 | Tech Environmental, Inc., Waltham, Massachusetts<br>Associate, Air Quality and Odor Control Services |
| 1991 to 2002 | Camp Dresser and McKee, Cambridge, Massachusetts<br>Air Quality and Odor Control Engineer, Air Quality Group Services |