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News

One-of-a-kind Rutgers noise center improves quality of life from Camden to Kansas

By Melissa Payton



Credit: Nick Romanenko
Mark Roskein, left, and Eric Zwerling on the job with Rutgers Noise Technical Assistance Center, the sole training center for noise enforcement in the nation. Center director Zwerling says that noise not only drives people crazy, it has a whole cascade of negative impacts.

In New Jersey, noise is a fact of life, whether it's from landscapers' leaf blowers in the suburbs, factories and distribution centers in the city, or late-night partying just about anywhere in the most densely populated state in the union.

While New Jerseyans may be resigned to the downside of living in a commercial and industrial hub, many local governments have set noise limits and are empowered to enforce them – and virtually all of the enforcers have been trained at Rutgers. In fact, thousands of noise enforcement officers nationwide and internationally have taken a certification course from the Rutgers Noise Technical Assistance Center (RNTAC).

That's because Rutgers is host to the sole training center for noise enforcement that was originally contracted by the U.S. Environmental Protection Agency (EPA). "Nobody does what we do," says Eric Zwerling, RNTAC's director since 1991. As a result, Zwerling and his bare-bones staff – two graduate students and one support staffer – are kept busy teaching enforcement officers from across the nation how to measure noise and persuade violators, through legal remedies if necessary, to fix the problem.

Operating out of the Environmental and Natural Resources Sciences Building on New Brunswick's George H. Cook Campus, Zwerling's office also offers training to businesses that want to comply with noise law and be good neighbors, and to citizens gearing up to fight the source of local noise problems.

"In the past 17 years, I've trained 4,500 people with the basic scientific skills necessary to improve the quality of life for hundreds of thousands – if not millions – of people," Zwerling said. "Not only is it the ultimate fulfillment of the mission of a land-grant college, but it's also extremely gratifying to know that the quality of life for people from Seattle to Camden has been made better because of the noise center."

Zwerling has bachelor's and master's degrees in microbiology from the University of Georgia and is a Ph.D. candidate in environmental sciences from Rutgers. He first came to the Rutgers Department of Environmental Sciences to work on a composting project and, when the grant concluded, asked the department chairman for a new assignment.

“He asked me to teach this ‘noise stuff.’ At the time, I didn’t understand the importance of the issue. Then I received phone calls about people whose lives had been destroyed because of their proximity to unregulated noise. I’ve seen marriages destroyed and jobs lost due to noise-induced stress. I’ve been called regarding altercations and looked into the crying eyes of many people whose lives have been completely disrupted. I realized I could make a difference in people’s lives, and as a former environmental activist, I find this remarkably fulfilling,” Zwerling said.

Zwerling’s microbiology training comes into play when he discusses the harmful impact of too-loud noises, which include hearing loss and other physiological, chemical, and biological changes. “You can show increased levels of stress hormones – catecholamines and cortisol – in the blood, saliva, and urine of people exposed to noise,” he said. “It’s not just a case of people being driven crazy, but a whole cascade of negative impacts.”

RNTAC and other noise centers nationwide were established in the 1970s by the federal EPA when government scientists began to recognize noise pollution as a serious problem. But in 1981, the Reagan Administration concluded that noise issues should be handled at the state or local government level and phased out federal funding. The New Jersey Department of Environmental Protection (NJDEP) filled the gap for RNTAC until the early 1990s; when the state pulled its funding, Zwerling decided to see if the Rutgers center could be self-supporting by raising course tuition to a “realistic” level and offering courses to other states.

NJDEP requires training for all local noise enforcement officers and now has a contract with RNTAC to offer training to county health departments. Noise enforcement officers from New Jersey agencies must be certified in a three-day course from Rutgers; every two years, they take a one-day recertification course. So, if a defense attorney for a noisy bar, for example, contends that the officer was merely measuring nearby highway noise, the Rutgers-trained officer can show that she measured the “total noise” (the bar plus the highway), then took a measurement of the highway alone, and calculated the sound level of the bar itself. Measurements are usually done with a hand-held sound level meter.

The Rutgers certification has been recognized in jurisdictions across the country from Hawaii to Rhode Island, Georgia to Alaska, and internationally from Vancouver to Barbados, Zwerling said. Last year, he traveled to Jacksonville, Florida, to train 10 employees of the city’s environmental quality division.

“He’s an excellent trainer,” said Rose Baker, the city’s environmental specialist in charge of noise enforcement. “We have a lot of commercial activity, and our cases are complaint-generated – for example, when a citizen’s quality of life is impacted by construction, Dumpster collection, music, or various business hours.” The state of Florida does not require the certification, but Jacksonville employees take the Rutgers course every three years because “we feel that it adds to our credibility,” Baker said.

Recently, the Rutgers center received a three-year, \$300,000 federal EPA grant to conduct an analysis of noise from freight trains that idle for two to three days on tracks behind the homes in a Bergen County town. The trains find it convenient to idle there while waiting for lines to clear because the town has no at-grade crossings. One resident told the local newspaper that the noise made her feel “like I’m at Grand Central Station.”

The study will help determine if a special local condition exists that would warrant an exemption from the federal pre-emption against local regulation of train noise that is stricter than the federal standard. Zwerling has noted a change in the pattern of idling through the course of the study. For one thing, he said, when the railroad employees spot the Rutgers researchers, they occasionally turn off their locomotives and idle in designated areas away from homes. Although this behavior biases the collection of data for the study, Zwerling said, some residents have noted the reduction in idling, and are appreciative.