

## CITY OF NEWARK DELAWARE

### SPECIAL COUNCIL MEETING MINUTES

September 15, 2014

Those present at 6:00 p.m.:

Presiding: Mayor Polly Sierer  
District 1, Mark Morehead  
District 2, Todd Ruckle  
District 3, Rob Gifford  
District 4, Margrit Hadden  
District 5, Luke Chapman  
District 6, A. Stuart Markham (Arrived at 6:10 p.m.)

Staff Members: City Secretary Renee Bensley  
Deputy City Manager Andrew Haines  
Chief Paul Tiernan  
Code Enforcement Supervisor Steve Wilson

Guest Presenter: Valentino DeRocilli, Compliance Environmental

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1. The special Council meeting began at 6:05 p.m. in the Council chamber.
  2. Ms. Sierer gave an overview of the format of the meeting for the evening and asked Mr. Haines to introduce the speaker for the meeting. Mr. Haines gave a brief overview of the genesis of the meeting and introduced Mr. DeRocilli of Compliance Environmental.
  3. Mr. DeRocilli gave background on himself and Compliance Environmental. He then reviewed a presentation on community and environmental noise basics including the parts of sound (sound volume/loudness, sound pressure and energy/acoustical power); the mechanics of sound transmission and reception; the logarithmic decibel scale; the components of sound, tones and pitch; hearing, infrasound and ultrasound ranges; examples of the decibel levels of various sounds; the impact of multiple sources of noise on the overall noise level; the effect of distance and physical obstacles on noise levels; types of noise and their effects on the community; noise measurement and modeling methods, equipment and limitations; the effects of sound pressure and sound power; factors to consider in noise regulation; permanent versus temporary noise generators; goals of environmental noise protection, including protecting against annoying noise intrusions, controlling increasing noise levels, and preventing excessive and unnecessary noise levels; methods used to regulate noise, including legislating noise emission limits and limits from various types of equipment, regulating the time of use of certain types of loud equipment, creating a permit process for restricted noise, and having a permit approval process that considers noise.
  4. Ms. Sierer opened the floor to questions from members of Council. There were no questions, so Ms. Sierer closed the floor to questions and asked Mr. DeRocilli to continue.
  5. Mr. DeRocilli demonstrated various levels and types of noise for Council with active sound meters to measure the decibel levels on several scales.

Mr. Chapman asked if the measurements being shown were measuring sound pressure and power together. Mr. DeRocilli stated that only sound pressure was being measured. Mr. Chapman asked if there was an instrument that would measure sound power. Mr. DeRocilli stated that sound power calculations would be needed and that the only way to measure sound power is in a closed laboratory area where there are no other sound influences. Mr. Chapman used the example of a radio and a rock band and asked if there would be a perceived difference in sound at the same decibel level. Mr. DeRocilli

stated the sound levels would be the same, but the sound power of the rock band would be much greater which means it is going to influence its surroundings at a much higher level than the radio. Mr. Chapman asked if power cannot be measured, how would Council be able to legislate to take that into account. Mr. DeRocilli said Council would not be able to legislate power levels, but Council could require someone who wanted to use a new piece of equipment to show what the effect of that equipment might be, regardless of other environmental factors, because the sound power would not change. Sound power is used in modeling. The City would need to consider the data given and look at whether it is a measurement of a point in time or whether it is a longer term value of what is being added.

Ms. Hadden asked how to measure a lack of sound to maintain an existing sound value without targeting an existing sound for a baseline measurement. Mr. DeRocilli said that multiple sources of sound are being measured at any given time, but that baseline measurements change depending on time of day and other factors. Ms. Hadden asked what length of time measurements would have to be taken to get a reliable baseline. Mr. DeRocilli stated that a 24-hour day/night average over all four seasons would be needed to account for variances.

Mr. Markham asked if Council was looking for a way to determine if a change in sound has occurred within a neighborhood that is detrimental and if changes in sound affect the quality of life. Mr. DeRocilli stated that would require establishing quality of life issues in a tangible way and would need to be considered in the measurement design. Mr. Markham stated that there were issues surrounding health and quality of life and that Council is trying to determine if there is an issue, how big an issue, how to enforce changes and how things may change if the existing ordinance is changed. Mr. DeRocilli stated there is no historical data and the existing ordinance has trigger levels. Mr. Markham stated that enforcement information is available. Mr. DeRocilli stated that could be analyzed as a place to start and could be part of the design.

Mr. Gifford reviewed the history of the noise conversation in relationship to the previously proposed power generation facility and stated that the concern regarding the existing noise ordinance is that it seems to be targeted more towards loud parties than toward regulating industrial noise and that he is looking for suggestions and best practices. Mr. DeRocilli stated that the state, counties and municipalities all have different takes on noise regulation and are related to numbers between source and receptors for various levels of noise regulations. Mr. Gifford stated that the proximity of residential areas to industrial areas was part of the issue and that the City was looking for feedback on the existing noise ordinance to determine if changes need to be made. Mr. DeRocilli pointed out that Council could look at the process being used to approve applications to evaluate the effect of noise. Mr. Gifford referenced the acoustician hired by residents and spoke about the results and the City wanting to understand the effects on all areas of the City if the noise ordinance was changed. Mr. DeRocilli recommended looking at data, at how Newark's ordinance lines up with other equivalent municipalities and whether changes being considered would be fair to all in the City. He emphasized the importance of the process in making any decisions on changes, the measures that could be taken by projects to reduce sound impacts and the impact of the surrounding environment on the effects of sound generated.

Mr. Markham stated that the City should look at a three-pronged approach: enforcement, incorporation into the permitting approval process, and required methods for reducing noise. Mr. DeRocilli agreed, spoke about the effects and perception of increased sound levels and considerations in measuring ambient sound.

Mr. Morehead raised the issue of frequency analyzers and which frequencies are causing potential issues. Mr. DeRocilli responded that frequency response drives the number depending on how it is weighted. Mr. Morehead asked if that was in modeling or actual measurement. Mr. DeRocilli stated it was actual measurement. Mr. Morehead asked if it were possible to do a study, introduce the new noise and pick the noise out based on frequency to determine the effect. Mr. DeRocilli stated that since noise is a composite, that type of study may not be useful because we may want to regulate level and source. Mr. Morehead asked about the current code reference to third octave. Mr.

DeRocilli stated that is a measure on the instrumentation and did not find it very useful. Mr. Morehead asked if Mr. DeRocilli recommended dropping the third octave reference. Mr. DeRocilli stated he would look at that and at the reference to a 100 dB limit as that is pretty loud.

Mr. Gifford asked if there were other areas in the code that Mr. DeRocilli recommended changing. Mr. DeRocilli suggested modernizing the City's code and considering the State code when looking at updates, however, he did not have a comprehensive list of specific recommendations. Mr. Gifford asked what the benefits of the State code were. Mr. DeRocilli said that the State code is very clear and looks at three parts: generation type, who is generating the noise and at what time of day is the noise being generated. The State regulation looks at three generators (industrial, commercial and residential), how the noise generated affects each of the three types of property, and certain time restrictions. The definition of a noise disturbance is a change in 5dB, while the City's is currently 10 dB. He recommended assessing what the City is trying to achieve with any changes, figure out what the City already has, and what the City needs to reach its end goals. Mr. DeRocilli and Council members discussed the sound levels being measured in the room, various environmental factors and their effects on sound.

Ms. Hadden indicated that her personal concern with the sound issue is that she wants to ensure that the Code accurately reflects the current values of the City, not just the values of the City at the time that the Code section was written while the Chrysler plant was still open. Mr. Gifford indicated that residents had also negotiated improvements with Chrysler in the past to lessen the effect of the plant on residents and that train noises are exempt from the City's noise ordinance.

Mr. Gifford asked Mr. Wilson if the Code is useful for enforcement purposes as written and if he would like to see any changes to make it easier to use. Mr. Wilson said that the measurement is usually if a sound can be heard at the property line, not by decibel readings, for enforcement purposes. Decibel meters are used primarily for items such as fire alarm testing. Changes to the Code may help, but can be difficult to enforce unless the right machinery is provided. Mr. Gifford stated that there seems to be no way to measure for an industrial facility or a new large generator and feels the City needs to address that, including equipment needs.

Mr. Chapman raised the topic of motorcycles and loud car exhaust and how access and mobility of instrumentation is a concern, but that even if a ticket is issued, it is not going to hold up in court. Chief Tiernan stated that is because environmental influences on outdoor sound measures make it difficult to uphold those citations in court. Mr. DeRocilli agreed with Chief Tiernan and cited other examples. Mr. Chapman stated that his concern is if the ordinance is not enforceable, why the City would change it. Mr. Gifford stated that his target was more toward stationary sources instead of moving sources. Mr. DeRocilli stated that the intervals above the value are important as smaller increases are not as noticeable as larger increases and are more difficult to enforce. Ms. Hadden noted that equipment specification often include dB values, which Mr. DeRocilli said would be sound power values. Mr. DeRocilli said that noise attenuation options could also be considered.

Mr. Morehead asked about Mr. DeRocilli's experience in crafting legislation related to prohibiting the use of air brakes on large trucks. Mr. DeRocilli did not have experience specific to writing an ordinance on the topic, but had worked on a project showing the effect of truck noise on residences to the State to show that there was an issue. The more effective means to address that may be to prohibit the use of air brakes instead of assigning a dB measurement to it. Mr. Morehead asked if Mr. DeRocilli could help Council determine a path forward and Mr. DeRocilli responded that he could, but would need to know what Council's goals are and what information Council has at this point. Mr. Morehead stated that Council does not have data, only their perceptions. Mr. DeRocilli said that there are some modeling methods to help figure out where the community should be and that measurements could be taken to compare the model with where the City actually is. A complete footprint of the City would be very expensive and not very useful, but modeling in association with a mini-study may be more effective. Some of the

conditional measurements are already in the Code, but Council would need to see if additional conditions should be added.

Mr. Markham stated that modeling may be difficult in parts of the City due to being surrounded by parts of the County that are under different restrictions. Mr. Morehead stated that he is in the same situation bordering the County. Mr. Chapman stated there is only so much Council can do as a legislative body and that any ordinance changes Council considers needs to include possible requirements for new sound sources, i.e. sound studies for new development, and the types of development that would require a sound study be considered so as not to create too many bureaucratic hoops that would be a barrier to new positive growth in Newark. Mr. DeRocilli stated that the numbers and ordinance needs to be fair and that the applicants should be given the opportunity to prove that what they want to do is not going to create a noise disturbance and could be required to submit measurements to prove that the initial studies submitted were accurate and that a disturbance is not being created after a project is operating. Sound consultants will tend to be conservative and work very closely with the equipment manufacturers to ensure that the projections being given are accurate. Mr. Chapman stated that the Council considerations should be the numbers measured, the differences in increase jumps and the definition of a noise disturbance. A noise disturbance could potentially be within decibel limits, but the type or condition of the noise could break the ordinance. Mr. DeRocilli agreed with that assessment.

Ms. Sierer asked for a timeframe necessary for modeling a city such as Newark. Mr. DeRocilli stated that a fingerprint of the City would be a combination of modeling and well-placed measuring at different times of the day and through the different seasons (including when the University is in session), so a comprehensive evaluation would need to be over all four seasons. The alternative would be to see what the City has and to fill in places where the City is weak. Council also needs to consider how finite and complex they want the ordinance to be and how it will affect all areas of the City.

Mr. Chapman asked for a ballpark cost. Mr. DeRocilli stated that for a complete comprehensive study, it would cost \$30,000 to \$50,000 or more, and for a more targeted study, it would be more in the \$10,000 to \$20,000 range depending on what the City is doing.

**6. Council opened the floor to public comment.**

John Morgan, District 1, spoke about the noise study he distributed to Council and expressed his belief that the City should focus on noise sources that are within its control and not to let train noise inflate the allowable noise level in the City. He stated that he felt money spent on a noise study would be worthwhile and that the City needed a more robust permitting process, including a permitting fee for a noise study to be completed, which would not be a financial burden for a large scale project.

As there were no more public comments, the discussion was returned to the table.

**7.** Mr. Gifford asked if there was any practical advice surrounding noise regulation for small engines, i.e. lawnmowers. Mr. DeRocilli stated that the best restrictions for that situation are based on times of day that the activity is permitted.

**8. Meeting adjourned at 8:50 p.m.**

Renee K. Bensley  
Director of Legislative Services  
City Secretary