

# New York City's Construction Noise Regulation



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# Developers



## *New York City Department of Environmental Protection*

- 6,000 staff
- Oversees services for 8 million residents
- Air, water, noise, hazmat pollution
- [www.NYC.gov/dep](http://www.NYC.gov/dep)



## *Parsons Brinckerhoff (PB)*

- Worldwide Engineering Firm
- Transportation and Infrastructure
- Nearly 125 years old; 55,000 staff
- Boston's Big Dig, FHWA RCNM
- [www.PBworld.com](http://www.PBworld.com)

# NYC's 311 Complaint Hotline

Up to 5000 complaints per month

*"The city that never sleeps."*





Text by Popular Science Monthly

*The truck and the motor and  
trolley car and the elevated train*

*They make the weary city street  
reverberate with pain. . . .*

—JOYCE KILMER

# CITY NOISE

The Report of the Commission Appointed by Dr.  
Shirley W. Wynne, Commissioner of Health,  
to Study Noise in New York City and to  
Develop Means of Abating It.

*Edited by*

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NOISE ABATEMENT COMMISSION  
Department of Health, City of New York  
1930

# Initiative Announcement

First update of NY City's Noise Code in 30 years



~ Mayor Michael Bloomberg, Oct 2002

*"Operation Silent Night aims to effectively fight and control the loud, excessive noise that plagues too many neighborhoods throughout the five boroughs. This coordinated, multi-agency initiative will specifically target those locations where noise adversely affects our everyday lives so New Yorkers may live, work, and enjoy the City in peace."*

# Team Approach & Consensus Building

2 year process

NYC DEP coordinated with the following:

- State/City/Local Authorities
- Transportation Agencies
- Construction Contractors/Unions/Utilities
- Private Business Interests



*League of the Hard of Hearing  
Building Owners & Managers  
Nightlife Association  
Heavy Equipment Contractors  
Affordable Housing  
Labor Unions  
Empire City Subway  
Dept of Design & Construction  
Dept of Buildings  
Dept of Consumer Affairs  
Dept of City Planning*

*Real Estate Board  
General Contractors Association  
Restaurant Association  
Licensed Plumbers  
Small Home Builders  
Keyspan, Verizon, Con Ed  
Mr. Softie Ice Cream  
Dept of Transportation  
Dept of Health & Mental Hygiene  
Dept of Sanitation  
Small Business Services*

# NYC DEP Strategy



## *Proactive*

- Proactive Avoidance of Noise
- Noise Mitigation Plans
- Technical Assistance Available
- Product & Vendor Guidance Sheet



## *Reactive*

- Reactive Enforcement Ability
- Noise Compliance Readings (FWHA RCNM)
- Fines / Possible Stop Work Orders

# New Rule Requirements

Effective July 2007

- Noise Mitigation Plans
- Normal Work Hours: 7:00 AM to 6:00 PM
- Mitigation for Particularly Noisy Devices
- Equipment Noise Emission Limits (FHWA RCNM)
- Mufflers and Silencers
- Enclosures for Stationary Equipment
- Quieter-type Backup Alarms
- Noise Barriers and/or Curtain Systems
- Laborer Training Program
- Public Outreach Program



# Top 10 Benefits for Laborers

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1. Noise training for workers
2. Required noise mitigation plans
3. List of suggested quieter tools
4. Equipment noise emission limits (dBA  $L_{max}@50$  ft)
5. Noise barriers proximal to sources
6. Jackhammer mufflers
7. Quieter backup alarms
8. Enclose stationary loud devices
9. Sound absorptive barrier liners
10. Source noise avoidance requirements

# Example Laborer Benefits



## Zo-Air Jackhammer Noise Muffler

Reduces emissions by 7 to 9 dBA



## SoundSeal Absorptive Curtains

Required inside noise barriers

Reduces reverberant noise on-site

# Product & Vendor Guidance Sheet

• Caterpillar	246B, 226B
<b>DUMP TRUCKS</b>	
• John Deere	250C, 400C
<b>ROLLERS</b>	
• Multiquip	AR20-2
<b>CRANES</b>	
• Link-Belt	218-HSL
• American	5299
• Bucyrus Erie	30B
<b>GENERATORS</b>	
• Multiquip	GA29R, GA36HA
• Atlas	VSS-125Dd, VSS-170Dd
<b>STREET SWEEPERS</b>	
• Elgin	GeoVac
• Schwarze	A-7000

## ACOUSTICAL WINDOWS

• Harvey Industries	Acoustical Windows
• Peerless Products	Acoustical Windows
• Acoustic Standards	Quiet Window
• Soundproof Windows	Soundproof Windows

## WHITE NOISE MACHINES

• Marpac	Sound Screen
• Speech Privacy Systems	Sonet System

## PILE DRIVERS

• Ken-Jet	Still Worker
• Giken	Silent Piler

## DOZERS

• John Deere	450H, 550H
• Caterpillar	D6R III

## LOADERS

• Volvo	L50E
• John Deere	444J
• Caterpillar	950

## GRADERS

• Caterpillar	14H, 12E, 12F, 140
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## SCAPERS

• Caterpillar	613
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## BACKHOES

• Caterpillar	420D, 416D
• John Deere	410G
• Case	680C

## EXCAVATORS

• John Deere	35D
• Caterpillar	307C

## TRACTORS

• John Deere	210LE
• Caterpillar	621G

## HOE RAMS

• Chicago Pneumatic	CP 100, CP 400
• Allied	Hammer Head
• Allied-Rammer	City Series

## SKID STEERS

## Construction Noise Control Products and Vendor Guidance Sheet

23 March 2007

Distributed by:  
New York City Department  
Of Environmental Protection

The following is intended to provide guidance to construction contractors with respect to finding and selecting suitable noise control products. These products and vendors may be helpful to contractors for achieving compliance with the New York City Noise Regulations. These items are provided only as suggestions for contractors to consider and should not be construed as an official endorsement of any product and/or vendor by the City of New York. Contractors are free to choose other products/vendors that meet the requirements of such Code. This sheet will be updated from time to time as new noise control technologies gain acceptance.

### BACKUP ALARMS

• Preco Electronics	200 Series, 45 Series, 6000 Series	<a href="http://www.preco.com">www.preco.com</a>
• Ecco Group	Smart Alarms, 500 Series, 700 Series	<a href="http://www.eccolink.com">www.eccolink.com</a>
• Grote Industries	Model 73040	<a href="http://www.grote.com">www.grote.com</a>
• Brigade Electronics	BBS-TEK Series	<a href="http://www.lbs-tek.com">www.lbs-tek.com</a>

### JACKHAMMERS

• Better World	Gentle Jack	<a href="http://www.bwanetwork.com">www.bwanetwork.com</a>
• Atlas Copco	TEX PE Series	<a href="http://www.atlascopco.com">www.atlascopco.com</a>
• Chicago Pneumatic	CP 1240-S	<a href="http://www.cp.com">www.cp.com</a>
• Makita	Makita HM1810	<a href="http://www.makita.com">www.makita.com</a>

### VACUUM EXCAVATORS (VAC-TRUCKS)

• Guzzler	LR ACE	<a href="http://www.guzzler.com">www.guzzler.com</a>
• GapVax	HV Series	<a href="http://www.gapvax.com">www.gapvax.com</a>

### NOISE BARRIERS

• Carsonite	Sound Barrier	<a href="http://www.carsonite.com">www.carsonite.com</a>
• Sound Fighter	LSE Sound Barrier	<a href="http://www.soundfighter.com">www.soundfighter.com</a>
• Kinetics	Noise Block	<a href="http://www.kineticsnoise.com">www.kineticsnoise.com</a>
• one Inch plywood is rated at 30 STC.		

### NOISE CURTAINS

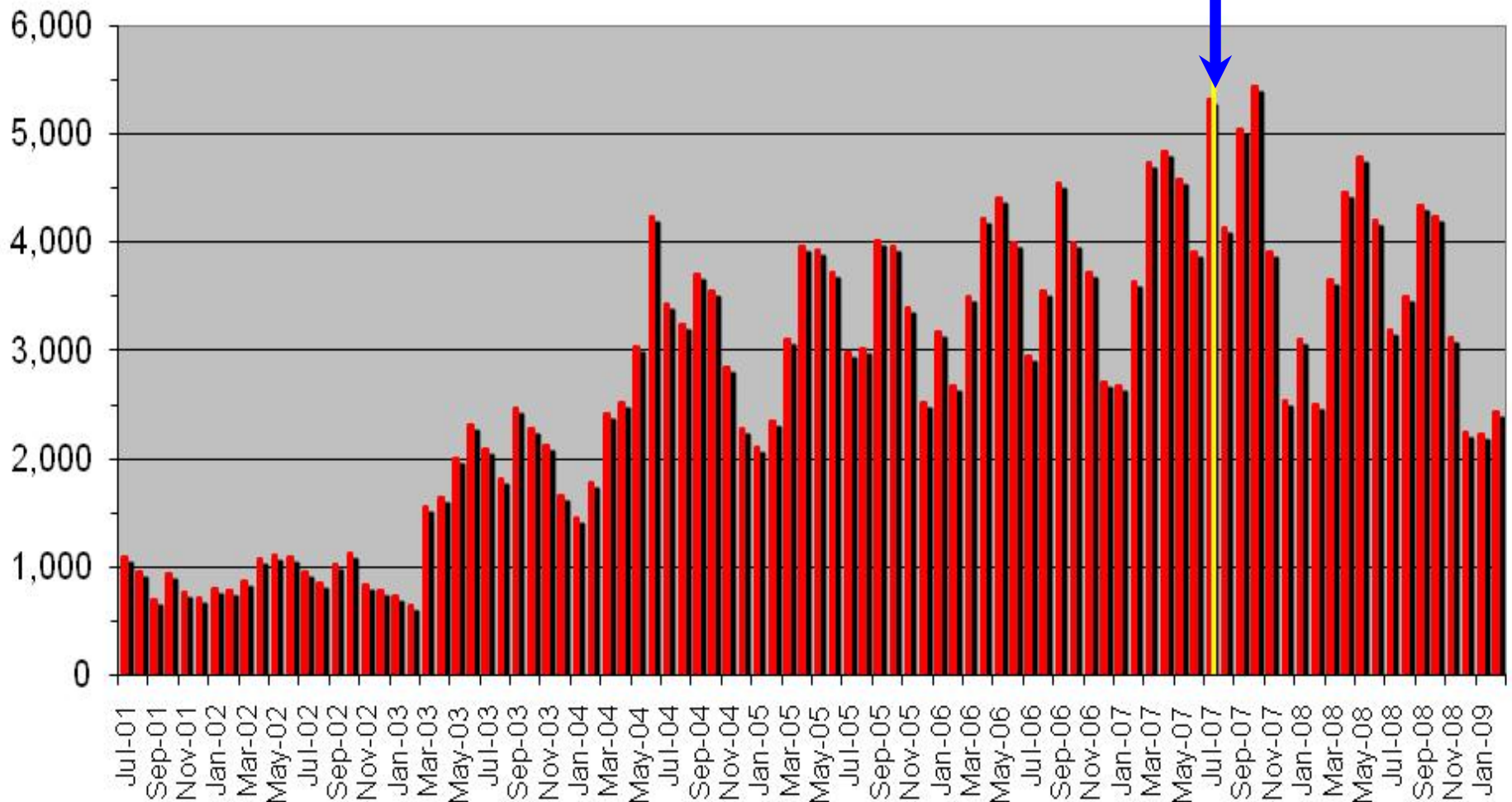
• Sound Seal	BBC-13-2	<a href="http://www.soundseal.com">www.soundseal.com</a>
• Illbruck Acoustic	SONEX Curtain	<a href="http://www.illbruck-sonex.com">www.illbruck-sonex.com</a>
• McGill AirSilence	Fibersorb Curtains	<a href="http://www.mcgillairsilence.com">www.mcgillairsilence.com</a>

### SILENCERS & MUFFLERS

• Universal Silencers	Silencers	<a href="http://www.universal-silencer.com">www.universal-silencer.com</a>
• Burgess Manning	Silencers	<a href="http://www.burgessmanning.com">www.burgessmanning.com</a>

# Complaint Effects: Post Implementation

NYC DEP 311 Noise Complaints  
Per Month, Jul-01 through Feb-09



# Industry and Public Reaction



- ✓ Winner - 2010 NIOSH/NHCA Safe-In-Sound Award
- ✓ Winner - 2009 ACEC Silver Award
- ✓ Hundreds of U.S. articles
- ✓ International articles; Britain, India, Russia, China
- ✓ Television, Radio, Internet press
- ✓ Trade Association interest



# Lessons Learned

- Construction noise can be regulated
- Requires early legislative cooperation
- Requires dialog and consensus building
- Must be technically correct & defensible
- Proactive avoidance with reactive ability
- Benefits to community and laborers
- Rules have not hindered construction
- Nationwide interest



# Future Directions

- Supportive enforcement and outreach
- Advisory Committee can change Rules
- Coordinate with equipment manufacturers
- Update the Product & Vendor Sheet
- Continue to share NYC's experiences

