

# **Lead & Kids: Why are 30,000 NYC Children Contaminated?**



A Report by  
**Mark Green**  
Public Advocate for the  
City of New York

February 2, 1998

## **THE PUBLIC ADVOCATE FOR THE CITY OF NEW YORK**

The Public Advocate, first in line of succession to the Mayor, is a citywide elected official responsible for answering constituents' complaints about municipal government. Serving a **four-**year term, the Public Advocate presides over the City Council, introduces legislation, and holds hearings. The Public Advocate also conducts in-depth research and investigations on public policy issues affecting New Yorkers, proposes solutions to ineffective government practices, and works to make agencies more responsive to the needs of City residents. Mark Green, the Commissioner of Consumer **Affairs** under Mayor David Dinkins, was sworn in as the first Public Advocate in January 1994.

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City of New York

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This report was prepared pursuant to New York City Charter § 24(f), which, among other provisions, empowers the Public Advocate to "review complaints of a recurring and multiborough or city-wide nature relating to services and programs, and make proposals to improve the city's response to such complaints."

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## EXECUTIVE SUMMARY

Lead is a poisonous heavy metal that is found in old paint, old pipes, and in some consumer products. When lead is ingested or inhaled, it can build up in blood, bone and soft tissue and can damage the brain, the kidneys, the central nervous system and blood-forming organs. For reasons explained in this report, it is particularly hazardous to very young children.

Discussions and negotiations have been underway on the need for new City Council legislation to stop the poisoning of NYC children by lead-based paint. The existing law, Local Law 1 of 1982, is interpreted by the courts to require removal of all lead-based paint from the walls, ceilings, windows and doors inside a multiple dwelling apartment in which a child under age seven resides. Private landlords have objected to the cost of compliance. Because the City itself is a landlord and subject to liability for lead-poisoning of children as a result of any failure to abate lead-based paint in apartments under its ownership, it has an inherent conflict of interest in enforcing the law and, not surprisingly, has contested certain interpretations of the law in court. In the meantime, children continue to be exposed to lead-based paint hazards because of inadequate maintenance by landlords and poor enforcement by the City.

While any lead-based paint in an apartment can become a hazard if it begins to peel, chip, or otherwise generate dust, the New York City Coalition to End Lead Poisoning ("NYCCELP")<sup>1</sup> has been willing to agree to a restriction of the legal requirement for preventive lead abatement so that it addresses only immediate or imminent lead-based paint hazards **if** that modification is coupled with strengthened inspection and enforcement requirements. These measures would include regular landlord inspections, increased inspections by the appropriate City agency and more effective enforcement action. Such an approach is embodied in a City Council bill authored by City Councilmember Stanley Michels and co-sponsored by Mark Green and 32 City Councilmembers which was labeled Int. 956 in 1997 and known as the "Childhood Lead Poisoning Prevention Bill."

Some landlord lobbying organizations continue to raise objections to this major compromise by health advocates. In the course of the continued discussions, several important questions have been raised. The most fundamental questions are:

- What is the extent of childhood lead poisoning in New York City?
- What is the impact of this poisoning?
- Is peeling paint the primary cause of childhood lead poisoning in New York City?
- Is it reasonable from a cost perspective to require landlords to make apartments occupied by children under six years old "lead safe"?
- Under what conditions is a "lead safe" apartment safe enough?

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<sup>1</sup>NYCCELP is a network of organizations and individuals working to reduce lead poisoning.

To examine these questions, the Office of the Public Advocate reviewed documents from the City Department of Health ("DOH") and the State DOH, the U.S. Bureau of the Census Housing and Vacancy Survey of 1996, the Department of Housing Preservation and Development ("HPD"), and Department of Environmental Protection ("DEP"). We also consulted medical and technical journal articles, interviewed medical and technical experts as well as safe housing advocates, and met with parents of lead poisoned children. To address the cost question, the Office of the Public Advocate worked with the Pratt Planning and Architectural Collaborative to develop a cost comparison table for lead abatement work in a sample two-bedroom apartment in a multiple dwelling. This research revealed the following:

**Lead poisoning is much more widespread than is commonly understood.**

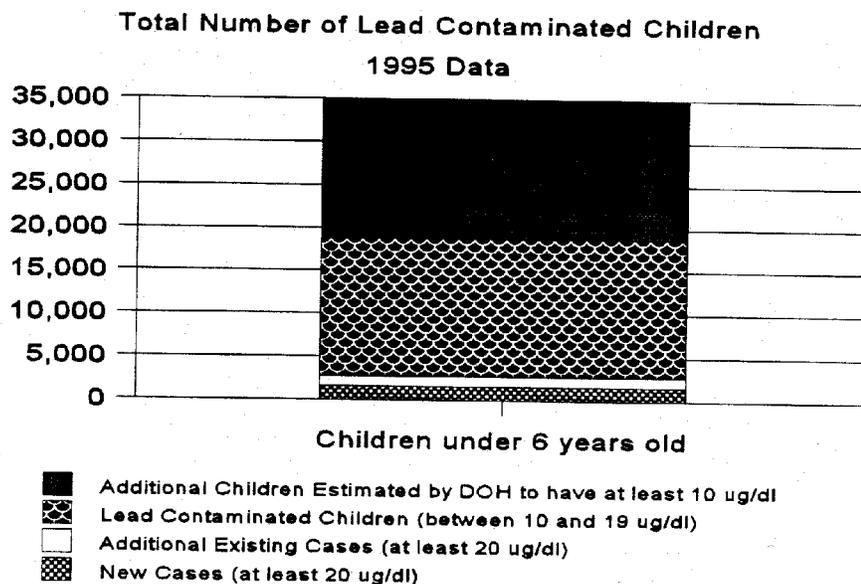
- While City documents usually state only the number of *new* lead poisoning cases per year, which is useful to compare one year with another, the actual number of existing lead poisoning cases is much higher. In 1995 -- the most recent year in which complete statistics are available -- the number of *new* lead poisoning cases in the City for children under age six was 1,580, but the total number of NYC children who were *existing* lead poisoning cases that year was 2,727 -- or 1.7 times higher.
- City DOH uses the term "lead poisoning case" to refer to instances in which it must inspect a child's dwelling and take action against lead hazards, which is required when a child has 20 micrograms per deciliter (" $\mu\text{g}/\text{dl}$ ")<sup>2</sup> or more of lead in the blood, a measurement known as the "blood lead level." But DOH regulations define the reportable disease of lead poisoning to occur at blood lead levels not of 20 micrograms but at or above 10 micrograms. The Federal Centers for Disease Control ("CDC") sets the "action level" for lead at 10  $\mu\text{g}/\text{dl}$ . No safe threshold of exposure has been established regarding the effect of lead on intelligence. Therefore, information on the number of children with blood lead levels at or above 20  $\mu\text{g}/\text{dl}$  and also at or above 10  $\mu\text{g}/\text{dl}$  is necessary to describe the health problem of lead exposure in New York City.

While the number of lead poisoning cases measured at or above 20  $\mu\text{g}/\text{dl}$  in 1995 was 2,727, the number of NYC children under age six with blood lead levels measured at or above 10  $\mu\text{g}/\text{dl}$  or more during this same year was 18,728 -- nearly seven times higher. Thus, the total number of NYC children under age six documented to have elevated blood lead levels is more than eleven times higher than the number of new "lead poisoning cases" usually revealed by the City.

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<sup>2</sup>A microgram is a millionth of a gram, and a deciliter is a tenth of a liter (or, 3.4 fluid ounces).

- Since only about half of the children in the City are screened for lead, City DOH recently estimated that more than 35,000 children in the City had blood lead levels of 10 µg/dl or higher in 1995. While DOH intervention efforts and turnover in housing stock are helping to reduce these exposures, year by year, the current rate of decline in childhood lead poisoning is not acceptable and may even be slowing down. Based on DOH projections, the Office of the Public Advocate estimates that at least 30,000 children in the City reasonably can be expected to have blood-lead levels of 10 µg/dl or higher in Fiscal Year 1998.
- Even this may be an underestimate. Many of the children in the City who are lead poisoned are the same children who have poor access to health care -- minority, low income children. It is possible that a significant number of lead poisoned children are never identified because they do not have primary health care providers and thus are not being tested for lead. In particular, the lead poisoning statistics for the Bronx probably are artificially low because its population has the least health insurance coverage of the five boroughs -- 27% of its residents have no health insurance whatsoever.



### **Childhood lead poisoning has a profound impact on children and their families.**

- Children who are lead poisoned may have trouble learning to talk or experience other developmental delays. They also frequently have behavioral problems that make it difficult for them to function well in a school situation. Their parents often are exhausted from the strain of caring for them. Where the parents of the lead poisoned children are not named on a lease and cannot avail themselves of tenant rights, a diagnosis of lead poisoning and subsequent necessary City intervention sometimes can lead to homelessness.
- In 1995, 163 lead-poisoned children were treated with chelation, an unpleasant medical procedure to remove lead from blood which usually is not performed unless a child has a blood lead level of 45 µg/dl or more.
- An increase of 10 µg/dl in blood lead level at age two has been associated with a drop of 5.8 points in IQ and a drop of 8.9 points in "Educational Achievement" -- even after adjusting for race, socioeconomic status, child stress, and other factors. The greatest effects were on Verbal IQ and on spelling and mathematics achievement.
- At least 81% of lead poisoned children in the City are known to be minority -- 43% African-American, 28% Latino, and 10% Asian/Pacific. Only 5% of lead-poisoned children are known to be Caucasian. The ethnicity of the remaining 14% of lead poisoned children in the City is unknown.

### **Lead-based paint in the home is the most significant source of lead contamination that is poisoning young children.**

- Lead poisoning in New York City is location specific. Over the last four years, the same eleven health districts have ranked among the twelve districts with the highest rates of new instances of lead poisoning.
- City DOH found lead hazards in 83% of the homes of children who had blood lead levels of 20 µg/dl or higher. Similarly, other counties in the State with 100 or more new cases of lead poisoning found lead hazards in a large majority of the homes inspected.
- While the correlation cannot be precise because the condition of the housing is an important factor in assessing the risks from lead-based paint, higher rates of lead poisoning generally are associated with districts that have greater amounts of housing built before lead-based paint was banned for use on interior surfaces.

- A study using "isotopic fingerprinting," which can identify different types of lead ores and products, to identify the sources of lead in homes in Baltimore found that the primary source of indoor lead dust was lead-based paint.
- While other sources of lead contamination should be addressed because they may contribute to elevated blood lead levels or cause an individual case of lead poisoning, none of them could reasonably be named the primary cause of lead poisoning in the City.

Leaded gasoline and garbage incinerators, which were environmental sources of lead dust in the past, have been eliminated. Industrial and drinking water sources have been greatly reduced. The locations of remaining industrial sources and the locations of bridges -- where paint removal activities have been a localized source of lead pollution -- do not explain the overall pattern of elevated blood lead levels in the City.

- The Consumer Product Safety Commission estimates that if a child is exposed to old paint that contains 1.5% lead (rather than new interior paint, which cannot contain more than .06% lead), and if that child ingests as little as one-tenth of a square inch of paint (approximately the amount that would fit on the tip of a pencil's eraser) daily for 15-30 days, this would be expected to cause a blood lead level above 10 µg/dl.

**It is reasonable and not unduly burdensome to require landlords to make multiple dwelling apartments lead safe.**

- Lead poisoning and uncorrected lead hazards cost the City money. The City has to pay for case management, education, medical treatment and legal expenses.

The City of New York spent \$2.2 million in fiscal year 1997 to identify and evaluate lead poisoned children, ensure that they received proper medical care and take action to stop their exposure to lead hazards. An additional \$3 million was spent by the State and \$1.3 million by the Federal government, for a total of \$6.6 million.

Over the past eight years lead paint claims settlements have cost the City approximately \$22 million. One of these settlements ranked among the ten costliest claims against the City in Fiscal Year 1996 -- in the amount of \$2.4 million for a case involving the lead poisoning of an infant.

Approximately 1,295 claims are pending against the City -- an average of 22 claims per month were filed in Fiscal Year 1996 alone. Some

of these cases are for lead poisoning that allegedly was caused by conditions in City-owned housing and some are for lead poisoning that was caused by conditions in private housing where the City allegedly failed to take aggressive action to enforce the Housing Maintenance Code to remedy the problem.

It has been estimated that 20% of children with blood lead levels above 25 µg/dl require assistance from a reading teacher, school psychologist, or other specialist for an average of three years. The cost can be even higher if the child is placed in the special education system. In Fiscal Year 1995, the New York City Board of Education spent, on average, over \$6,000 more for each high school student in the special education system.

The cost to individuals and society from lost earnings is substantial. A recent study found that each additional IQ point is associated with an estimated 3.63% gain in earnings overall, and the effect on earnings per IQ point is 1.4 times higher for females than for males. It concluded that a permanent reduction in blood lead concentrations of 1 µg/dl nationwide would produce a net present value benefit of \$1,950 per child for all children turning 6 years of age each year, for a total benefit of \$7.56 billion per year.

The costs for enforcement against lead-based paint violators and for addressing other social costs of childhood lead poisoning -- which may even include some juvenile delinquency and crimes as lead poisoned children who fail in school or have serious behavioral problems grow older -- are more difficult to quantify but very likely are substantial.

- While *full* abatement (removal of all lead-based paint) in a two bedroom apartment typically would cost approximately \$9,650, under the "lead safe" bill, a responsible landlord could repair a typical peeling lead-based paint problem in an occupied apartment for \$450 and an unusually serious peeling paint problem for \$900-\$1,500. Even upon vacancy, the further action required under the Childhood Lead Poisoning Prevention Bill would cost only \$1,500 -- about 15% of the cost of a full abatement.

- Landlords can reduce their costs of compliance with the Childhood Lead Poisoning Prevention Bill if they:
  - (a) comply with the Housing Maintenance Code requirements to repair water leaks and other underlying defects that can cause paint to peel or deteriorate;
  - (b) comply with the Housing Maintenance Code requirement to repaint occupied apartments every three years;
  - (c) inspect apartments in which a child under age six resides at least annually, as would be required under the Childhood Lead Poisoning Prevention Bill for apartments containing lead-based paint, and conduct repairs immediately;
  - (d) where appropriate and where no lead-based paint violation has been issued, take advantage of the Rent Stabilization Code's major capital or single apartment improvement allowances to replace windows and doors with non-lead materials. The code allows the landlord to recover the costs to replace windows or doors that are 25 years old or older through a reasonable rent adjustment.
  
- The requirement of taking additional action to make apartments "lead safe" upon vacancy is reasonable for landlords of rent stabilized apartments, especially in light of their recent success in Albany. Under the new law, landlords won the right to a rent increase of 20% or more upon vacancy of an apartment (even though their profits had been keeping pace with inflation). (Only 4% of rent controlled apartments contain a child under age six. Rent controlled units comprise only 4% of apartments in the City and they are converted to the rent stabilization system upon vacancy.)
  
- Financial assistance for lead abatement is available through the Federal Department of Housing and Urban Development ("HUD") to some landlords with low income tenants, in a program administered by HPD.

**A "lead safe" apartment is not safe enough without a strict and enforceable schedule for inspections at least once a year and requirements to conduct timely, careful repairs.**

- All peeling or deteriorated paint was once intact. Without regular inspections and timely, careful repairs, there is no guarantee that a harmful condition will not occur.

- HPD is responsible for conducting inspections and taking enforcement action against lead-based paint hazards, but its program is inadequate to prevent peeling and deteriorated paint conditions citywide and, under existing law, landlords are not required to conduct their own inspections of apartments annually for lead-based paint hazards.

Most of HPD's inspections of peeling or deteriorated lead-based paint are complaint driven. This means that the dwellings of many children at risk for lead poisoning are not inspected because tenants either do not know how to complain or are afraid to risk angering the landlord by making a complaint.

Even where a tenant risks the landlord's ire by making a formal complaint to the agency about peeling paint, HPD may not respond in a timely manner or it may notify the landlord about the complaint before conducting the inspection, which gives the landlord an opportunity to make an unsafe repair that could spread even more paint chips and dust around.

- Lack of specific, strict inspection and enforcement requirements gives an inappropriate amount of discretion to the City Administration. This is particularly of concern because the City is a landlord. It may be reluctant at times to hold landlords to a high standard of care because its own actions or inactions also will be measured against that standard in litigation.

Too many NYC children and their families still are experiencing the repercussions of our failure to eliminate childhood exposure to this brain toxin. It is reasonable from a cost perspective to require landlords to make their apartments "lead safe." It would not be reasonable, however, to weaken lead-based paint abatement requirements without strengthening inspection and enforcement requirements. If the City's lead-based paint standard is changed from full abatement to partial abatement, that is, from "lead free" to "lead safe," then children will be protected from lead poisoning only if strict new requirements are put in place to ensure that their lead contaminated apartments are inspected regularly and that repairs of deteriorated paint are conducted promptly and safely.

## **RECOMMENDATIONS**

- City Council should enact the Childhood Lead Poisoning Prevention Bill, including its provisions that strengthen inspection and enforcement requirements and maintain work safety standards for conducting repairs, to ensure that changing from a "lead-free" to a "lead-safe" abatement standard does not leave children unprotected from lead hazards.
- HPD should establish a written inspection and enforcement policy that (1) establishes that the agency must conduct prompt inspections of alleged lead-based paint violations without

giving landlords an opportunity to conduct unsafe repairs; and (2) clarifies the duty of inspectors to look for lead-based paint violations when conducting inspections of apartments in response to other complaints.

- The *Mayor's Management Report* and the Department of City Planning's *Annual Report on Social Indicators* should disclose not only the number of new childhood lead poisoning "cases" at 20 µg/dl and above, but also the number of new incidences of childhood blood lead levels at 10 µg/dl and the total number of children documented to be at or above that blood lead level.
- City DOH should regularly report to the City Council on its efforts to improve screening of high risk children for lead poisoning, especially its efforts to reach children who are not insured and have no primary healthcare provider.
- City DOH and HPD should provide to the City Council a current, comprehensive assessment of the costs to the City of lead poisoning.
- Funding is needed at the State and Federal level to help NYC strengthen its inspection program and to expand the existing HPD-administered program to assist landlords with low income tenants to conduct lead-based paint abatements.

## BACKGROUND

Lead is a poisonous heavy metal that is found in old paint, old pipes, and some other materials. Because it is an "element," it does not break down in the environment or in the body, nor does it lose its toxicity over time. When lead is ingested or inhaled, it can build up, or "accumulate" in blood, bone and soft tissue and can damage the brain, the kidneys, the central nervous system and blood-forming organs.

Lead poisoning is most common -- and most damaging -- in very young children because of their behavioral and physical characteristics.

- When lead-based paint begins to peel or becomes deteriorated, tiny particles fall to the floor or onto a surface such as a baseboard or windowsill. Children become exposed to lead mostly by ingestion -- they touch a surface containing lead-contaminated dust and then put their fingers in their mouths or touch something else and put that in their mouths.<sup>3</sup> This normal hand-to-mouth activity is seen mostly during the crawling and early walking stage in a child's development. A study of 205 children in the Rochester, New York area found that 25% of the children put their mouth on the window sill, 27% had been observed to eat soil, and 10% had put paint chips into their mouths, and that each of these activities was associated with higher blood lead levels.<sup>4</sup>
- Children also are more vulnerable to lead poisoning because they retain two times more of the lead that they ingest than adults.<sup>5</sup> During the period of greatest risk for lead poisoning, when children are between 9 and 18 months of age, they absorb lead at a rate that is five to ten times higher than adults.<sup>6</sup> In addition, because their bodies are

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<sup>3</sup>Testimony of City DOH Commissioner Margaret Hamburg, M.D., on Lead Poisoning Prevention Before the New York City Council Committee on Housing and Buildings, April 29, 1996, p. 2; Philip Landrigan, M.D., and Herbert Needleman, M.D., *Raising Children Toxic Free* (New York: Farrar, Straus & Giroux, 1994), p. 76.

<sup>4</sup>University of Rochester School of Medicine, *The Relation of Lead-contaminated House Dust and Blood Lead Levels Among Urban Children: Final Report* (June 1995)(hereafter, *Rochester Study*), Vol. II, at 23 and 28.

<sup>5</sup>Infants and children retain 50% of the lead that they ingest, while adults ultimately retain about 25% of the lead that they ingest. National Research Council Committee on Measuring Lead in Critical Populations, *Measuring Lead Exposure in Infants, Children and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), p. 150.

<sup>6</sup>Ellen K. Silbergeld, "Preventing Lead Poisoning in Children," *Annu Rev Public Health* 18:187-210, 191 (1997); Gillian Lockitch, "Perspectives on Lead Toxicity," *Clin Biochemistry* 26:371-72 (1993). Children around this age also are more likely than older children to be iron deficient, which could increase their

smaller, a smaller amount of ingested or inhaled lead can result in a higher concentration in a child than in an adult.

- Children around the age of two, in particular, may be especially vulnerable to lead's harmful effects because of their stage of brain development.<sup>7</sup> The development of the brain and central nervous system -- when cells develop a complex web of fibers to connect with fibers from other nerve cells -- continues after birth until at least the third year.<sup>8</sup>

Currently, instances of lead poisoning are identified by measuring the amount of lead in micrograms per deciliter (" $\mu\text{g}/\text{dl}$ ") of the individual's blood, a measurement commonly known as the "blood lead level." Under natural conditions, children should have very little, if any, lead in their blood. The level of lead in human blood during preindustrial times has been estimated to have been around  $.016 \mu\text{g}/\text{dl}$ .<sup>9</sup> Thus, while the mean blood lead level among United States children from ages one to five is estimated to be  $2.7 \mu\text{g}/\text{dl}$ ,<sup>10</sup> this does not mean that such a level is "physiologically normal." The average body burden for lead still remains several orders of magnitude higher than the human "natural background" level.<sup>11</sup> Unfortunately, if a child is exposed to old paint that contains 1.5% lead (rather than new interior paint, which cannot contain more than .06% lead), and if that child ingests as little as one-tenth of a square inch of paint (approximately the amount that would fit on the tip of a pencil's eraser) daily for 15-30 days, this would be expected to cause a blood lead level above  $10 \mu\text{g}/\text{dl}$ .<sup>12</sup>

Not surprisingly, approximately 56% of new cases of childhood lead poisoning at or above  $20 \mu\text{g}/\text{dl}$  identified in New York City occurs in children age one to less than three years. The next most common age group affected is children from three to less than six years, which make up

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absorption of lead and also make them more vulnerable to its harmful effects. H. Ruff, M. Markowitz, P. Bijur, and J. Rosen, "Relationships Among Blood Lead Levels, Iron Deficiency, and Cognitive Development in Two-Year-Old Children," *Envtl Health Perspectives* 104: 180-185, 180 (February 1996).

<sup>7</sup>The synaptic connections within the brain reach a peak at this age and then selectively are reduced. H. Ruff, M. Markowitz, P. Bijur and J. Rosen, "Relationships Among Blood Lead Levels, Iron Deficiency, and Cognitive Development in Two-Year-Old Children" *Envtl Health Perspectives* 104:180-185, 180 (February 1996).

<sup>8</sup>Landrigan and Needleman, at 6.

<sup>9</sup>Karen Florini and Ellen Silbergeld, "Getting the Lead Out," *Issues in Sci & Tech* 9:33-39, 34 (Summer 1993).

<sup>10</sup>CDC, "Update: Blood Lead Levels -- United States, 1991-1994," *Morbidity and Mortality Weekly Report* 46:141-45 (1997).

<sup>11</sup>R. Flegal and D. Smith, "Lead Levels in Preindustrial Humans," *New Engl J Med* 326: 1293-94 (1992). See also David Bellinger, cited at note 17 below.

<sup>12</sup>U.S. Consumer Product Safety Commission, *Staff Recommendations for Identifying and Controlling Lead Paint On Public Playground Equipment* (October 1, 1996), pp. 2-3. This estimate assumes that the child's body would absorb 30% of the lead in the paint that she or he ingested.

33.7% of documented cases.<sup>13</sup> The highest blood lead levels generally are found in children between nine and 18 months of age.<sup>14</sup>

Children who have absorbed lead can suffer central nervous system damage and impaired intellectual development, shortened attention spans and behavioral disorders and/or anemia and impaired metabolism of vitamin D. Much of this damage is permanent and irreversible.<sup>15</sup>

- A landmark study released in 1995 found that an increase of 10 µg/dl in blood lead level at age two was associated with a drop of 5.8 points in WISC-R full-scale IQ (Wechsler Intelligence Scale for Children-Revised) and a drop of 8.9 points in K-TEA Battery Composite (Kaufman-Test of Educational Achievement) at age ten -- even after adjusting for race, socioeconomic status, gender, birth order, maternal marital status, maternal IQ, maternal age, child stress, and changes in family residence. The association was stronger for Verbal IQ than for Performance IQ, and stronger for spelling and mathematics achievement than for reading achievement.<sup>16</sup>
- Similarly, another study found that an increase in blood lead level from 10 to 30 µg/dl -- as the average of blood lead concentrations at ages 15 months and two, three and four years old -- continued to be correlated with an adverse effect on children in later years, reducing the children's IQ from 4.4 to 5.3 points at the age of seven.<sup>17</sup>
- A long-term study found that children with a high bone lead level -- indicating cumulative lead exposure -- exhibited greater amounts of antisocial behavior and delinquency at eleven years of age. It found that young boys with high bone lead levels are more likely to steal, bully other children and even set fires than children who are not poisoned. The study results further indicated that high bone lead

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<sup>13</sup>City DOH, "New Cases of Childhood Lead Poisoning by Age, New York City 1995" (for blood lead levels greater than 20 µg/dl).

<sup>14</sup>H. Ruff, M. Markowitz, P. Bijur and J. Rosen, " Relationships Among Blood Lead Levels, Iron Deficiency, and Cognitive Development in Two-Year-Old Children" *Envtl Health Perspectives* 104:180-185, 180 (February 1996).

<sup>15</sup>U.S. Dept. of Health and Human Services, Centers for Disease Control, *Preventing Lead Poisoning in Young Children* (1991); Herbert Needleman and Philip Landrigan, *Raising Children Toxic Free* (New York: Farrar, Straus & Giroux, 1994), pp. 67-80; National Research Council Committee on Measuring Lead in Critical Populations, *Measuring Lead Exposure in Infants, Children and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), pp. 3-4.

<sup>16</sup>David Bellinger, "Lead and Neuropsychological Function in Children: Progress and Problems in Establishing brain-Behavior Relationships," in M. Tramontana, S. Hooper, eds., *Adv Child Neuropsychol* 3:12-47, 22 (1995).

<sup>17</sup>P. Baghurst, *et al.*, "Environmental Exposure to Lead and Children's Intelligence at the Age of Seven Years: The Port Pirie Cohort Study," *N Engl J of Med* 327:1279-84 (October 29, 1992).

subjects were more likely to worsen in behavior between the ages seven and 11.<sup>18</sup>

- The effects can continue into the teenage years. In one eleven-year follow-up study, researchers found a higher rate of reading disabilities, absenteeism in the final year of high school and failure to graduate from high school among those children who had had high level of lead in their teeth in 1978. Having a high tooth-lead level was associated with a sevenfold increased risk for failure to graduate.<sup>19</sup>

While the City DOH commonly uses the term "lead poisoning case" to refer to those instances in which it must inspect a child's dwelling and order abatement of lead-based paint hazards -- which is required when a child has a blood lead level of 20 µg/dl or more -- the City Health Code defines the condition of "lead poisoning" as occurring at a blood lead level of 10 µg/dl or higher.<sup>20</sup> This is in compliance with the guidelines of the Federal Centers for Disease Control ("CDC"), which reduced the "action level" for lead in children's blood in 1991 from 25 to 10 µg/dl, urging close monitoring of a child whose blood lead level is within the range of 10-14 µg/dl and further action if it rises above that level.<sup>21</sup> It also is in keeping with the Federal

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<sup>18</sup>H. Needleman, J. Riess, M. Tobin, G. Biesecker, and J. Greenhouse, "Bone Lead Levels and Delinquent Behavior," *J Am Med Assn* 275:363-69 (February 7, 1996); see Joe Nicholson, "Lead Can Turn Kids Bad, Study Says," *Daily News* (February 7, 1996).

<sup>19</sup>H. Needleman, A. Shell, D. Bellinger, A. Leviton and E. Alfred, "The Long-term Effects of Exposure to Low Doses of Lead in Childhood: an 11-year Follow-up Report," *N Engl J Med* 311:83-88 (1990); Landrigan and Needleman, at 72 and 74. New evidence associates cumulative exposure to lead in adults with high blood pressure in adults. As the body ages and exposure to lead diminishes, bone lead levels can remain elevated despite declines in blood lead levels. The measure of lead in tibia is indicative of cumulative exposure. With the recent development of "in vivo K x-ray fluorescence (KXRF)" for measuring bone lead, epidemiological studies of long-term effects of lead have become more feasible. This study correlated bone lead level with hypertension. Howard Hu, *et al.*, "The Relationship of Bone and Blood Lead to Hypertension," *J Am Med Assn* 275:1171-76 (April 17, 1996); See Denise Grady, "Unexpected Dangers Found in Low Levels of Lead," *New York Times* (April 17, 1996).

<sup>20</sup>NYC Health Code, § 11.03(a)(1997). Lead poisoning was added to the list of legally reportable diseases on June 16, 1986, and the definition of lead poisoning under this code provision was amended to include all children with blood lead levels of 10 µg/dl or higher on October 6, 1992. The City Health Code is more strict than the State Health Code, 10 N.Y.C.R.R. § 22.7, which is permissible pursuant to Public Health Law § 228 (McKinney 1990).

<sup>21</sup>At 10 to 15 micrograms, the CDC recommends close monitoring of the child. At 15 to 20 micrograms, it recommends that the child be tested again and that his parents consider cleaning up the lead in their home or changing the child's diet to help remove some of the lead. At 20 to 25 micrograms, the CDC urges that public health officials visit the child's home to test for lead and take other action as needed. U.S. Dept. of Health and Human Services, Centers for Disease Control, *Preventing Lead Poisoning in Young Children* (1991), p. 30; see "Administration Is Near Completion of a Tougher Standard on Lead: Millions More Children Are Held to Be at Risk," *New York Times* (October 6, 1991). The guideline defining toxic exposures to lead had been set at 25 µg/dl in 1985. Silbergeld, at 197. In the late 1960s, a blood lead level of 60 µg/dl was considered the upper limit of normal for children. David Bellinger, at 14. A microgram is a millionth of a gram.

Environmental Protection Agency's "Lead Strategy," issued in 1990, which outlined policies to reduce the incidence of blood lead levels above 10 µg/dl.<sup>22</sup>

The adverse health effects of lead within the range of 10-19 µg/dl are well established in scientific studies and the concern over the impact of lead at even lower blood lead levels is increasing.<sup>23</sup>

- For children who have a blood lead level between 10 and 20 µg/dl, it has been estimated that each 1 µg/dl increase in blood lead level is associated with a decrease in IQ of 1/4 to 3/10 of a point.<sup>24</sup> Dr. Herbert Needleman, a lead poisoning expert at the University of Pittsburgh Medical School, describes this amount of lead as "like a teaspoon in a swimming pool."<sup>25</sup>
- New evidence indicates that blood lead levels *lower* than 10 µg/dl are associated with lower IQ, stunted growth and behavioral disorders.<sup>26</sup> Dr. Rokho Kim of the Harvard Medical School, in addition, found a significant association between blood lead levels and decreased kidney function at levels below 10 µg/dl.<sup>27</sup>
- Moreover, the Federal CDC acknowledges that no safe threshold has been established for lead poisoning with regard to its adverse effect on intelligence.<sup>28</sup>

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<sup>22</sup>U.S.E.P.A., *Strategy for Reducing Lead Exposures* (October 3, 1990b).

<sup>23</sup>U.S. Dept. of Health and Human Services, Centers for Disease Control, *Preventing Lead Poisoning in Young Children* (1991); Herbert Needleman and Philip Landrigan, *Raising Children Toxic Free* (New York: Farrar, Straus & Giroux, 1994), pp. 67-80; National Research Council Committee on Measuring Lead in Critical Populations, *Measuring Lead Exposure in Infants, Children and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), pp. 3-4; John F. Rosen, "Adverse Health Effects of Lead at Low Exposure Levels: Trends in the Management of Childhood Lead Poisoning," *Toxicology* 97 (1995), pp. 11-17.

<sup>24</sup>Univ. of Rochester School of Medicine, *The Relation of Lead-Contaminated House Dust and Blood Lead Levels Among Urban Children: Final Report* (June 1995), Vol. II, p. 2; J. Schwartz, "Low-level Exposure and Children's IQ: A Meta-analysis and Search for a Threshold," *Envtl Res* 65:42-55 (1994).

<sup>25</sup>Jay Romano, "Taking the Measure of Lead-Paint Hazards," *New York Times* (July 15, 1997).

<sup>26</sup>National Research Council, *Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), p. 255; Bellinger, Stiles and Needleman, "Low-level Lead Exposure, Intelligence and Academic Achievement: A Long-term Follow-up Study," 90 *Pediatrics* 855-861 (1992). This was acknowledged by the Appellate Division in *Williamsburg Around the Bridge Block Assn. v. Giuliani*, 223 A.D.2d 64, 667 (1st Dep't, 1996).

<sup>27</sup>Rokho Kim, A. Rotnitzky, D. Sparrow, S. Weiss, C. Wager, H. Hu, "A Longitudinal Study of Low-level Lead Exposure and Impairment of Renal Function," *J Am Med Assn* 725:1177-81, 79 (April 17, 1996); Denise Grady, "Unexpected Dangers Found in Low Levels of Lead," *New York Times* (April 17, 1996).

<sup>28</sup>Editorial, "Health Effects of Lead at Low Exposure Levels: Expert Consensus and Rationale for Lowering the Definition of Childhood Lead Poisoning," *AJDC* 146:1278-81, 1278 (November 1992); See Centers for Disease Control, *Strategic Plan for the Elimination of Childhood Lead Poisoning* (Washington, DC: Dept. of

City DOH acknowledges that the adverse effects of lead poisoning can develop at levels of 10-20 µg/dl of blood, stating:

Concern about the adverse effects on central nervous system functioning at blood lead levels as low as 10 mcg/dl is based on a large number of epidemiologic studies, which have provided evidence of the association between low-level lead poisoning and impaired cognitive development and other deficits.<sup>29</sup>

The City Health Code requires abatement of lead-based paint hazards in the home if a child has a blood lead level of 20 µg/dl, but also grants DOH the discretionary authority to order abatement if a child has a blood lead level within the range of 15-19 µg/dl.<sup>30</sup> In addition, it grants DOH authority to order abatement of lead-based paint "in such cases as it deems essential" by such methods as it may direct "to protect the life and health of the occupants of such apartment."<sup>31</sup> Moreover, even if DOH does not issue an order for abatement of a lead-based paint hazard, the landlord of a multiple dwelling is nevertheless required to do so in any apartment containing a child six years old or younger regardless of the child's blood lead level, under the provision for lead poisoning prevention in the Housing Maintenance Code, established by Local Law 1 of 1982.

Because of the urgency of this health risk, any health care provider in New York State providing care to a child must test that child's blood lead level at the ages of one and two or else refer the child for a blood lead test.<sup>32</sup> The health care provider also must assess the risk of high dose lead exposure among children between the ages of six months and six years, and provide or refer for a blood lead test any such child found to be at high risk.<sup>33</sup> In 1992, the State Legislature required that all licensed childcare providers, nursery schools and pre-schools must obtain documentation within three months after enrollment of a child under the age of six that the child has been screened for lead. The laboratory must report every test for a New York City child both to the State DOH and to the City DOH, and the physician must give notice of any cases of elevated blood lead levels to the City DOH as well.<sup>34</sup>

When a child has a blood lead level of 20 µg/dl or greater,<sup>35</sup> City DOH must take action to prevent further lead exposure and determine if the child is obtaining proper medical supervision. DOH is required to inspect the child's residence for evidence of current lead hazards. DOH also inspects supplemental apartment units where the child spends significant

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Health and Human Services, February 1991).

<sup>29</sup>City DOH, *City Health Information* Vol. 14, No. 1 (Jan. - Mar. 1995), p. 1.

<sup>30</sup>NYC Health Code, § 173.13(d)(2)(1997). The City Health Code authorizes the imposition of fines for noncompliance with an order to abate lead paint. N.Y.C. Health Code, § 173.14(3)(1997).

<sup>31</sup>N.Y.C. Health Code, § 173.13(d)(1)(1977).

<sup>32</sup>10 N.Y.C.R.R. § 67-1.2(a)(3); see Public Health Law, § 1370-c (McKinney, 1997).

<sup>33</sup>10 N.Y.C.R.R. § 67-1.2(a)(1).

<sup>34</sup>Public Health Law, § 1370-d(1) and 1370-e (McKinney 1997); 10 N.Y.C.R.R. § 67-3.1(b).

<sup>35</sup>A microgram is a millionth of a gram, and a deciliter is a tenth of a liter (or, 3.4 fluid ounces).

amounts of time. In addition to examining lead-based paint hazards in the home, sampling of interior dust, soil and pottery is performed as needed. DOH's goal is to inspect the dwelling of a lead poisoned child within seven days of notice of an elevated blood lead level; it succeeds in doing so in 87% of cases.<sup>36</sup>

If DOH identifies a lead-based paint hazard, it issues an Order to Abate the hazard to the owner of the premises.<sup>37</sup> Existing paint is considered to be "lead-based" if it contains lead at a level of 1.0 micrograms per square centimeter (mg/cm<sup>2</sup>) or 0.5% by weight.<sup>38</sup> If the landlord fails to do so, the City Department of Housing Preservation and Development ("HPD") will do the work and place a lien against the property for reimbursement of its costs.<sup>39</sup> Unfortunately, by the time such action is taken, the child may already have suffered permanent impairment of brain functions.

Children with blood lead levels above 10 µg/dl can be found in each of the five boroughs. In only seven health districts, five of which are in Manhattan, does the documented rate of elevated blood lead levels fall below 20 cases per 1,000 children. Currently, the documented rate is above 30 in nine health districts -- seven in Brooklyn and two in Queens.<sup>40</sup>

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<sup>36</sup>The inspection is conducted by a DOH Lead Poisoning Prevention Program Public Health Sanitarian. DOH also tries to make a "case management visit" within 10 days of notice of elevated blood lead level; it achieves this goal in 83% of cases. *City DOH 1997 Grant Application to CDC*, at 23 and 59.

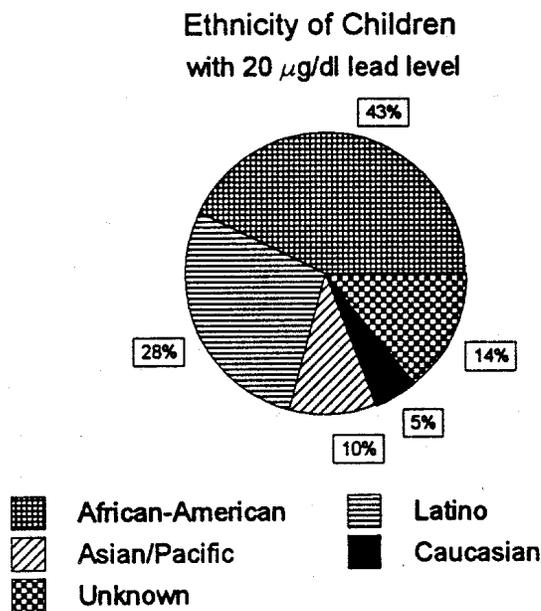
<sup>37</sup>N.Y.C. Health Code, § 173.13(d); Affidavit of Susan Klitzman, City DOH Assistant Commissioner for Environmental Risk Assessment and Communication in Opposition to Plaintiff's Motion to Vacate Statutory Stays, *New York City Coalition to End Lead Poisoning v. Rudolph Giuliani* (N.Y. Co. Index No. 42780/85, September 12, 1997), p. 4.

<sup>38</sup>42 U.S.C. § 4822(c). Congress established this standard when it enacted Title X in 1992. City DOH attempts to issue such an order to abate within 14 days of notification of an elevated blood lead level, and succeeds in doing so in 83% of cases. *City DOH Grant Application to CDC*, at 23. As noted above, new paint for interior surfaces cannot contain more than .06% lead.

<sup>39</sup>City DOH and HPD, "Request to U.S. Department of Housing and Urban Development for Grant Assistance for Lead-Based Paint Hazard Control" (July 31, 1997)(hereafter, *City DOH and HPD 1997 Grant Application to HUD*), p. II-34. See N.Y.C. Health Code, § 173.13(d)(2).

<sup>40</sup>See Appendix A.

It is a problem that affects minority children more severely than Caucasian children. At least 81% of children in the City with blood lead levels at or above 20  $\mu\text{g}/\text{dl}$ , the level requiring immediate intervention by City DOH, are known to be minority -- 43% African-American, 28% Latino, and 10% Asian/Pacific. Only 5% of lead-poisoned children are known to be Caucasian. The ethnicity of the remaining 14% of lead poisoned children in the City is unknown,<sup>41</sup> and these figures do not take into consideration the ethnicity of lead-poisoned children who have not been documented because they are not being tested.



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<sup>41</sup>City DOH, "New Cases of Lead Poisoning at Greater than 20  $\mu\text{g}/\text{dl}$  by Race/Ethnicity, New York 1995." In 1994, the prevalence of blood lead levels greater than 10  $\mu\text{g}/\text{dl}$  among non-Hispanic Blacks nationwide was 21%. J. Pirkle, D. Brody, and E. Gunter, "The Decline in Blood Lead Levels in the United States," *J Am Med Assn* 272:284-91 (1994).

## HISTORY OF LEAD POISONING PREVENTION LEGISLATION

Legislation designed to *prevent* lead poisoning has focused mostly on rental housing. The focus on rental housing is reasonable. The *Rochester Study*, which surveyed 205 children, found that 92% of the children with blood lead levels above 10 µg/dl lived in rental property.<sup>42</sup> Thus, the type of housing -- rental versus owner-occupied -- is significantly associated with children's blood lead levels.

Landlords already are required by law to maintain a safe and habitable apartment. All leased residential buildings in New York State carry a statutory warranty (based on common law) that the premises:

. . . are fit for human habitation and for the uses reasonably intended by the parties and that the occupants of such premises shall not be subjected to any conditions which would be dangerous, hazardous or detrimental to their life, health or safety.<sup>43</sup>

Consistent with this directive, the NYC Housing Maintenance Code, which applies to buildings containing three or more dwelling units, establishes certain minimum requirements that all landlords must meet whether or not lead-based paint is present. Landlords must keep the premises and plumbing in good repair (which would include repairing peeling paint and water leaks which can cause peeling paint)<sup>44</sup> and repaint occupied apartments in multiple dwellings every three years.<sup>45</sup>

Unfortunately, noncompliance with the Housing Maintenance Code is widespread and penalties too often are not an effective deterrent.<sup>46</sup> Consequently, given the special risks to public health from lead-based paint chips and lead-contaminated paint dust, City Council has recognized the importance of establishing more specific standards -- and inspection and enforcement mechanisms -- to prevent lead-based paint hazards in apartments that contain young children.

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<sup>42</sup>In contrast, only 55% of the children surveyed who had blood lead levels *below* 10 µg/dl lived in rental property. *Rochester Study*, at 29.

<sup>43</sup>Real Property Law, § 235-b(1) (McKinney 1989).

<sup>44</sup>N.Y.C. Housing Maintenance Code, §§ 27-2005(a) and 27-2026.

<sup>45</sup>NYC Housing Maintenance Code, § 27-2013(b)(2). A landlord may have to repaint an apartment more often if required by contract or other provision of law. A landlord can obtain permission to repaint less often by obtaining a determination from HPD that the paint used is exceptionally durable. Also, the tenant and landlord can, by mutual written agreement, extend the deadline for repainting by no more than two years. See N.Y.C. Housing Maintenance Code, § 27-2013(d).

<sup>46</sup>See, generally, Office of N.Y.C. Comptroller, *The New York City Department of Housing Preservation and Development's Enforcement of the Housing Maintenance Code*, Audit No. MJ95-098A (June 30, 1995).

In 1959, the City amended its Health Code to grant the City DOH discretionary authority to order removal of lead-based paint on interior surfaces in a dwelling.<sup>47</sup> In 1970, the Code was strengthened to make this agency action mandatory where a child had been lead-poisoned.<sup>48</sup> This was an important initiative because it helped to prevent further exposure of children who had already been poisoned by lead, but the Code provision was not designed to prevent children from becoming poisoned in the first place.

Then, in 1982, the City Council amended the Housing Maintenance Code again. Unlike earlier Health Code mandates, Local Law 1 of 1982 -- the prime sponsor of which was City Councilmember Stanley Michels -- was among the first municipal ordinances in the nation to take a preventive approach -- to attempt to remediate lead-based paint hazards *before* a child became poisoned. The law requires that owners of multiple dwellings (with three or more dwelling units) must remove or cover the lead-based paint on all interior walls, ceilings, doors, window sills and moldings in any apartment that contains a child six years old or younger. The law presumes that the code has been violated when inspectors find peeling paint in a multiple dwelling unit built before 1960, although the landlords can rebut this presumption by providing HPD with test results that prove the paint is not lead-based.<sup>49</sup>

Landlords and the City -- as a landlord of *in rem* and public housing units -- objected to the requirement of having to remove or cover all lead-based paint in a dwelling. The City has been unwilling to enforce the law. On December 9, 1997, a State appeals court affirmed that the City of New York and HPD should be held in civil contempt (for the second time) for repeated violation of a court order directing them to carry out their duties under Local Law 1 and elevated the case to a "class action" suit. The court stated, "The record amply demonstrates the City defendants refusal to fully comply with previous court orders directing them to issue regulations in conformance with their statutory duties under the Administrative and Housing Codes."<sup>50</sup> As

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<sup>47</sup>City Health Code § 173.13(d), which authorizes the City DOH to intervene in the case of a lead poisoned child, was adopted in 1959. The City DOH's Lead Poisoning Prevention Program was established in 1970. *City DOH and HPD 1997 Grant Application to HUD*, at 36. Federal action against lead paint did not come until more than ten years later, with passage in 1971 of the Lead-based Paint Poisoning Prevention Act, 42 U.S.C. §§ 4801-4846, which banned the use of lead-based paint in the interior of residential structures built or rehabilitated by the federal government or with federal assistance. The Consumer Product Safety Commission then banned the manufacture of paint containing more than .06% lead by weight for use on interior and exterior residential surfaces, toys and furniture in 1978.

<sup>48</sup>See Legislative history notes to N.Y.C. Health Code § 173.13 and N.Y.C. Health Services Administration and Housing and Development Administration, *Lead Poisoning Control: Project Plan* (March 6, 1997), pp. I-17 to I-19.

<sup>49</sup>N.Y.C. Admin. Code, § 27-2013(h)(1997). Courts have held that the law requires removal of all lead paint from such surfaces in any multiple dwelling where a child six years old or less resides, whether or not the child has already become poisoned by lead. See *N.Y.C. Coalition to End Lead Poisoning v. Koch*, slip op., (Sup. Ct. N.Y.Co. Aug. 2, 1990), *aff'd*, 170 A.D.2d 419 (1st Dep't, 1991)("NYCCELP II"); *N.Y.C. Coalition to End Lead Poisoning v. Koch*, 216 A.D.2d 219, 220 (1st Dep't, 1995)("NYCCELP IV"); *N.Y.C. Coalition to End Lead Poisoning v. Giuliani*, slip op. (Sup. Ct. N.Y. Co. Dec. 14, 1995), Order (May 1, 1996), *aff'd as modified*, \_\_\_ A.D.2d \_\_\_, 1997 N.Y.App. Div. LEXIS 12871 (December 9, 1997)("NYCCELP VI").

<sup>50</sup>*New York City Coalition to End Lead Poisoning v. Giuliani*, 1997 N.Y. App. Div. LEXIS 12871 (December 9, 1997). The City is appealing a different Supreme Court order, *New York City Coalition to End*

a result, landlords by and large have ignored the law and thousands of young children have remained exposed to lead-based paint hazards as a result.

While DOH's educational and intervention efforts in lead poisoning cases, combined with the gradual abatement of some of the City's worst apartments, has helped to reduce the annual number of new cases of lead poisoning citywide, these efforts have not solved the problem. Over five thousand more children in the City became lead poisoned at levels of 20 µg/dl or higher during the past three years alone.<sup>51</sup> Moreover, despite efforts of the past to change the situation, lead-based paint hazards still are commonplace in New York City housing. A recent report by the NYC Rent Guidelines Board determined that 28% of apartments in pre-1947 multiple dwellings had peeling paint or broken plaster and 24% of them had cracked interior walls or ceilings.<sup>52</sup>

Clearly, a new course of action is needed to prevent lead poisoning in New York City.

In 1993, Councilmember Stanley Michels introduced a bill that required the removal or covering of lead-based paint on specified "high-risk" surfaces. Landlords complained that the bill did not consider whether or not the building was well maintained and argued that this should be taken into account in determining whether or not the landlord should be required to remove or cover such paint. Some landlords also wanted to make it more difficult for agencies to place a lead-based paint violation and sought to reduce their responsibility for identifying lead-based paint hazards.

Recognizing the landlords' concerns but also seeing the need for effective action to protect children from lead, in 1997 Councilmember Michels introduced Int. 956,<sup>53</sup> the Childhood Lead Poisoning Prevention bill, cosponsored by Mark Green and 32 other Councilmembers. The bill does not require removal or covering of intact lead-based paint (which is not causing a lead hazard) in well-maintained buildings until vacancy or until July 1, 2005, whichever occurs first. At that time, only the friction surfaces on windows and doors, which can generate lead-contaminated dust even in a well-maintained apartment, must be abated. To help ensure that the conditions in such "lead safe" apartments do not later deteriorate and become hazardous, the bill requires landlords to inspect apartments in which a child under age six resides at least annually,

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*Lead Poisoning v. Giuliani*, 173 Misc.2d 235, 660 N.Y.S.2d 234 (S.Ct.N.Y.Co. 1997)("NYCCELP VII"), which enjoined a 1996 amendment to § 173.13(d)(2) of the NYC Health Code because it does not require the abatement of all intact lead paint from a home or apartment in the event that a child has become lead poisoned. The amendment would require abatement only of peeling lead paint and lead paint on window friction surfaces (for any lead paint that DOH considers hazardous because of its "condition, location or accessibility to children." N.Y.C. Health Code, § 173.13(d)(2).

<sup>51</sup>City DOH statistics contained in Department of City Planning, *1996 Annual Report on Social Indicators* (April 1997), p. 41.

<sup>52</sup>NYC Rent Guidelines Board, *Housing NYC: Rents, Markets & Trends '97*, p. 110-111.

<sup>53</sup>Available on the internet at [Http://leah.council.nyc.ny.us/leg97/int956.htm](http://leah.council.nyc.ny.us/leg97/int956.htm).

to identify and repair peeling paint hazards in a timely and careful manner.<sup>54</sup> It also strengthens the requirements for oversight by HPD.

Support for this bill is widespread. In 1997, health professionals, technical experts, and organizations signed a "Resolution for a Strong Childhood Lead Poisoning Prevention Act" in support of the bill.<sup>55</sup> These included:

- 40 medical doctors and 13 other technical experts and health professionals
- 7 medical and health organizations
- 13 parents and children's advocacy organizations
- 29 low income housing and tenants organizations
- 46 community, environmental, civic, religious and worker organizations

Several members of Congress, the State Legislature and other elected officials -- including Public Advocate Mark Green, whose office drafted the Resolution -- endorsed it as well.

Some advocates are concerned that Int. 956 may be too much of a compromise. There have been recommendations to strengthen the law by, for example:

- establishing as a goal the eventual elimination of all human exposure to lead-based paint hazards in New York City, not just a reduction in the number of lead poisoning incidents in children under six;
- stiffer penalties for noncompliance; and,
- eventually expand the requirement of making apartments "lead safe" to protect children six years old or older.<sup>56</sup>

While there may be good reasons to strengthen Int. 956, this report will use it as the model for presenting cost estimates to compare the responsibilities for making an apartment "lead safe" with the responsibilities of making an apartment "lead free."

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<sup>54</sup>Similar to the existing "window guards" requirement, the owner would be required to send each residential unit a notice asking whether a child under age six resides therein. Only if the tenant does not respond is the owner required to inspect the dwelling to ascertain whether a child under age six resides within. Int. 956, § 27-2056.4(d).

<sup>55</sup>See Appendix D for the Resolution and list of supporters.

<sup>56</sup>See, e.g., Letter from the Sierra Club Environmental Justice Committee to City Councilmember Stanley Michels, September 3, 1997.

## I. CHILDHOOD LEAD POISONING IN NEW YORK CITY IS MORE WIDESPREAD THAN IS COMMONLY UNDERSTOOD

Lead poisoning is much more widespread in New York City than is commonly understood. In most public documents, such as the *Mayor's Management Report* and the Department of City Planning's *Annual Report on Social Indicators*, the City only releases the number of *new* cases of lead poisoning documented by City DOH. While this is important information, it can be misleading for three reasons.

- **New vs. existing cases.** The number of *new* cases is much smaller than the number of *existing* cases. The Department of City Planning's *1996 Annual Report on Social Indicators* failed to disclose this distinction, presenting the number of new cases as simply "Lead Poisoning Cases in Children."<sup>57</sup>

This distinction is significant; the total number of children under age six in the City suffering from lead poisoning at the level requiring City DOH intervention (at or above 20 µg/dl) is more than two-thirds higher. Thus, while the number of *new* lead poisoning cases in 1995 -- the most recent year for which complete statistics are available -- was 1,580, the total number of children under age six in the City who represented *existing* "lead poisoning cases" was 2,727 -- or 1.7 times higher.<sup>58</sup>

- **Lead poisoning "case" vs. lead-contaminated child.** The City's use of the term "lead poisoning case" is limited to children whose blood lead levels are at or above 20 µg/dl, the level at which City DOH is required to take action to prevent further contamination of the child. But as noted above, the actual definition of lead poisoning under the City Health Code and the CDC "action level" for lead contamination is a blood lead level of 10 µg/dl or higher, and studies show that harmful effects of lead can occur even below this level. Therefore, information on the number of children at blood lead levels at or above 20 µg/dl and also at or above 10 µg/dl is necessary to describe the health problem of lead exposure in New York City.

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<sup>57</sup>See Department of City Planning, *1996 Annual Report on Social Indicators*, p. 41. The Department of City Planning gave the figures for fiscal years rather than calendar years, stating that there were 1,848 "cases" in Fiscal Year 1995 in children under age six. The *Mayor's Management Report: Fiscal Year 1996*, Vol. I, p. 128, gave the figure for Fiscal Year 1995 as 2,204, but did not state whether it was referring to cases of children under age six or for all children.

<sup>58</sup>For new cases, see City DOH, "New Cases of Lead Poisoning (at or greater than 20 µg/dl) Among Children 6 Months to 5 Years by Health Districts New York City - 1995" (updated 1/23/97). For prevalence figures, see City DOH, "A Non-Competitive Continuation Application for NYCDOH Provision of 1997-1998 State and Community-Based Childhood Lead Poisoning Prevention Program & Surveillance of Blood Lead Levels in Children - #H64/CCH205097-08 (March 24, 1997)(hereafter, *City DOH 1997 Grant Application to CDC*), pp. 33. Prevalence figures are not yet available for 1996. Telephone interview of Jessica Leighton, NYC Department of Health, Lead Poisoning Prevention Program, January 20, 1998. With increased screening, DOH expects to document 3,283 children with blood lead levels greater than 20 µg/dl in 1997. *City DOH 1997 Grant Application to CDC*, at 53.

While the total number of children documented to have blood lead levels at or above 20 µg/dl in 1995 was 2,727, the number of children in the City under age six with blood lead levels documented at or above 10 µg/dl during this same year was 18,728 -- nearly seven times higher. (For all children below age 18, the total is 21,158.) See Table I below. The total number of NYC children under age six who meet the federal action level for lead in blood is more than eleven times higher than the number of new "lead poisoning cases" usually revealed by the City.

- **Documented vs. undocumented exposures.** Only 50-60% of NYC children under age six are tested for lead. Since about 5.7% of children under six years of age who have received blood tests were found to have elevated blood lead levels in 1995 and over 606,000 children under age six live in New York City, City DOH estimates that in 1995, approximately 35,000 children under age six in the City had blood lead levels of 10 µg/dl or higher.<sup>59</sup> For Fiscal Year 1998, the figure may be closer to 30,000.<sup>60</sup>
- **Children screened vs. children at greatest risk.** Even the figure of 35,000 or more may be an underestimate because the children most at risk for lead poisoning have the least access to health care. Most cases of lead poisoning occur in communities where the majority of residents are minorities and have low incomes.<sup>61</sup> City DOH notes, in particular that the health districts of Jamaica East and Jamaica West in Queens are high risk neighborhoods that have poorer screening rates compared to other districts.<sup>62</sup>

Research conducted by the Public Advocate's Office earlier this year found that nearly 20% of children under the age of 18 in New York City had no health insurance coverage of any kind, private or public, in 1995. This includes approximately 10% of minority youth, or 243,000 children below age 18. In 1995, 36% of families with incomes at or up to double the poverty line -- having a total family income of \$15,141-\$30,130 in a family of four -- were uninsured. Also, 27% of families with incomes from two to four times the poverty line -- having an income of \$30,282-\$60,142 for a family of four -- were uninsured.<sup>63</sup>

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<sup>59</sup>City DOH 1997 Grant Application to CDC, at 20, 29 and 32.

<sup>60</sup>If DOH achieves a screening rate of 71%, it expects to document 21,551 children with blood lead levels above 10 µg/dl in 1998, leaving approximately 174,000 children unscreened. The unscreened children could account for an additional 8,500 children at that blood lead level, for a possible total of approximately 30,000. The prevalence rate, in this estimate, is assumed to be 4.9%, as indicated by DOH's calculations. See *City DOH 1997 Grant Application to CDC*, at 53. The prevalence rate in 1995 was 5.7%, down from 6.8% in 1994. *Id.*, at 20.

<sup>61</sup>City DOH 1997 Grant Application to HUD, at 19.

<sup>62</sup>City DOH 1997 Grant Application to CDC, at 33.

<sup>63</sup>Office of the Public Advocate, *Who Are New York City's Uninsured?* (February 1997), pp. 6-8. Half of African-American children and 60% of Latino children in New York City are insured through Medicaid and Child Health Plus. *Id.* The poverty income figures are from 1994.

Consequently, it is possible that a significant number of lead poisoned children are never identified because they do not have primary health care providers and therefore are not being tested for lead.<sup>64</sup> In particular, the lead poisoning statistics for the Bronx probably are artificially low because it has the worst health insurance problem of the five boroughs -- 27% of its residents have no health insurance whatsoever.<sup>65</sup>

**Table I**  
**Blood Lead Levels for NYC Children, 1995<sup>66</sup>**

Blood Lead Levels (µg/dl)	Children Under Six Years Old	Children under 18 Years Old
10-14	12,832	14,532
15-19	3,169	3,559
Greater than 20	2,727	3,067
Total Above 10	18,728	21,158

While the rate of lead poisoning in the City has declined over the years, the rate of that decline may be slowing down. Because of changes in screening rates, figures from 1993 and earlier cannot easily be compared with those of more recent years, but there does appear to be a drop in the rate of decline from 1994 to 1996. From 1994 to 1995, the rate of *new* incidents of children under six years of age having a blood lead level at or above 10 µg/dl dropped from 5.2% to 4.1% -- a 21% decline. From 1995 to 1996, however, the rate of new incidents dropped from 4.11% to 3.69% -- only a 10% decline.<sup>67</sup>

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<sup>64</sup>Children who do not have primary health care providers receive only episodic care in emergency rooms, where screening is less likely to occur. *City DOH 1997 Grant Application to CDC*, at 52. Through its public education efforts, the City DOH sometimes is able to refer such families to the NYC Health and Hospital Corporation or Child Health Clinics. The City has forty-two such clinics.

<sup>65</sup>*Id.*, Appendix, Chart 1.

<sup>66</sup>The total number of children under 6 years old was 343,033; the total number of children under 18 years old was 405,735. *City DOH 1997 Grant Application to CDC*, at 33.

<sup>67</sup>City DOH, "Numbers and Rates (per 100 children tested with venous tests) of new cases with Venous Blood Levels Greater than 10 µg/dl for children 6 m. to less than 6 yrs. by Borough, New York City 1993-1996." The rate in 1993 was much higher, but because reporting of all blood lead levels did not become mandatory until October 1994, the 1993 rates may be inflated. Prevalence rates of lead poisoning at 10 µg/dl dropped from 6.8% in 1994 to 5.7% in 1995. *City DOH 1997 Grant Application to CDC*, at 20.

## **II. THE EFFECTS OF CHILDHOOD LEAD POISONING CAN BE SEVERE BOTH FOR THE CHILD WHO IS POISONED AND FOR THE CHILD'S FAMILY**

As noted above, children who become lead poisoned can suffer central nervous system damage and loss of intelligence, shortened attention spans and behavioral disorders and/or anemia and impaired metabolism of vitamin D. A mere listing of the symptoms of lead poisoning, however, does not really describe the physical, emotional, and long-term effects of lead poisoning on an individual child or on the child's family.

### **A. *The Effects of Lead Poisoning (at 20 µg/dl) on a Child***

It is well-known that lead harms a child's learning ability. In some children, the impact is particularly debilitating and tragic. Assistant Deputy Advocate Suzanne Mattei met with one mother whose three-year-old child kept up a constant vocalization during the interview -- but without using any words at all. The child, who had a blood lead level of 58 µg/dl, simply made the sound, "La, la, la, la, la," for the entire time. The mother said,

It's upsetting to see the effect on his brain. He used to speak clearly, but now he cannot speak at all. He just makes sounds. It happened very slowly. I hope that no one else's child gets poisoned like this. I hope it doesn't happen to anyone else.<sup>68</sup>

Dr. John Rosen, Professor of Pediatric Medicine at the Albert Einstein School of Medicine, notes that such regression of development is a classic symptom of childhood lead poisoning and is one of the most frequent observations in such cases.<sup>69</sup>

Moreover, even when a child displays the ability to learn, the behavioral effects of lead poisoning can interfere with schooling. One study found that two to three year old boys and girls with blood lead levels greater than or equal to 15 µg/dl had more maternal-reported maladaptive behaviors than did children with lower blood lead levels, including such behavior problems as aggressiveness, destructiveness, and sleep problems. The prevalence of aggressive behavior, in particular, was nearly six times greater in the lead poisoned children.<sup>70</sup> As one parent noted, even

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<sup>68</sup>Interview of mother of lead-poisoned child at Montefiore Safe House, December 4, 1997.

<sup>69</sup>Public Advocate Office telephone interview of Dr. John Rosen, Professor of Pediatric Medicine, Albert Einstein School of Medicine, January 23, 1998. The industry-funded American Council on Science and Health recently has argued that the cause and effect relationship between lead poisoning and behavioral disorders might be reversed on the ground that children with pervasive developmental disorders may exhibit "pica" behavior (an appetite for unfit foods or nonfood substances) which would put them at greater risk for lead exposure. See, American Council on Science and Health, *Lead and Human Health* (December 1997). While such behavior disorders can place a child at greater risk for lead poisoning, Dr. Rosen observes that true pica behavior is rare even among lead poisoned children, and that the normal hand-to-mouth activity that is characteristic of most toddlers is sufficient to cause exposure to lead paint hazards.

<sup>70</sup>W. Sciarillo, G. Alexander, and K. Farrell, "Lead Exposure and Child Behavior," *Am J Pub Health* 82:1356-60 (October 1992). The mean blood lead level for the lead poisoned children in the study was 28.6

though her child is learning in school, "he is very active and aggressive," and "his teachers complain to me about his behavior."<sup>71</sup>

Another symptom of lead poisoning is lack of appetite. As one mother, expressing a frequently-raised complaint, explained, "It's hard. I know that nutrition is important, but he doesn't want to eat. He gets headaches and stomach aches a lot."<sup>72</sup>

Finally, children who have very high blood lead levels often are treated by "chelation," which can be very unpleasant. Chelation is a procedure to help the body excrete lead. A metal-binding drug is injected into the child, usually into the blood stream but in severe cases it is sometimes injected into muscle tissue (a particularly painful procedure). Usually the child is injected several times a day over a period of approximately five days, while staying in a hospital.<sup>73</sup> In 1995, 108 of the 1,721 newly identified children with blood lead levels at or above 20 µg/dl -- more than six percent -- were treated with chelation, which usually is not performed unless a child has a blood lead level of 45 µg/dl or more. Moreover, 55 children who had already been diagnosed as lead-poisoned in prior years also received chelation therapy during 1995.<sup>74</sup>

Unfortunately, while chelation is effective in removing lead from the blood, a child who has been exposed over a period of time may retain significant amounts of lead in bones and soft tissue.<sup>75</sup> When the blood lead level is lowered, it often is no longer in "equilibrium" with the lead concentrations in the bone tissues and some stored lead gradually can leach out again into the blood.<sup>76</sup> This means that even if the original sources of the child's lead exposure have been eliminated, a lead poisoned child may have to undergo repeated chelation therapy. One parent told the Public Advocate's Office that the first time her child was chelated the blood lead level dropped from 49 µg/dl down to 10 µg/dl, but quickly rose again, requiring another round of

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µg/dl before the study and 27.8 µg/dl during the study.

<sup>71</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>72</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>73</sup>The treatment, for example, could entail injection of CaNa<sub>2</sub>EDTA at a daily dose of 1,000 mg/m<sup>2</sup> given in four divided doses per day over a period of five days. See John Rosen, "Adverse health Effects of Lead at Low Exposure Levels: Trends in the Management of Childhood Lead Poisoning," *Toxicology* 97 11-17, 14. (1995).

<sup>74</sup>City DOH 1997 Grant Application to CDC, at 57.

<sup>75</sup>A measure of blood lead level mostly reflects recent exposure. The residence time of lead in blood is short (it has a "half-life" of about a month), and the lead that is not excreted from the body can enter both soft and hard tissues. Lead that is stored in body tissues can be released and redistributed as a result of injury or infection and physiological changes such as pregnancy, age or growth-related bone remodeling processes. Consequently, a low current blood lead level can mask substantial past exposures. In animal models, brain lead levels do not decrease as rapidly as blood lead levels following chelation or cessation of exposure. David Bellinger, at 27-28.

<sup>76</sup>EPA, *Review of Studies Addressing Lead Abatement Effectiveness* (EPA 747-R-95-006)(July 1995), pp. 11-18; see J. Rosen, A. Crocetti, K. Balbi, J. Balbi, C. Bailey, I. Clemente, N. Redkey, and S. Grainger, "Bone Lead Content Assessed by L-line X-ray Fluorescence in Lead-exposed and Non-lead-exposed Suburban Populations in the United States," *Proc Natl Acad Sci USA* 90:2789-92 (April 1993).

treatment.<sup>77</sup> A mother of a seven year old boy who has undergone chelation eleven times confided:

It is very painful for me to watch when they put the needles into him. He cries and he is frightened. I don't like needles myself, so I understand what he is going through. It's upsetting. And he keeps having to go back. They can clean out his blood, but it's in his bones, so the blood level just comes back up again. I can never tell him, "This is the last time."<sup>78</sup>

### ***B. Impact on a Family of Caring for a Lead-poisoned Child***

While it is easy for researchers to list "behavioral problems" and "hyperactivity" as symptoms of lead poisoning, living with these symptoms in one's own child is a great strain on parents. Assistant Deputy Advocate Suzanne Mattei witnessed one child who, while kept in a stroller, incessantly was reaching for things, picking at a decal on a clothes hamper and tearing at pieces of paper. His mother said:

I'm so tired all the time. I can never sit down to a peaceful meal. I'm always running after him. He's very active. His hands are moving all the time. It never stops.<sup>79</sup>

This active and aggressive behavior can be hard on the other children in a family as well. Carol Hill, Co-Chair of the NYC Coalition to End Lead Poisoning and the grandmother of a lead-poisoned child, explains:

When a lead-poisoned child is acting up all the time, it's hard on the other kids. The parents have to focus so much on that child's behavior -- keeping the child safe and out of trouble -- that they don't have a lot of time and energy for the others. So a poisoned child suffers, but the other kids suffer too.<sup>80</sup>

The uncontrollable behavior of a lead-poisoned child can sometimes present a physical risk to siblings. Cordell Cleare, Co-Chair of the NYC Coalition to End Lead Poisoning and mother

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<sup>77</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>78</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>79</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>80</sup>Interview of Carol Hill, Co-Chair of the NYC Coalition to End Lead Poisoning and grandmother of a lead-poisoned child, December 5, 1997.

of a lead-poisoned child, notes that many mothers of lead-poisoned children find that they cannot safely leave the child alone in a room with siblings.<sup>81</sup>

Maureen Silverman, Housing Resource Coordinator for Synergia, points out that the effort of obtaining the special medical care and providing the attention required by a lead-poisoned child make life particularly difficult for working parents. She described one case in which a mother had to stop working in order to care for her child's needs.<sup>82</sup>

Some poor families who are living with acquaintances or relatives have found that lead poisoning leads to homelessness. When a child becomes lead poisoned, DOH is required to intervene and make sure that the home in which the child is living does not contain lead-based paint hazards. This intervention is important to the child's health but generally not welcomed by landlords or primary tenants. One mother explained that she has had to move five times since her child became lead poisoned because the people with whom she shares apartments do not want trouble with their landlords -- and health inspectors mean trouble.<sup>83</sup> Another mother whose one-and-a-half year old child recently was hospitalized with 56 µg/dl of lead in his blood was living in a home occupied by the owner. He ejected her, her lead-poisoned child and her other children when he was faced with enforcement action. "Now I have to find another place to live," she said, "and it's not easy."<sup>84</sup>

The strain on some parents from the anguish over what has happened to their children and the stress of caring for a hyperactive and brain-damaged child can be severe. Carol Hill, who has counseled many parents of lead-poisoned children, explains, "The first emotion is always guilt. 'What did I do wrong?' they ask. It's an awful feeling, to learn that your child has been poisoned. You have to get educated about it, and then -- you have to live with it."

The mother of the boy who lost the ability to speak described herself as being under severe emotional strain, saying, "I've been very depressed sometimes. Very depressed. My blood pressure is up, and I get very nervous and tense. It's hard."<sup>85</sup>

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<sup>81</sup>Interview of Cordell Cleare, Co-Chair of the NYC Coalition to End Lead Poisoning and mother of a lead-poisoned child, December 5, 1997.

<sup>82</sup>Interview of Maureen Silverman, Housing Resource Coordinator, Synergia, December 5, 1997.

<sup>83</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>84</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

<sup>85</sup>Interview of mother of lead-poisoned child at Montefiore Lead Poisoning Control Clinic, December 4, 1997.

**C. The Harmful Effects of Lead on a Child with a Blood Lead Level Below 20 µg/dl.**

While high levels of lead cause more easily observable symptoms, it is important to consider the effect on a child of lead absorption at lower levels. Parents of children who have blood lead levels from 5-15 µg/dl probably will not realize that their child might have been a little smarter, might have had a better attention span, and might have developed and grown more quickly. Blood lead levels of 5-15 µg/dl are associated with attention deficit and delayed reaction time and also have been associated with delays in postnatal development, including growth and the age at which a child sits up. One study found that an increase in lead level from 5 to 25 µg/dl was associated with a three centimeter decrease in height in five year old children.<sup>86</sup>

As noted above, an increase in blood lead level of 10 µg/dl can result in a drop in IQ up to five points, with a "likely apparent effect" of a drop in IQ between one and three points at age four and above. While children affected by such a drop in IQ may not end up in the hospital undergoing chelation or exhibit strong behavioral problems, they may have somewhat impaired concentration and ability to follow directions or "sequences." Drs. Landrigan and Needleman note:

The difference in mean IQ scores between high- and low-lead groups is about 6 points in many of the studies from around the world. But . . . a small shift in the curves is associated with a huge difference at both extremes of the groups. The proportion of low-lead children with IQ scores below 80 is 4 percent, but for the high-lead group the proportion is 16 percent. . . . Probably just as important is the effect of lead at the top of the distribution. Five percent of the low-lead group had IQ scores above 125, some reaching as high as 143. No high-lead subject exceeded 125. One of the costs of lead exposure is that it prevents a certain number of children from reaching their peak superior function. Although these children appear to be doing well, they are not operating at their full potential.<sup>87</sup>

For example, lead damage to a child's developing brain could make the difference between a child being at the low end of normal intelligence and dropping below normal -- thus requiring special education. The cognitive losses affect many aspects of a child's learning ability. Research indicates that the decline in academic achievement documented in lead-poisoned children is more serious than can be explained simply by the loss of IQ points.<sup>88</sup>

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<sup>86</sup> J. Schwartz, C. Angle and H. Pitcher, "Relationship Between Childhood Blood-lead Levels and Stature," *Pediatrics* 77:281-288 (1986); National Research Council, *Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), p. 255.

<sup>87</sup> Landrigan and Needleman, at 70.

<sup>88</sup> Statement of Dr. David Bellinger, epidemiologist and psychologist, associate professor of neurology at Harvard Medical School, in Jane Brody, "Despite Reductions in Exposure, Lead Remains Danger to Children," *New York Times* (March 21, 1995).

### III. STRONG EVIDENCE REVEALS THAT DETERIORATED PAINT IN DWELLINGS IS THE PRIMARY CAUSE OF CHILDHOOD LEAD POISONING IN NYC

Many people do not realize how much lead can be present in old paint. Today, existing indoor paint cannot contain lead at a concentration higher than 0.5%, and new paint cannot contain lead at a level higher than .06%.<sup>89</sup> Some earlier paint formulations contained as much as 45% lead by weight.<sup>90</sup> As noted above, daily ingestion for only a month of a paint chip about the size of the tip of a pencil's eraser containing just 1.5% lead can cause a child's blood to become poisoned at a level above 10 µg/dl.

Nationally, the Federal Centers for Disease Control and the U.S. Department of Health & Human Services have declared that lead-based paint is the primary cause of the most severe cases of lead poisoning in children and "the source of greatest public health concern."<sup>91</sup> Even the Lead Industries Association has been willing to recognize that old lead-based paint is the greatest contributor of lead to the environment.<sup>92</sup> In 1970, the City Health Services Administration declared that "almost all of New York City's lead poisoning cases occur in areas with substantial amounts of substandard housing."<sup>93</sup>

Nevertheless, an argument that has been raised against establishing a more effective lead-based paint hazard reduction law in New York City is that other sources of lead poisoning exist. These sources include outdoor dust contaminated by exterior paint sources and by "fall-out" from past air pollution caused by leaded gasoline, toys and ceramics with lead-based paint or coating, and drinking water contaminated by lead soldering of pipes or lead plumbing fixtures or fittings. An advocacy group comments:

When regulators began proposing to limit lead in gasoline, the lead and petroleum industries used lead in paint as the excuse for inaction on gasoline. Ironically, now that Congress is getting serious about addressing lead-based paint hazards, the converse argument is being

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<sup>89</sup>N.Y.C. Health Code, § 173.13(a), (c), as amended September 24, 1996.

<sup>90</sup>Silbergeld, at 199.

<sup>91</sup>Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, *Strategic Plan for the Elimination of Childhood Lead Poisoning* (1991), p. 9. See also, U.S. General Accounting Office, *Toxic Substances: Federal Programs Do Not Fully Address Some Lead Exposure Issues* (GAO/RCED-92-186)(May 1992), p. 2.

<sup>92</sup>Testimony of Mr. Jerome F. Smith and Mr. Jeffrey T. Miller, the Lead Industries Association, Inc., in *Lead Contamination in New York State*, at 50.

<sup>93</sup>N.Y.C. Health Services Administration and Housing and Development Administration, *Lead Poisoning Control: Project Plan* (March 6, 1970), p. I-14.

used: Don't clean-up lead-based paint; the problem is lead in soil from auto exhaust.<sup>94</sup>

One researcher reports that, according to industry data, approximately the same quantity of lead was used in leaded gasoline as in white lead-based paint in the United States -- about seven million tons -- and about 400,000 more tons of lead may also have been used in residential red lead-based paint.<sup>95</sup> It therefore should not come as a surprise that while the removal of lead from gasoline, which began in the United States in 1972, resulted in an almost fourfold reduction in the median blood lead level for children nationwide from 1976 to 1991, lead exposure continues to occur.<sup>96</sup> The difference is that the higher levels of lead exposure now occur almost exclusively in certain neighborhoods and among poorer children.

Using the existence of multiple sources of human lead exposure as an excuse for inaction against lead-based paint is unreasonable. Moreover, strong evidence indicates that lead-based paint in the home remains the primary source of childhood exposure to lead in New York City.

#### **A. Lead Poisoning in New York City Is "Location Specific."**

It cannot be disputed that lead poisoning in New York City is a "location specific" phenomenon. The trends are easy to spot. Over the past four years, eleven health districts have ranked among the twelve districts with the highest rates of new, documented incidents of children with blood lead levels at or above 10 µg/dl:

Bedford-Stuyvesant	Jamaica East
Brownsville	Jamaica West
Bushwick	Red Hook
Central Harlem	Washington Heights
Flatbush	Williamsburg/Greenpoint
Fort Greene	

Although older City documents only cite raw numbers of cases, which does not reveal actual lead poisoning *rates*, seven of the eleven districts listed above were included in the "lead belt" of health

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<sup>94</sup>Alliance to End Childhood Lead Poisoning, "The 'Debate' Over Sources of Childhood Lead Poisoning," (June 1992).

<sup>95</sup>S. Clark, *et al.*, "Urban Lead Exposures of Children in Cincinnati, Ohio," *Chemical Speciation and Bioavailability* 3:163-71 (1991), citing Minerals Yearbook 1932-33 through 1988, U.S. Bureau of Mines 1989, Washington, D.C. See David Jacobs, "Lead-based Paint as a Major Source of Childhood Lead Poisoning: A Review of the Evidence," in Michael Beard and S.D. Allen Iske, Eds., *Lead in Paint, Soil and Dust: Health Risks, Exposure Studies, Control Measures and Quality Assurance* (Philadelphia: American Society for Testing and Materials, 1994).

<sup>96</sup>Silbergeld, at 195-99.

districts that had the highest numbers of lead poisoned children, which was identified by New York City's Health Services Administration in March 1970 -- nearly 28 years ago.<sup>97</sup>

Other City health districts which have ranked consistently among or close to the top twelve districts during these past four years include:

Fordham  
Mott Haven  
Pelham Bay  
Sunset Park  
Tremont

Appendix A of this report provides data on the rate of new incidences of blood lead levels at or above 10 µg/dl in New York City by Health District and lists the Community Districts contained within each of those geographical areas.

Based on the above-described pattern of statistics, it is reasonable to conclude that most cases of lead poisoning in New York City must be caused either by:

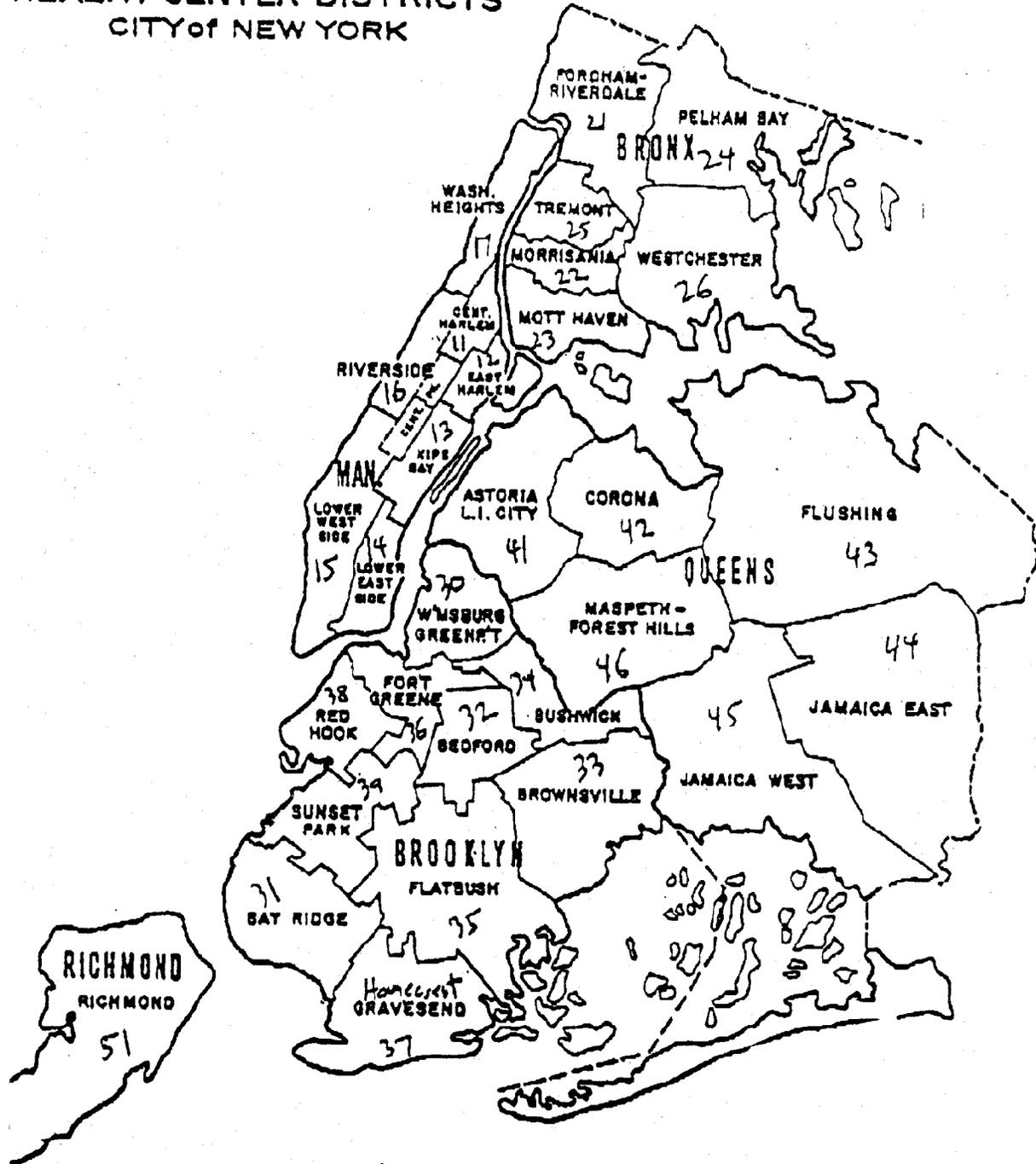
- (1) lead hazards in the home due to housing conditions that are prevalent in certain communities, or
- (2) outdoor dust or soil contaminated by lead pollution sources that are present to a greater extent in those communities.

For reasons set out below, it is clear that lead hazards *in the home* are the primary factor in lead poisoning and that deteriorated lead-based paint is the culprit.

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<sup>97</sup>Health Services Administration and Housing and Development Administration, *Lead Poisoning Control: Project Plan* (March 6, 1970), pp. I-14 to I-15. The districts were: Bedford, Brownsville, Bushwick, Central Harlem, East Harlem, Fort Greene, Jamaica East, Lower East Side, Morrisania, Mott Haven, Riverside, Tremont and Williamsburg.

# HEALTH CENTER DISTRICTS CITY of NEW YORK



**B. The Vast Majority of Homes of Lead-poisoned Children in NYC and Throughout the State Contain Lead-based paint Hazards**

Some people believe that all homes in New York City contain lead-based paint hazards, but this is not the case. Only about 68% of dwelling units in the City contain lead-based paint. This is true for the following reasons:

- The City banned the use of lead-based paint on the interior surfaces of dwellings in 1960. Approximately 23% of all housing in New York City (653,499 units) was constructed *after* this ban took effect.<sup>98</sup>
- Also, not all old housing contains large amounts of lead-based paint. Because leaded paint was more expensive than unleaded paint, "economy" housing for poorer people often avoided using it. (Generally, apartment buildings located in neighborhoods which once were middle-class or wealthy but now have become less well-maintained are particularly likely to contain lead-based paint hazards.) DOH estimates that 20% of apartment units constructed between 1947 and 1959, and 10% of apartment units built before 1947, made little or no use of lead-based paint.<sup>99</sup> Thus, more than 200,000 units can be added to the category of generally lead-safe housing.
- Finally, some apartments have undergone lead abatement or else have been partially abated because of remodeling so that they have a fewer surfaces covered with lead-based paint.<sup>100</sup>

As a result, about 32% of all New York City housing -- nearly a third of it -- contains very little or no lead-based paint.

If lead-based paint were not the primary cause of childhood lead poisoning in New York City, one would expect that DOH would fail to find lead hazards in a relatively similar percentage of homes. But City DOH has found lead hazards in all but 17% of homes of lead-poisoned children. In 1995, DOH found lead-based paint hazards in 1,518 of the 1,836 homes of lead-poisoned children that it inspected that year, or 83% of them.<sup>101</sup> Moreover, with the exception of Nassau County, this is consistent with findings throughout most of the State. The counties below inspected dwellings for 100 or more lead-poisoned children:

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<sup>98</sup>Derived from data contained in Rent Guidelines Board, *Housing NYC: Rents, Markets & Trends '97*, pp. 94 and 121. Approximately 6% of New York City housing (159,446 units) was built after the national ban on lead paint was established in 1978. These figures include both rental units and private homes.

<sup>99</sup>The total number of units built from 1947 to 1959 is 459,324. The total number of units built before 1947 is 1,707,435. Source: NYC Department of Health.

<sup>100</sup>City DOH and HPD 1997 Grant Application to HUD, at 18.

<sup>101</sup>NYCDOH Environmental Investigation Activity, 1/1/95 - 12/31/95.

<u>County</u>	<u>Percent of Dwellings of Lead Poisoned Children Having Lead Hazards</u> <sup>102</sup>
New York	83% (2,142 children referred)
Albany	78% (170 children referred)
Erie	92% (661 children referred)
Monroe	91% (818 children referred)
Nassau	56% (117 children referred)
Oneida	80% (102 children referred)
Onondaga	77% (282 children referred)
Orange	85% (194 children referred)

Because the *condition* of lead-based paint in an apartment affects the amount of lead chips or dust that is present in the dwelling, a direct correlation between age of housing stock and blood lead levels cannot be drawn. Nevertheless, a comparison of the incidence of lead poisoning and the age of housing stock indicates that higher rates of elevated blood lead levels generally are associated with housing built before the ban on lead-based paint was enacted. The chart below lists the health districts in the order of highest to lowest rates of incidences of elevated blood lead levels per thousand children screened, correlated with the percentage of existing housing units which were built within the borough before the ban on lead-based paint.

As noted above, the amount of housing stock built in the City before 1960, on average is 77%. The following chart and Figure 1 show that:

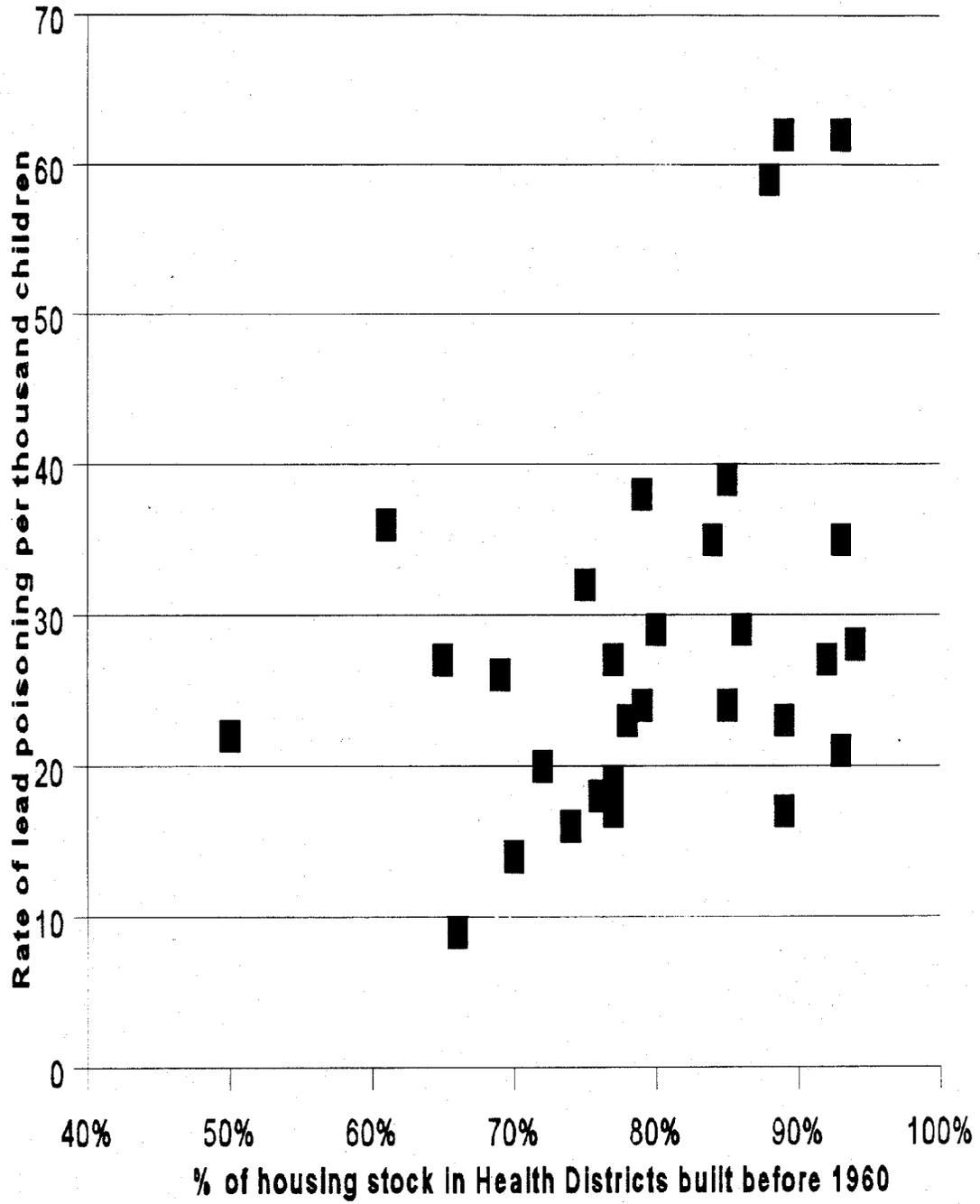
- All four of the health districts with greater than 90% old housing and all but one of the districts with greater than 80% old housing rank among the 15 districts rated highest for incidences of blood lead levels at or above 10 µg/dl.
- In 11 of the 15 districts rated highest for incidences of blood lead levels at or above 10 µg/dl, *more than 77%* of housing stock was built before 1960. The exceptions are Brownsville, Pelham Bay, Jamaica East and Morrisania. Their relatively high rates may be due to the condition of housing, which children were screened, or other factors.

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<sup>102</sup>State DOH, "New York State Health Department Environmental Investigation Activity 1/1/95-12/31/95." Westchester is not included in this list because its approach to inspection was not comparable to the others. Although 157 children were referred to Westchester as lead poisoned in 1995, the agency inspected 353 dwellings -- many more per child than other health departments. It still found lead hazards in 43% of those dwellings. On average statewide, lead hazards were identified in 81% of homes inspected.

Figure 1

**Correlation of lead poisoning rates in NYC Health Districts  
(at or above 10ug/dl) and % of Health District's housing stock built pre-1960**



<u>Health District</u>	Rate at or above 10µg/dl <sup>103</sup>	<u>Percentage of Housing Stock Built Before Ban on Lead-based paint</u> <sup>104</sup>
Bed.-Stuyv.	62	89%
Bushwick	62	93%
Ft Grne/Bklyn Hts	59	88%
Flatbush	39	85%
Jamaica East	38	79%
Brownsville	36	61%
Wmsburg/Grnpt	35	84%
Red Hook	35	93%
Jamaica West	32	75%
Fordham	29	80%
Tremont/N Bronx	29	86%
Sunset Park	28	94%
Washington Hts	27	92%
Morrisania	27	77%
Pelham Bay	27	65%

**C. A Recent Study Using "Isotopic Fingerprinting" Identified Lead-based Paint as the Major Component of Indoor Lead Dust**

Lead ores from different regions differ in their relative abundance of certain stable (nonradioactive) isotopes of lead. Consequently, differences in the isotopic concentration in lead ores and in products incorporating the refined metal can be used to "isotopically fingerprint" sources of lead in the environment. A recent study conducted in Baltimore, Maryland compared background sources of lead, interior lead paint and exterior lead paint with lead dust in several dwellings. In a dwelling containing non-intact lead-based paint, the study found that interior lead-based paint accounted for 85-89% of the floor lead dust.<sup>105</sup>

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<sup>103</sup>Rate is per thousand children screened. City DOH, "Numbers and Rates of new cases with Venous Blood Levels Greater than or Equal to 10 µg/dl for children 6 m.- less than 6 yrs. by borough, NYC" (1993-1996).

<sup>104</sup>City DOH 1997 Grant Application to CDC, at 31.

<sup>105</sup>Peter J. Ashley, E. Korgstad, P. Lees, E. Silbergeld and D. Smith, "The Use of Stable Lead Isotopes to Identify and Approtion Sources of Lead in Urban House Dust," in B.L. Johnson, Ed., *Impacts on Human and Ecological Health* (1997), pp. 144-45. Where a building is painted rather than bare brick or brownstone, exterior paint may contaminate the dust in window wells. This study found the lead in window well dust in one home to be approximately 29% interior paint and 71% exterior paint.

**D. Blood Lead Levels Generally Go Down After Lead-based Paint Hazards Are Safely Abated and They Go Up If Lead-based paint Is Disturbed Through Unsafe Renovation or Abatement Practices**

Several studies have found that safe removal of lead-based paint reduces blood lead levels in children.<sup>106</sup> A review of seven studies of the effectiveness of lead-based paint hazard controls found that all of the studies showed a decline in the average blood lead level within the year. The magnitude of the benefits ranged from .5 µg/dl to 10 µg/dl. The scientists conducting this review noted that the interventions used in those studies were less stringent than the current standards, and that it would be reasonable to expect that current, more exacting lead hazard control practices would be more beneficial to lead-poisoned children. They also noted that because lead-poisoned children carry some lead in their bones and soft tissue which can be released into the bloodstream, "the increase in blood lead levels *prevented* by lead hazard control interventions is probably larger than the decrease measured among already poisoned children."<sup>107</sup>

In contrast, improper abatement can actually increase lead exposure. One study found that when lead-based paint was removed by dry scraping, the mean blood lead level for more than one hundred children studied rose from 36.4 µg/dl to 42.2 µg/dl.<sup>108</sup> Another study found that remodeling activity in homes with lead-based paint caused a 69% increase in blood lead levels in more than two hundred infants studied.<sup>109</sup> Other researchers have reported similar cases.<sup>110</sup> A study of lead-based paint hazard remediation found that increased floor dust lead levels *after* remediation was associated with a 6.5 µg/dl rise in blood lead levels for children with blood lead levels below 25 µg/dl.<sup>111</sup> (The concern over hazards created by improper lead-based paint activities caused Congress to require EPA to establish a lead-based paint worker training and

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<sup>106</sup>Mark Farfel & J. Chisholm, "Health and Environmental Outcomes of Traditional and Modified Practices for Abatement of Residential Lead-based Paint," *Amer J Pub Health* 80: 1240 (1990); Mark Farfel, J. Chisholm, Charles Rhode, The Longer Term Effectiveness of Resident Lead Paint Abatement," *Envtl Res* 66:217 (1994).

<sup>107</sup>Catherine Staes and Richard Rinehart, *Does Residential Lead-based Paint Hazard Control Work? A Review of the Scientific Evidence* (National Center for Lead-safe Housing, April 4, 1995), pp. 64 and 71.

<sup>108</sup>Y. Amitai, M. Brown, J. Graef, and E. Cosgrove, "Residential Deleading: Effects on the Blood Lead Levels of Lead-Poisoned Children," *Pediatrics* 88:893-97 (1991).

<sup>109</sup>M. Rabinowitz, A. Leviton and D. Bellinger, "Home Refinishing, Lead Paint and Infant Blood Lead Levels," *Am J Public Health* 75:403-04 (1985).

<sup>110</sup>P. Marino, P. Landrigan, J. Graef, A. Nussbaum, G. Bayan, K. Boch and S. Boch, "A Case Report of Lead Paint Poisoning During Renovation of a Victorian Farmhouse," *Am J Public Health* 80:1183-85 (1990); A. Fischbein, *et al.*, "Lead Poisoning from 'Do It Yourself' Heat Guns for Removing Lead-based Paint: Report of Two Cases," *Environmental Research* 24:425-31 (1981).

<sup>111</sup>A. Aschengrau, A. Beiser, D. Bellinger, D. Copenhafer, and Michael Weitzman, "Residential Lead-based Paint Hazard Remediation and Soil Lead Abatement: Their Impact Among Children with Mildly Elevated Blood Lead Levels," *Am J Pub Health* 87:1698-1702, 1702 (October 1997). The authors' conclusion was that greater emphasis should be placed on the permanent abatement of residences before occupancy and to prioritize secondary prevention remediations by blood lead levels, but also noted that "Cleanup and clearance testing procedures may have been inadequate" and that "clearance standards may not be sufficiently stringent." Most notably, the floor dust clearance standard used in that study was 200 µg/ft<sup>2</sup>; both HUD and City DOH have stated that this standard be changed to half that level, 100 µg/ft<sup>2</sup>. City DOH, "Notice of Intention to Amend Section 173.13 of the NYC Health Code" (April 4, 1996), p. 6.

certification program.<sup>112</sup> EPA adopted the new rule in 1996; it will apply to lead-based paint abatement activities in New York State beginning March 1, 1999.<sup>113</sup>) In addition, City DOH adopted a set of strict safety standards for lead-based paint abatement in 1993.<sup>114</sup>

Perhaps most revealing, a Cincinnati study of deteriorated pre-World War II housing and rehabilitated housing (in which most of the lead-based paint had been removed) located in the same general area with similar traffic patterns found that the rehabilitated housing had lower dust lead levels and that the children living in the rehabilitated housing had lower blood lead levels. If the primary source of lead exposure were the historic deposition of lead gasoline particles into the soil, it is highly unlikely that there would have been a significant difference in blood lead levels between the two groups of children.<sup>115</sup>

It should be noted that merely improving dust control in an apartment through ordinary cleaning measures is not enough to prevent lead poisoning. A 1996 study found that providing cleaning supplies and instruction in dust control measures is ineffective in reducing blood lead levels in urban settings.<sup>116</sup> Another study found that household carpets removed from homes of children in Ohio with high blood lead levels could not be cleaned effectively even by repeated vacuuming using special "HEPA vacuum" equipment to capture lead dust.<sup>117</sup>

***E. Other Forms of Lead Pollution Are Not the Primary Source of Exposure for NYC Children But Still Can Play a Role in Poisoning a Child and May Be the Primary Cause in Individual Cases***

The consistently high blood lead levels of children in specific neighborhoods of the City cannot readily be explained by environmental sources of lead other than paint. The need for action against lead-based paint in the home, however, does not negate the need for action against

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<sup>112</sup>The program was established under Section 402(a)(1) of Title IV of the Toxic Substances Control Act ("TSCA"), 15 U.S.C. § 2681-2692 (1997).

<sup>113</sup>40 C.F.R. § 745.227 (1997); 61 *Fed. Reg.* 45778, 45822 (August 29, 1996).

<sup>114</sup>N.Y.C. Health Code, § 173.14. These regulations were adopted in response to a court order in *New York City coalition to End Lead Poisoning v. Giuliani*, slip op. (Sup. Ct. N.Y. Co. July 6, 1989), Order (Sup. Ct. N.Y. Co. Aug. 2, 1990), *aff'd*, 170 A.D.2d 419 (1st Dep't, 1991). Although the language of the safety standards limit their applicability only to abatements ordered by the City, the Supreme Court recently directed that the safety standards must apply to *all* lead abatements in the City, whether or not a violation has been issued. *N.Y.C. Coalition to End Lead Poisoning v. Giuliani*, 173 Misc.2d 235, 660 N.Y.S.2d 234 (Sup. Ct. N.Y. Co. 1997)(August 1, 1997)("NYCCELP VII"). The City is appealing that order.

<sup>115</sup>S. Clark, R. Bornschein, P. Succop, S. Que Hee, P. Hammond, and B. Peace, "Condition and Type of Housing as an Indicator of Potential Environmental Lead Exposure and Pediatric Blood Lead Levels," *Envtl. Research* 38:46-53 (1985); S. Clark, *et al.*, "Urban Lead Exposures of Children in Cincinnati, Ohio," *Chemical Speciation and Bioavailability* 3:163-71 (1991).

<sup>116</sup>Bruce P. Lanphear, *et al.*, "A Randomized Trial of the Effect of Dust Control on Children's Blood Lead Level" *Pediatrics* 98:35 (1996).

<sup>117</sup>L. Ewers, S. Clark, W. Menrath, P. Succop and R. Bornschein, "Clean-up of Lead in Household Carpet and Floor Dust," *Am Industrial Hygiene Assn J* 55:650-57 (1994); Staes and Rinehart, at 46.

other potential sources of exposure. Other forms of lead pollution can contribute to the poisoning of a child and may be the primary cause of lead poisoning in an individual case. Approximately 17% of lead poisoning cases in New York City are of unknown origin and may have been caused by deteriorated paint in a school or daycare center, fences or playground equipment covered with lead-based paint, toys or ceramic items with lead-based paint or coating, contaminated dust or dirt in playgrounds, or contaminated drinking water.

**1. Outdoor dust and soil are not the primary cause of lead poisoning in New York City but may contribute to individual cases or neighborhood blood lead levels**

Lead-containing particles from air emissions and dust from exterior paint can become deposited on neighborhood streets, asphalt playgrounds and sidewalks in the form of dust. This dust can be "kicked up" by cars and trucks or by people walking. Children also can ingest the dust if it gets on their hands -- from a rolling ball, for example. The contaminated dust remains on the ground unless it is washed into the sewer system by rainfall or street cleaning.

The same sources that can produce outdoor dust also can contaminate soil, but the lead particles are more likely to be retained in the soil and remain in the environment long after the source of the contamination has been reduced or eliminated. While New York City does not have the same problem as upstate New York -- where new development in areas that formerly were orchards has presented the risk of exposure from lead arsenate, which was used as a pesticide for many years in the past<sup>118</sup> -- soils and outdoor dusts have been contaminated by lead-based paint dust from bridges, building facades, demolition activity and other outdoor sources. The soil located near major roads is often polluted by lead from automobile exhaust. Consequently, depending on the extent to which children play in such areas, contaminated soil can present a lead exposure risk to them.

Urban dust and soil still are considered the second most significant sources of lead exposure for most urban children (after direct exposure to lead-based paint). Studies differ on the impact of exposure to lead in soil, and the differences may be related to any number of factors, including the nature of the soil exposure, the chemistry of the soil itself and the types of lead compounds that contaminate it. While the 1995 *Rochester Study* found no significant correlation between hours of outdoor play and blood lead levels for the children surveyed, it did find a correlation between elevated blood lead levels and children who had actually been seen eating dirt.<sup>119</sup> A 1994 study found that where soil was *highly* contaminated, a reduction of 2,060 ppm in soil lead was associated with a reduction of 2.3 to 2.7  $\mu\text{g}/\text{dl}$  in blood lead levels.<sup>120</sup> EPA

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<sup>118</sup>Testimony of William Stasiuk, *Lead Contamination in New York State*, at 23.

<sup>119</sup>*Rochester Study*, at 28.

<sup>120</sup>A. Ashengrau, A. Beiser, D. Bellinger, C. Copenhafer, M. Weitzman, "The Impact of Soil Lead Abatement on Urban Children's Blood Lead Levels, Phase II: Results from the Boston Lead-in-Soil Demonstration Project," *Envtl Res* 67:125-48 (1994); A. Ashengrau, A. Beiser, D. Bellinger, D. Copenhafer and M. Weitzman, "Residential Lead-based Paint Hazard Remediation and Soil Lead Abatement: Their Impact Among Children with Mildly Elevated Blood Lead Levels," *Am J Public Health* 87:1698-1702 (October 1997).

estimated in 1986 that approximately a 2 µg/dl increase in the population mean blood lead level can result in children from every 100 parts per million ("ppm") increment in dust or soil lead content above a level of 500-1,000 ppm.<sup>121</sup> On the other hand, a 1993 study reported a modest decline in blood lead levels among children who lived in homes that received soil abatement, but the authors concluded that because the decline was modest, soil abatement is not likely to be a useful clinical intervention for most urban children.<sup>122</sup> EPA has found only a minimal impact on blood lead status and has raised questions regarding the bioavailability of lead in soil.<sup>123</sup>

In New York City, many of the sources of outdoor dust and soil contamination have been reduced or eliminated. Nevertheless, exterior paint and certain other sources may still remain a problem in specific neighborhoods and soil is likely to remain contaminated from past sources.

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<sup>121</sup>U.S. Environmental Protection Agency, *Air Quality Criteria for Lead* (EPA 699/8-83-028A)(1986); P. Landrigan, L. Halper, and E. Silbergeld, "Toxic Air Pollution Across a State Line," *J Public Health Policy* 10:309-323, 317 (Autumn, 1989); U.S. General Accounting Office, at 9.

<sup>122</sup>M. Weitzman, A. Aschengrau, D. Bellinger, R. Jones, J.S. Hamlin, A. Beiser, "Lead-contaminated Soil Abatement and Urban Children's Blood Lead Levels," *J Am Med Assn* 269:1647-1654 (1993).

<sup>123</sup>U.S.E.P.A., *Urban Soil Lead Abatement Demonstration Project*, Vol. I, "EPA Integrated Report" (EPA/600/P-93/001aF)(April 1996).

**Industrial sources, former car exhaust, closed incinerators.** Two of the three primary sources of lead air pollution -- leaded gasoline and municipal garbage incinerators -- have been eliminated or greatly reduced in the New York City environment over the past decade:

- The removal of lead from gasoline began in 1972 and was completed in 1991.<sup>124</sup> This and other regulations on lead air emissions by EPA have reduced lead in the atmosphere by 90% over the past 20 years.<sup>125</sup> This had an enormous health benefit. From 1976 to 1980, national blood lead levels in children dropped 37%, from 14.6 to 9.2 µg/dl, and analysis showed that this reduction was almost entirely the result of decreased use of lead in gasoline. It is generally agreed, however, that further reductions in blood lead levels will have to come from reduction of other causes of lead exposure.<sup>126</sup>
- Burning garbage releases lead dust into the air. Fortunately, under pressure from the public, the City's three municipal incinerators -- which were located in Maspeth, Greenpoint and Bensonhurst -- were closed down in the early 1990s and the City's plan to build more incinerators has been scrapped.

Industrial sources continue to exist, but have been greatly reduced over the past decade. The annual release of lead into the air from industrial sources in the City dropped by approximately 80% from 1990 to 1995, to a level of 602 pounds per year.<sup>127</sup> More recent data is not yet available. Nevertheless, in the Greenpoint-Williamsburg community, industrial lead sources may still be contributing to local environmental lead contamination.

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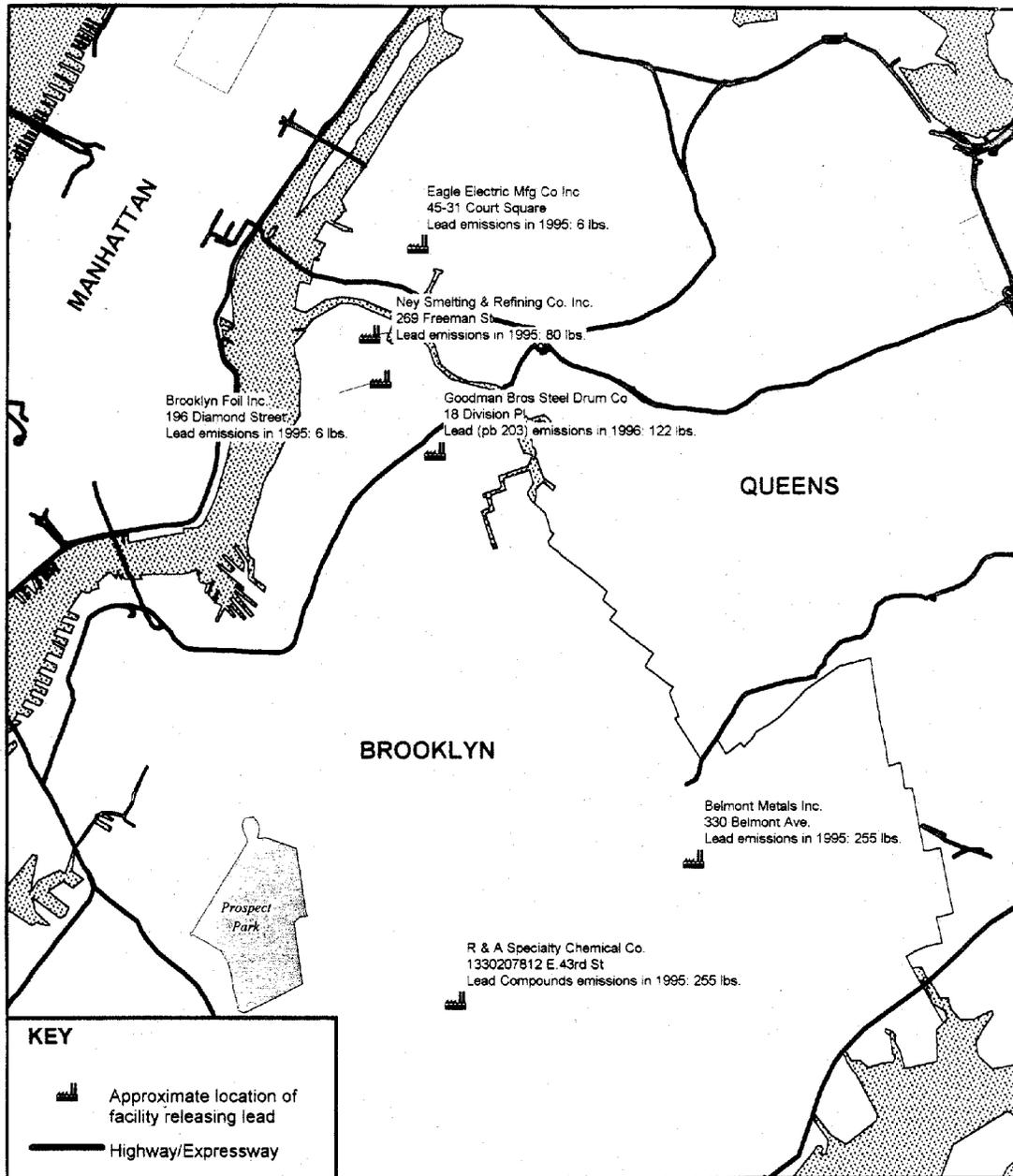
<sup>124</sup>From the 1920s to the late 1980s, lead was added to gasoline in the "anti-knock" additive known as tetraethyl lead (later mixed with tetramethyl lead), and was emitted from a car's tailpipe at a level of approximately 24,000 µg/m<sup>3</sup> in the 1970s. Lead use in gasoline declined from 175,000 metric tons in 1976 to less than 4,000 metric tons in 1988. National Research Council, *Measuring Lead Exposure in Infants, Children, and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), pp. 118-120.

<sup>125</sup>Philip Landrigan, M.D. and Herbert Needleman, M.D., *Raising Children Toxic Free* (New York, Farrar, Straus and Giroux, 1994), p. 72.

<sup>126</sup>Barbara Berney, "Round and Round It Goes: the Epidemiology of Childhood Lead Poisoning, 1950-1990," *Millbank Qtrly* 71 (March 22, 1993), p. 39; Silbergeld, at 198; J. Schwartz, A. Janney and H. Pitcher, "The Relationship Between Gasoline Lead and Blood Lead," *Sci American* (May 1984).

<sup>127</sup>"Toxic Releases into the Air for Years 1990 through 1995," in DEP, *1997 Annual Report: Community Right-to-Know Laws in New York City* (1997), p. 42, containing information based on section 313 data submitted to the State Emergency Response Commission. and NYPIRG, "Lead Toxic Chemicals Released in 1995 in New York City," a report prepared based upon the N.Y.S. Department of Environmental Conservation's Toxic Release Inventory Database. All areas in the State comply with the National Ambient Air Quality Standard for lead, which requires that the maximum quarterly average concentration of lead not exceed 1.5 µg/m<sup>3</sup> of air.

## Air Emissions of Lead or Lead Compounds by Manufacturers in New York City in 1995 and 1996



Map prepared by NYPIRG's Community Mapping Assistance Project.  
Sources: NYS Department of Environmental Conservation (1995 Toxic Release Inventory database; & 1996 Air Emissions Statements database); NYC Department of City Planning.

**Lead-based paint on bridges and building exteriors.** Exterior lead-based paint remains a source of outdoor dust contamination. Lead has been popular as an ingredient in paint for outdoor structures because it inhibits corrosion and can adhere to surfaces that are rusty or dirty, and its use for such purposes is still permitted.

Exterior lead-based paint can have a significant impact on yard soil. The Baltimore study found yard soil outside homes with exterior lead-based paint to be approximately four times higher than park soil in open areas (affected only by general environmental sources).<sup>128</sup> Also, sloppy work practices in the removal of exterior lead-based paint can cause extensive contamination, at least on a short-term basis, at a very local level. For example, in the fall of 1994, a building at 112 Franklin Street in the Greenpoint section of Brooklyn was undergoing renovation. Lead-based paint sandblasted from the outside of the building came in through the windows of approximately fifteen nearby residential apartments. The paint contained 10.9% lead by weight -- over 20 times the allowable level.<sup>129</sup> In general, demolition of buildings coated in lead-based paint and sloppy management of construction debris can release lead dust in a neighborhood.<sup>130</sup>

Up to 80% of steel bridges in the United States are coated with lead-containing materials.<sup>131</sup> Seasonal changes and "weathering" can cause the release of lead dust or chips from bridges, but the problem is most severe during paint removal activities. In June 1992, the City began abrasive blasting of the Williamsburg Bridge in order to repaint it, but was forced to cease the activity in the face of public outcry over the generation of lead dust in surrounding neighborhoods.<sup>132</sup> In February 1994, neighborhood groups, elected officials and Community Board 1 brought a lawsuit which forced the City to conduct a full Environmental Impact Statement on bridge paint removal protocol. That year, it was reported that soil lead levels above the national guideline of 500 ppm were found at all seven bridges maintained by the Triborough Bridge and Tunnel Authority, causing the Authority to spend millions of dollars in clean-up activities.<sup>133</sup> That process is now underway.<sup>134</sup>

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<sup>128</sup>Ashley, at 141.

<sup>129</sup>Letter from Phyllis Atwater, NYS Department of Environmental Conservation Regional Director to Assembly Member Joseph R. Lentol, October 20, 1994; City Council Member Ken Fisher, "Press Advisory: Paint Removal Leads to Lead Contamination" (October 6, 1994).

<sup>130</sup>Testimony of Ward Stone, Wildlife Pathologist, N.Y.S. Department of Environmental Conservation, in *Lead Contamination in New York State*, p. 38.

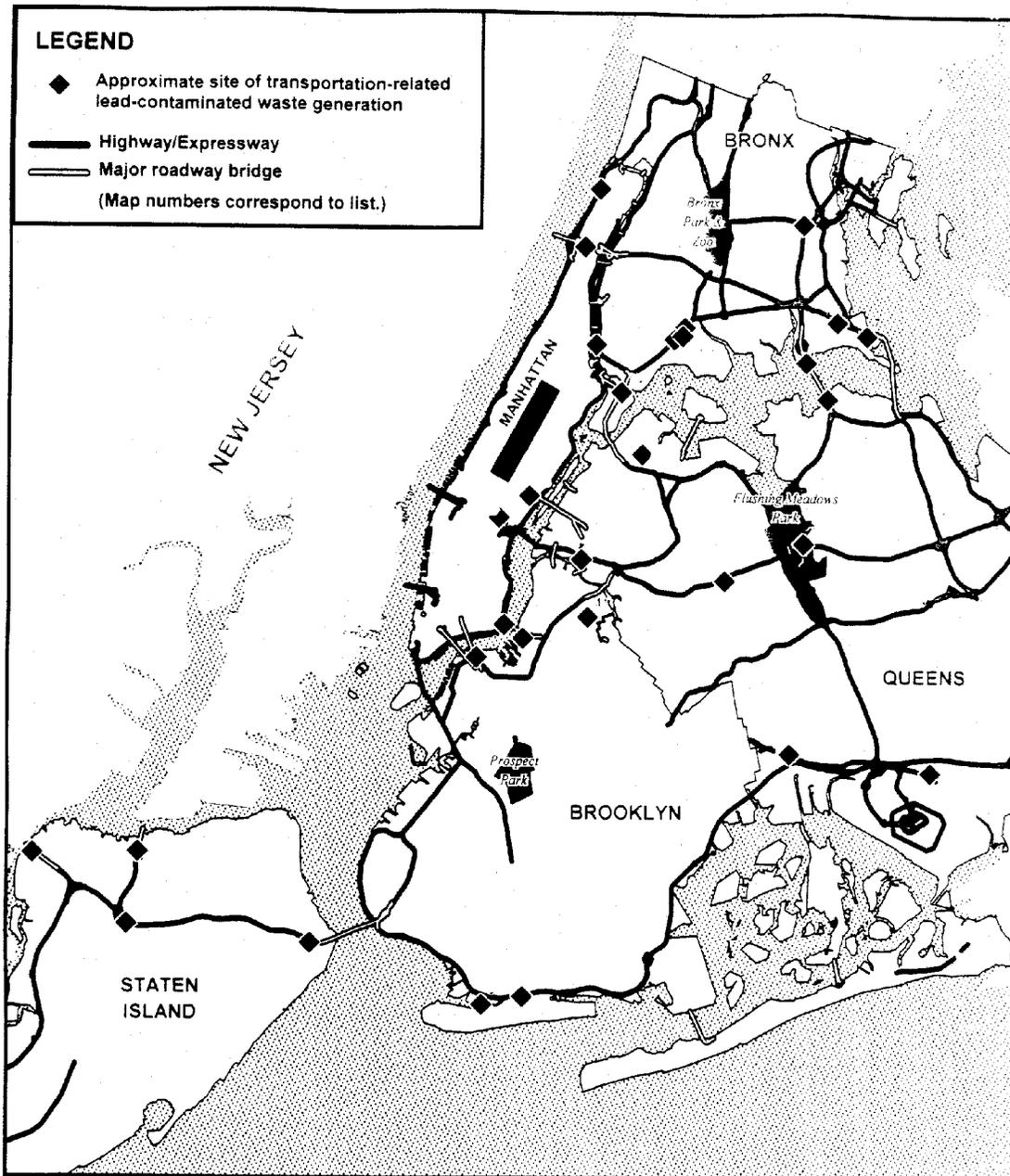
<sup>131</sup>NYC Department of Transportation, "Positive Declaration and Draft Scope of Work for Lead Paint Containment, Monitoring and Review Associated with Bridge Maintenance" (CEQR No. 96-DOT-005Y)(May 23, 1997)(hereafter, *DOT Positive Declaration on Bridge Paint Repair*, p. 3.

<sup>132</sup>Jonathan Larsen, "Lead Testing Spreads to Local Bridges," *Brooklyn Paper Publications* (September 1-17, 1992).

<sup>133</sup>Emily Sachar, "Report Reveals Park Lead Peril," *New York Newsday* (May 13, 1993).

<sup>134</sup>*DOT Positive Declaration on Bridge Paint Repair*, at 1-2. See *Williamsburg Around the Bridge Block Ass'n v. Giuliani*, 167 Misc.2d 980, 984, *aff'd*, 223 A.D.2d 64 (1st Dep't, 1996).

## Lead-Contaminated Hazardous Waste Generated at Bridges, Bridge Structures and other Transportation-related Lead-Paint Removal Sites in New York City in 1995



Map prepared by NYPIRG's Community Mapping Assistance Project.  
Sources: NYS Department of Environmental Conservation 1995 Hazardous Waste Report Data;  
and NYC Department of City Planning.

Individual cases of lead poisoning may be related to such paint removal activities and the dust generated by such activities may contribute to the cumulative exposure of children in an individual community. Nevertheless, the locations of lead-contaminated hazardous waste generated at bridges and other transportation-related lead-paint removal sites that occurred before the court order halted such activity do not explain the pattern of elevated blood lead levels in NYC. Of the 11 districts identified above as having consistently high rates of lead poisoning, seven contain no such sites at all and the remainder contain only one or two such sites. See map, "Lead-contaminated Hazardous Waste Generated at Bridges" (opposite page).<sup>135</sup>

Based on the above considerations, it is reasonable to conclude that dust and soil contamination from exterior paint and air emissions of lead are not the primary cause of lead poisoning in New York City. Those sources may, however, contribute to elevated blood lead levels in certain neighborhoods.

## **2. *Lead contamination of drinking water has been reduced substantially but still can contribute to blood lead levels citywide***

Drinking water -- which arrives to the City from its upstate reservoirs unpolluted by lead -- can become contaminated by lead solder which was commonly used to connect pipes in the water distribution system until as recently as 1986. (In December 1982, the Town of Smithtown, New York became the first municipality east of the Rocky Mountains to ban lead solder. Three years later, the State Legislature enacted a ban, and the federal government followed suit the following year.<sup>136</sup>) Also, older water coolers and commercial hot water urns sometimes contain a lead-lined storage compartment.

Drinking water is not usually the primary cause of lead poisoning. Still, it must be controlled because it can contribute to a child's overall body burden of lead. Prior to introduction of its National Primary Drinking Water Regulations for Lead and Copper, EPA estimated that compliance with the rule nationwide would result in an additional 570,000 children having their blood lead level reduced to below 10 µg/dl.<sup>137</sup>

In July 1992, the New York City Department of Environmental Protection ("DEP") began adding a chemical containing calcium phosphate and sodium to the drinking water system to help buffer drinking water and to "coat" water pipes to reduce the leaching of both lead and copper into tap water.<sup>138</sup> The process was expected to bring the City's tap water into compliance with federal standards by late 1993. Under the EPA rule, the City should achieve a lead level of 15 parts per billion ("ppb") in 90% of water samples taken at 100 "high risk" locations. In other words, no

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<sup>135</sup>The site in Manhattan denoted by a "notched" square is not certain and may be located further north.

<sup>136</sup>Testimony of Norman E. Murrell, P.E., DEE, in *Lead Contamination in New York State*, at 46.

<sup>137</sup>U.S.E.P.A., "Fact Sheet: National Primary Drinking Water Regulations for Lead and Copper" (May 1991). See U.S.E.P.A., *Strategy for Reducing Lead Exposures* (October 3, 1990b); J.M. Davis, R. Elias and L. Grant, "Current Issues in Human Lead Exposure and Regulation of Lead," *NeuroToxicology* 14 (1993).

<sup>138</sup>The chemical added to the City's drinking water is a "blended orthophosphate."

more than 10% of the "high risk" drinking water taps monitored should have lead levels above 15 ppb. This is expected to result in an average level of no more than approximately 5 ppb of lead in drinking water.<sup>139</sup> Before the introduction of this program, water tap testing in 1992 revealed that only 65% of the "high risk" water samples achieved the 15 ppb standard.<sup>140</sup> Drinking water quality improved significantly within a year after DEP launched its corrosion-control program; the percentage of "worst case" samples at or above 30 ppm (double the EPA standard) dropped from 14% to 4% by the end of 1993.<sup>141</sup> While the City still has not fully achieved the federal standard, it has come very close to doing so.

Certain individual faucets, unfortunately, can present a greater risk. When water has not been drawn for several hours, the water in the pipes has more time to react with the lead in the pipes or solder.<sup>142</sup> For example, lead in some school or daycare center water fountains and taps potentially can result in greater exposures than in homes because the water may be left standing for longer periods -- overnight, during weekends and during vacation periods.<sup>143</sup>

Lead is present throughout New York City in building plumbing and water supply systems, so it may add an incremental level of exposure citywide. But lead pipe materials have been used to a greater extent in smaller buildings, such as single or two family homes. Also, such homes are less likely to use as much water as apartment buildings, which would help to flush the system and also facilitate the coating of the pipes. Consequently, the children who would be more affected by this lead source would very likely tend to be those who live in single or two family dwellings rather than larger rental buildings.<sup>144</sup> There is no apparent correlation between this and the areas of concentration of lead poisoning in the City.

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<sup>139</sup>See Inside EPA, "EPA Tightens Standards for Lead in Drinking Water," *Envtl News* (May 7, 1991); 40 C.F.R. §§ 141 and 142; 56 *Fed. Reg.* 26460 (June 7, 1991).

<sup>140</sup>Office of the Comptroller, *Report on Lead Content in Drinking Water at City Schools and Day-care Centers* (July 1, 1993), p. 10.

<sup>141</sup>NYC DEP, "USEPA Lead and Copper Rule: NYCDEP - At the Tap Lead Levels: Morning First Draw Sampling Results" for Jan. 92-Dec. 93 (January 10, 1994).

<sup>142</sup>Testimony of Dr. William N. Stasiuk, Director of the State DOH Center for Environmental Health and Dr. Michael Cohen, Director of the State DOH Child and Adolescent Health for State DOH, in, N.Y.S. Joint Legislative Comm'n on Toxic Substances and Hazardous Wastes, *Hearing Report: Lead Contamination in New York State* (March 1992), p. 23; Testimony of Dr. Evelyn Mauss, Senior Science Consultant for the Natural Resources Defense Council, *id.*, at 30.

<sup>143</sup>National Research Council, at 129.

<sup>144</sup>Interview of Dr. Evelyn Mauss, Physiologist and Consultant to the Natural Resources Defense Council, January 5, 1998.

### **3. *Lead-based paint in schools, daycare centers, and playgrounds are potential causes of individual cases of lead poisoning***

Day-care centers can present a special risk because they often service children who are within the age range most vulnerable to lead poisoning. Also, because care givers frequently have to supervise several children at a time, it can be more difficult to witness and prevent behavior that can lead to exposure to lead dust. The Childhood Lead Poisoning Prevention Act would require the abatement of all peeling lead-based paint in any portion of a day care facility which serves seven or more children under the age of six and operates more than five hours per week for more than one month a year and in the home of a family day care service which provides regular daytime care of at least three children under the age of six in the home of an unrelated provider for more than five hours per week.<sup>145</sup>

The City's public schools can present a risk of contamination as well. The Chancellor's Task Force on Lead Hazard Reduction, in a 1993 report, concluded that all walls and ceilings in schools built before 1980 should be assumed to contain lead-based paint -- a warning that applied to 628 elementary schools throughout the City.<sup>146</sup> Because of ongoing maintenance problems in the public school system, peeling and chipping paint in classrooms is a frequently occurring problem.<sup>147</sup> These conditions can present a significant risk, especially for very young children in our schools, some of whom still engage in hand-to-mouth activity. Responding to concerns raised by the Public Advocate, City Councilmember Stanley Michels, and public health advocacy groups<sup>148</sup> during the summer of 1994 the Board of Education launched a peeling paint repair program in pre-kindergarten, kindergarten and special education classrooms. The 1,219 "worst case" rooms were repaired in 1994 and 1995.<sup>149</sup> An additional 2,303 rooms were repaired in 1996 and 1997 and approximately 460 are scheduled to be repaired.<sup>150</sup>

Nevertheless, renovation activities in the schools continue to disturb lead-contaminated paint.<sup>151</sup> Window removal activities can be particularly hazardous because heavily leaded paint,

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<sup>145</sup>Int. 956, § 17-821(a). Also, the interior and exterior surfaces of windows, radiators, radiator coverings, pipes and other surfaces designated by DOH in regulation must be abated by September 1, 2000. Int. 956, §17-821(c).

<sup>146</sup>Chancellor's Task Force on Lead Hazard Reduction, *Report on Lead Based Paint Policy Recommendations* (August 4, 1993), p. 1.

<sup>147</sup>In 1994, the Board of Education reported that its survey of 11,574 rooms found 5,114 had damaged walls and 4,441 had peeling ceilings. Eric Greenberg, "I'll Get Lead Out, Cortines Promises," *Daily News* (April 20, 1994).

<sup>148</sup>Advocacy groups included Parents Against Lead in Schools, the New York Public Interest Research Group ("NYPIRG"), the New York City Coalition to End Lead Poisoning, and others.

<sup>149</sup>*Mayor's Management Report: Fiscal Year 1995*, Vol. I, p. 201. In 1994, the first 245 rooms were repaired.

<sup>150</sup>*Mayor's Management Report: Fiscal Year 1996*, Vol. I, p. 191. *Mayor's Management Report: Fiscal Year 1997*, Vol. I, p. 239.

<sup>151</sup>Office of the Public Advocate, *Construction vs. Children: The Need to Improve Environmental Safety During Renovation of Schools and Public Housing* (April 24, 1996), pp. 48-53.

because of its durability, often was used on surfaces expected to become moist. Unfortunately, despite repeated requests from this office and public health advocates over the past year and a half, the Board of Education still has not released a window removal safety protocol.

The Childhood Lead Poisoning Prevention Bill would require the Board of Education to establish a lead-based paint hazard reduction plan for projects costing \$2,500 or more that would disturb lead paint and to assign a "certified supervisor" to ensure that the plan is implemented properly.<sup>152</sup> It also would require the Board to establish a systematic program to abate peeling paint conditions in rooms occupied by special education, kindergarten or first grade students.<sup>153</sup>

Fences and playground equipment at schools, daycare centers, parks and playgrounds can also present a risk, since some of it is coated with lead-based paint. In October 1996, the Consumer Product Safety Commission released a report which found that over 60% of the playgrounds it tested in 13 cities had elevated levels of lead in the paint on playground equipment. (The two playgrounds in New York City which were part of this study did not have lead-based paint on their equipment.)<sup>154</sup> The Childhood Lead Poisoning Prevention Bill would immediately require the abatement of any peeling or chipping lead-based paint on public playground equipment or fencing. It also would require all public playground equipment that is coated with lead-based paint to be replaced by lead-free equipment by September 1, 2005.<sup>155</sup>

**4. *Toys and tableware are not a likely source of lead poisoning for most children, but can still contribute to or cause individual cases of lead poisoning***

Both State law and the City Health Code ban the sale of ceramic tableware and other consumer products which release lead at a level greater than seven parts per million unless it can be demonstrated that the product presents no threat to public health.<sup>156</sup> Also, toys covered with lead-based paint or a lead-contaminated surface coating cannot be sold or given away in New York City.<sup>157</sup> Individual cases of lead poisoning can be caused by exposure to old or imported toys and tableware if the surface paint, glaze or coating contains lead, however, this is not a primary cause of lead poisoning in the City.

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<sup>152</sup>Int. 956, § 17-812.

<sup>153</sup>Int. 956, § 17-813.

<sup>154</sup>Consumer Product Safety Commission, *Staff Recommendations for Identifying and Controlling Lead Paint on Public Playground Equipment* (October 1, 1996). The worst levels were found in Chicago, Memphis, Pittsburgh, New Orleans, Portland (Oregon), San Francisco, and Philadelphia.

<sup>155</sup>Int. 956, §17-182(c) and (d).

<sup>156</sup>Public Health Law, § 1376-a (McKinney, 1997); N.Y.C. Health Code, § 173.13(a)(1997).

<sup>157</sup>N.Y.C. Health Code, § 173.13(b)(1997); State law only bans the sale of such toys, see Public Health Law, § 1372 (McKinney, 1997).

#### **IV. IT IS REASONABLE TO REQUIRE LANDLORDS TO MAKE APARTMENTS OCCUPIED BY CHILDREN UNDER SIX YEARS OLD "LEAD SAFE"**

As noted above, unlike Local Law 1 of 1982, which requires full abatement of all lead-based paint on the walls, ceilings, windows and doors inside a multiple dwelling apartment, Int. 956 requires only that an apartment be made "lead safe." This report uses the approach taken by Int. 956 as a model for defining what constitutes a "lead safe" apartment and what actions a landlord should be required to take to ensure that an apartment is lead safe. It then compares the costs of such actions with the costs already required for basic maintenance of buildings and apartments under the Housing Maintenance Code and also with the costs that would be required under the existing lead-based paint law, Local Law 1, as interpreted by the Courts.

While some people have argued that simply urging householders to take care to clean their homes will protect children against lead contaminated dust, this approach has not been effective. Lead dust is particularly difficult to remove from a home. Because lead dust particles typically are extremely small, they escape from ordinary vacuum bags and are not easily picked up by brooms. This is why lead abatement contractors use a special "HEPA" vacuum, which is designed to remove lead dust, in order to clean an area after lead-based paint removal.<sup>158</sup>

To protect children living in apartments that contain lead-based paint, hazards must be controlled.

##### **A. *The City Pays for the Failure of Landlords to Make Their Apartments Lead Safe***

Right now many landlords pay no costs at all for lead poisoning prevention despite deteriorated conditions in their buildings because enforcement of Local Law 1 is so limited. Of course, not all such landlords escape their responsibility because such inaction does leave them open to liability if a child becomes lead poisoned. A landlord can be held liable for injuries caused by lead-based paint if he or she had actual *or* "constructive" notice of the lead-based paint hazard and the residency of a child six years of age or under in the dwelling. In a dwelling built before 1960, the paint is presumed to be lead-based unless proved otherwise, the landlord is deemed to have constructive notice of a lead-based paint hazard.<sup>159</sup> Since the window guard law gives landlords notice that a child ten years of age or under resides in a dwelling, landlords can easily identify which apartments for which they must determine whether a child under the age of seven resides on site. Such liability can range from \$1.7 million, as in the case of an eight-year-old child in a suit against a landlord who failed to remedy the peeling paint conditions despite repeated

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<sup>158</sup>J.J. Chisolm and C.A. Rhode, "The Long Term Effectiveness of Residential Lead -Based Paint Abatement," *Environmental Research* (1994); M. Weitzman, A. Aschengrau, D. Bellinger and R. Jones, "Lead-Contaminated Soil Abatement and Urban Children's Blood Lead Levels," *Journal of American Medical Association* (1993)

<sup>159</sup>*Juarez v. Wavecrest Mgt. Team Ltd.*, 88 N.Y.2d 628, 646-47 (1997); *Allison v. Bay Realty Corp.*, Index No. 13494/94, *N.Y.L.J.*, June 9, 1997, p. 33, col. 5, Sup.Ct., Queens Co., A. Price, J., 1997 N.Y. Misc. LEXIS 219.

complaints<sup>160</sup> up to \$11 million, which was the amount of a recent damages award against the City in a lead poisoning case.<sup>161</sup>

All landlords are injured by the failure of irresponsible landlords to make their apartments lead safe. One expert notes that the exposure of landlords to liability "probably contributed to the 5.2 percent increase in the cost of insurance in 1994-95, the fastest growing category of landlords' operating expenses."<sup>162</sup>

But whether or not the landlord is taken to court, when a child becomes poisoned, the City pays for the landlord's inaction.

- **Direct costs to the City.** The City of New York spent \$2.2 million in fiscal year 1997 alone to identify and evaluate lead poisoned children, ensure that they received proper medical care and take action to stop their exposure to lead hazards. An additional \$3 million was spent by the State and \$1.3 million by the federal government, for a total of \$6.6 million.<sup>163</sup>

While it is difficult to separate out the costs of lead enforcement activities from other code enforcement work, HPD, DEP and the City Corporation Counsel's office expend staff time and resources conducting inspections in response to complaints and enforcing Housing Maintenance Code and Health Code violations. In addition, City agencies must respond to requests for information by litigators regarding individual cases of poisoning.

- **Liability and Legal Costs.** Over the past eight years, lead poisoning claims settlements have cost the City approximately \$22 million.<sup>164</sup> Among the ten

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<sup>160</sup>*Miller v. Beaugrand*, 169 A.D.2d 537, 564 N.Y.S. 390 (1st Dep't, 1991).

<sup>161</sup>*Jones v. City of New York*, Supreme Court, Kings Co., *NYLJ* (August 4, 1997), p. 2, col. 6; see also, \$2.4 million settlement of a lead poisoning case cited in Office of the Comptroller, *Annual Claims Report Fiscal Year 1996* (August 1997); *Miller v. Beaugrand*, 564 N.Y.S.2d 390, 169 A.D.2d 537 (1st Dep't, 1991), *appeal denied*, 77 N.Y.2d 810, 571 N.Y.S.2d 913 (1991)(\$1.7 million awarded in damages for eight-year-old lead-poisoned child who had been exposed to lead paint for a period of six months).

<sup>162</sup>Donald A. Lash, "Cost Allocation of Lead Paint Abatement in Distressed Buildings in New York City," *J Affordable Housing* 6:299-308, 301 (Summer 1997); see New York City Rent Guidelines Board, *Housing NYC: Rents, Markets and Trends '95* (1995) and Matthew Purdy, "Cost of Lead Cleanup Puts More Poor Children at Risk," *New York Times* (August 25, 1994).

<sup>163</sup>*City DOH 1997 Grant Application to CDC*, at 81.

<sup>164</sup>Telephone interview of Steve Levy, Assistant Corporation Council, Chief of the Tort Division Lead Unit, January 30, 1998. In Fiscal Year 1998, a court awarded damages in the amount of \$11 million for the poisoning of a two-year-old child in a City-owned building, but the claim was settled for a substantially reduced sum which is included in the \$22 million figure. See *Jones v. City of New York*, Supreme Court, Kings Co., *NYLJ* (August 4, 1997), p. 2, col. 6. For a partial list of settlements, see Office of the Comptroller, "Lead Paint Claims Settlements - FY 1993 to FY 1997." The list is not complete yet. A larger and more accurate sum will be available soon.

most costly claims against the City resolved in fiscal year 1996 was a claim for lead poisoning caused by exposure to lead-based paint chips in an apartment building. The settlement was for \$2.4 million.<sup>165</sup>

Many of the cases settled during this period were eight to ten years old, and a total of approximately 1,295 cases are pending.<sup>166</sup> An average of 22 cases per month were filed in Fiscal Year 1996 alone.<sup>167</sup> Some of these cases are for lead poisoning that allegedly was caused by conditions in City-owned housing and some are for lead poisoning that was caused by conditions in private housing where the City allegedly failed to take aggressive action to enforce the Housing Maintenance Code to remedy the problem.

In addition to the settlement fees, the City pays the legal costs for responding to such litigation and devotes staff time and resources to the legal effort. It also is the subject of ongoing lawsuits for failure to enforce Local Law 1, as noted in the History section of this report.

Also, when the City and a landlord share responsibility for a poisoning but the landlord becomes insolvent, the City can be left holding the bag. In one case, the court awarded \$1.7 million to the family of a child who had suffered lead poisoning where the landlord had failed to remedy the condition despite repeated complaints. In this case, however, the City had taken over the property from the landlord in an *in rem* foreclosure proceeding, and it took the City four months to abate the lead condition after it took title. While the court held that the City was 20% liable and the landlord 80% liable for the injury, the City ended up having to pay the full award because the private landlord was insolvent.<sup>168</sup>

- **Social costs to the City.** The City pays for medical care and education of most lead poisoned children, and it also is subject to other social costs of lead poisoning.

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<sup>165</sup>Eight of the other top ten claims were for injuries attributed to hospital negligence, and the remaining claim was for an injury attributed to a fall after a water main break which allegedly caused the claimant's death. Office of the Comptroller, *NYC Comptroller's Annual Claims Report Fiscal Year 1996* (August 1997), p. 15.

<sup>166</sup>Telephone interview of Steve Levy, *supra*.

<sup>167</sup>Office of the Comptroller, "Lead Paint Claims Filed 1993-7." Because the computer coding system was only just beginning to be used in 1993, the number of claims in earlier years may be understated. In 1994, the City had reported that on average, 15 new claims were being filed each month. Matthew Purdy, "Cost of Lead Cleanup Puts More Poor Children at Risk," *New York Times* (August 25, 1994), at B3.

<sup>168</sup>*Miller v. Beaugrand*, 169 A.D.2d 537, 564 N.Y.S.2d 390 (1st Dep't), *appeal denied*, 77 N.Y.2d 820, 572 N.Y.S.2d 913 (1991); David J. Grais, "Lender Liability for Injuries from Lead Paint," *N.Y.L.J.* (Apr. 22, 1993), p. 1, col. 1; Suzette Brooks, "Lead-based Paint: Liability Looms for Landlords," *Env'tl. Law in N.Y.* (September 1993), PP. 141-142.

**Medical treatment or care for poisoned children.** The majority of children who become lead poisoned are poor and nearly all of them are in the public school system. Consequently, the City and/or the State bears most of the financial costs of caring for these victims. The health effects of lead poisoning -- such as anemia and hyperactivity -- can lead to health costs which are difficult to quantify but can be substantial.

The Centers for Disease Control in 1991 calculated the "present value" of preventing a child's blood lead level from rising above 24 µg/dl at \$1,300 in avoided medical costs.<sup>169</sup> Another study estimated an average savings of \$2,000 per child from avoided costs of clinical attention and remedial education as well as lost productivity would result for each reduction of 1 µg/dl in blood lead levels in a community.<sup>170</sup>

**Special educational assistance.** It has been estimated that 20% of children with blood lead levels above 25 µg/dl require assistance from a reading teacher, school psychologist, or other specialist for an average of three years. The cost for this, taken from a study for the U.S. Department of Education<sup>171</sup>, when updated to 1997 dollars by the Consumer Price Index, results in an estimated cost of \$4,850 per child over 25 µg/dl.<sup>172</sup> The cost can be even higher if the child is placed in the special education system. In FY 1995, the New York City Board of Education spent, on average, over \$6,000 more for each high school student in the special education system.<sup>173</sup>

**Lost tax revenue from earnings as adults.** Lost IQ, reduced educational achievement, effects on hearing, hyperactivity, perceptual disorders and attention span deficits can affect future earnings of an individual who has been lead poisoned. A recent

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<sup>169</sup>CDC Report; Florini and Silbergeld, at 36.

<sup>170</sup>S. Binder and M. Falk, "Strategic Plan for the Elimination of Childhood Lead Poisoning" (Atlanta: Department of Health and Human Services, 1991); see P. Baghurst, at 1283.

<sup>171</sup>J. Kakalik, "The Cost of Special Education" (Rand Note N-1792-ED, U.S. Dept. of Education, by Rand Corp., Santa Monica, CA)(1981).

<sup>172</sup>Joel Schwartz, "Societal Benefits of Reducing Lead Exposure," *Envtl Res* 66:105-124 (1994). The CDC had estimated this cost to be \$3,331 in 1991. CDC Report; Florini and Silbergeld, at 36; see also M. Nina Coppens, et al., "The Relationship Between Elevated Lead Levels and Enrollment in Special Education," *Family and Community Health* 40-41 (1990).

<sup>173</sup>Office of the Comptroller, *Comparison of per Capita High School Spending on Instruction for General Education versus Special Education Students* (1996), pp. 20-27. The average cost to educate a high school student in a general education setting was \$2,841, while the average cost to educate a high school student in the special education system was \$8,963.

study found that each additional IQ point is associated with an estimated 3.63% gain in earnings, and the effect on earnings per IQ point is 1.4 times higher for females than for males. It concluded that a permanent reduction in blood lead concentrations of 1 µg/dl nationwide would produce a net present value benefit of \$1,950 per child for all children turning 6 years of age each year, for a total benefit of \$7.56 billion per year. The researchers pointed out that "[i]t is reasonable to expect the importance of education and cognitive skills in our economy to continue growing in the future."<sup>174</sup>

**Possible City costs related to juvenile delinquency.** A 1993 study found that among males, lead poisoning was "the most significant environmental...factor that showed an independent effect" on disciplinary problems in school, juvenile crime and adult crime.<sup>175</sup> New evidence continues to link lead poisoning with delinquent behavior among juveniles, which could lead to criminal behavior.<sup>176</sup> In 1991, the CDC recognized this connection and noted that any statement of the social costs of lead poisoning will be an underestimate without consideration of this issue.<sup>177</sup>

One researcher estimated in 1994 that in light of the medical, educational and social costs of lead poisoning for children and adults, a 1 µg/dl reduction in blood lead levels nationwide would save \$17.2 billion dollars per year.<sup>178</sup>

**B. A Responsible Landlord's Costs for Lead Poisoning Prevention Under the Childhood Lead Poisoning Prevention Bill Would Be Very Limited**

Under Local Law 1, as interpreted by the courts, all landlords are required to remove or cover all lead-based paint -- whether deteriorated or intact -- from apartments in multiple dwellings where very young children reside. Our research, based on analysis by the Pratt Planning & Architectural Collaborative, indicates that complete abatement of a typical two-bedroom apartment could cost up to \$9,950 if the apartment's walls, windows and doors were

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<sup>174</sup>David Salkever, "Updated Estimates of Earnings Benefits from Reduced Exposure of Children to Environmental Lead," *Envtl Res* 70:1-6, 4 (1995). This work updates and further develops calculations conducted in an earlier study. See Joel Schwartz, at 114. Schwartz's estimate was \$1,300 per child for the cohort turning 6 years of age each year, for a total benefit of \$5.06 billion per year, in 1993 dollars.

<sup>175</sup>Deborah Denno, "Considering Lead Poisoning as a Criminal Defense," *Fordham Urban Law Journal* 20: 377-400, 385 (1993); see Deborah Denno, "Human Biology and Criminal Responsibility: Free Will or Free Ride?" *U Pa L Rev* 137:615 (1988).

<sup>176</sup>See note 18, *supra*.

<sup>177</sup>CDC Report; Florini and Silbergeld, at 36.

<sup>178</sup>Joel Schwartz, "Societal Benefits of Reducing Lead Exposure," *Envtl Res* 66:105-24 (1994).

fully abated.<sup>179</sup> (See Table III below.) This is significantly lower than the "\$15,000 or more" unit cost estimate provided by landlord lobby organizations<sup>180</sup> and HPD,<sup>181</sup> and more consistent with the \$7,500 on average per unit provided by HPD to landlords in forgivable loans for lead abatement.<sup>182</sup> Higher figures may include costs for repairs already required by the Housing Maintenance Code. In other instances, they are based on a removal strategy of stripping the paint off all surfaces rather than the more common practice of sheetrocking or otherwise enclosing walls and replacing windows or doors.<sup>183</sup> Still, it is a substantial expense.

In contrast, a *responsible* landlord -- one who regularly maintains apartments to avoid the condition of peeling paint -- would have very limited duties under the Childhood Lead Poisoning Prevention Bill. Compliance reasonably could be expected to cost from \$20 to \$1,800 in an occupied apartment and from \$1,500 to \$3,900 in a vacated apartment, according to estimates developed for the Public Advocate's Office by the Pratt Planning & Architectural Collaborative,<sup>184</sup> with the range depending on whether the landlord chose to remove lead-based paint from window friction surfaces or replace the windows entirely. The cost would be lower because the goal would be to make the apartment "lead safe" rather than "lead free," and a well-maintained unit is much more easily converted to a "lead safe" apartment than a poorly maintained unit. The landlord would be required to:

- Inspect, or have inspected, any occupied apartment containing a child under the age of six at least once each year to check for lead-based paint hazards (unless more frequent inspections are needed in a

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<sup>179</sup>In 1991, HUD estimated the cost of full abatement of an average home containing peeling paint and excessive dust levels to range from \$8,900 to \$11,900 per unit, depending on the abatement strategy used. For an apartment without peeling paint or excessive lead dust, the cost was estimated to range from \$5,500 to \$7,700. "Testimony of John C. Weicher, Assistant Secretary for Policy Development and Research HUD," before Senate Subcommittee on Toxic Substances, Environmental Oversight, Research and Development of Committee on Environment and Public Works" (February 21, 1991), p. 119; see N.Y.S. Joint Legislative Commission on Toxic Substances and Hazardous Wastes, *Lead Poisoning: Sources, Symptoms and Solutions* (January 1993), p. 38.

<sup>180</sup>Letter from John J. Gilbert, III, President, Rent Stabilization Association of N.Y.C., Inc., to N.Y.C. Comptroller Elizabeth Holtzman, April 13, 1993.

<sup>181</sup>Testimony of City HPD First Deputy Commissioner William E. Spiller on Intro. 385 Before the Committee on Environmental Protection, September 9, 1994, p. 2. These estimates have varied. About two weeks before this testimony was delivered, unnamed City housing officials reportedly told a writer for the *New York Times* that full abatement of an apartment would cost approximately \$5,000. See Matthew Purdy, "Cost of Lead Cleanup Puts More Children at Risk," *New York Times* (August 25, 1994), p. B1.

<sup>182</sup>See *City DOH and HPD 1997 Grant Application to HUD*, at 23.

<sup>183</sup>Florini and Silbergeld, at 36, citing a HUD demonstration project in which abatement costs ranged from \$8,870 to \$11,870, depending on which strategy was used.

<sup>184</sup>This estimate is similar to the \$3,500 which City DOH and HPD plan to allocate on average for apartments participating in the Alternative Interim Control Project - which, similarly, would require removal of peeling lead paint and lead paint from friction surfaces. See *City DOH and HPD 1997 Grant Application to HUD*, at 28.

particular case to prevent the occurrence of peeling paint or other hazardous conditions in the apartment).<sup>185</sup>

- Repair any condition of peeling lead-based paint, deteriorated subsurface or any other lead-based paint hazard (such as, for example, a plumbing leak that could cause paint to peel from a wall or ceiling or a condition that causes paint to chip off of a door) in a safe manner, in order to avoid creating any *new* lead-based paint hazard.<sup>186</sup> While the best way to do that probably would be to follow the procedures set out in City DOH regulations, Int. 956 does not state such a requirement directly, which arguably leaves the landlord some flexibility in conducting the repair safely.

For certain apartments, City DOH would require additional action, including the removal or covering of lead-based paint on friction surfaces of windows and doors and provision of smooth and cleanable horizontal surfaces on floors, window sills and window wells to facilitate dust removal. This would depend upon such factors as the age and condition of the building, outstanding violations, emergency repair charges and related considerations. These requirements must be established in regulations that would be subject to public review and comment.<sup>187</sup>

Since 78% of all rental apartments in the City reportedly contain no amount of peeling paint or broken plaster,<sup>188</sup> many landlords' costs for occupied apartments will be limited to the cost of the inspection.

- Upon vacancy of an apartment, cover or remove any lead-based paint from window and door "friction surfaces," repair any peeling paint and deteriorated subsurfaces, and make sure that horizontal surfaces in apartments are smooth and cleanable (so that dust can be removed by normal cleaning without special equipment).<sup>189</sup> The repair of peeling

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<sup>185</sup>Int. 956, § 27-2056.4(a). As in the case of "window guards," the owner would be required to send each residential unit a notice asking whether a child under six years of age resides therein. Only if the tenant does not respond is the owner required to inspect the dwelling unit to ascertain whether a child under six years of age resides within. Int. 956, § 27-2056.4(d).

<sup>186</sup>See Int. 956, §§ 27-2056.3 and 27-2056.11(a). "Lead-based paint hazard" is defined in the bill as "any condition in a multiple dwelling that causes exposure to lead from lead-contaminated dust, lead-contaminated soil, or lead-based paint that is peeling or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects." Int. 956, § 27-2056.2(2).

<sup>187</sup>See Int. 956, §27-2056.8(a) and (b).

<sup>188</sup>U.S. Bureau of the Census, *1996 N.Y.C. Housing and Vacancy Survey* (Tabulation Package), Table 50, p. 94.

<sup>189</sup>See Int. 956, § 27-2056.8(2) and (3). Landlords would not have to conduct such work in an occupied apartment until July 1, 2005.

paint and deteriorated subsurfaces, again, must be conducted "using work practices that will minimize and contain the generation of lead-contaminated dust" -- a standard that is qualitative and allows for some flexibility in methods used.<sup>190</sup>

Int. 956 gives the landlord the discretion to decide whether or not to hire a professional to inspect the apartment. It also gives the landlord the discretion to determine the nature of the inspection. Depending on the conditions in an individual apartment, a responsible landlord might, for example, conduct a more comprehensive and professional inspection initially, possibly including dust wipe samples. This might be followed in subsequent years by inspections designed to look only for *changes* in conditions. ATC Associates, Inc., an environmental consulting firm, notes that if a building includes 15 or more apartments to be inspected, a professional inspection limited to visual observations and documentation of lead paint hazards observed could cost \$30-40 per unit, while work that is limited to five or fewer units might cost \$75-100 per unit. If the landlord also requests dust sampling and recommendations for abatement action, the cost might range from \$150-\$300 per unit or more, depending in part on the type and amount of sampling requested. These prices, however, could be reduced by increased competition if a market "niche" were created by City legislation.<sup>191</sup> Also, DOH could issue guidance documents that might affect choices made by landlords.

The abatement of friction areas, which generally would be required only upon vacancy (unless a lead-poisoned child was present, in which case City DOH would order such work to be conducted right away) is very important. As former City DOH Health Commissioner Margaret Hamburg, M.D., explained in testimony to City Council:

Friction surfaces refer to movable surfaces such as window frames that rub against each other. The rubbing motion will, over time, cause the paint to abrade and deteriorate, creating chips and dust. Simply repainting the deteriorated portion of the window is only a temporary solution, especially when it is old and has many layers of paint. Unless all the lead-based paint is removed or covered, over time the constant movement and rubbing will probably cause the hazard to recur.<sup>192</sup>

It is reasonable to expect responsible landlords to make their apartments lead safe upon vacancy, especially since:

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<sup>190</sup>See Int. 956, § 27-2056.8(1).

<sup>191</sup>Public Advocate Office telephone interview of Vince Colluccio, Eric Whiston and David Chambers, ATC Associates, Inc., January 29, 1998. While a more comprehensive lead-based paint "risk assessment" could \$500-\$600 per unit, landlords generally would not contract for such costly work unless specifically required by law to do so.

<sup>192</sup>Testimony of City DOH Commissioner Margaret Hamburg, M.D., on Lead Poisoning Prevention Before the NYC Council Committee on Housing and Buildings, April 29, 1996, p. 3.

- Landlords recently won a large new vacancy allowance of 20% or more -- a cost which incoming tenants are required to pay -- despite the fact that they have regularly been awarded rent increases that reflected their maintenance costs and despite the fact that their income has kept pace with inflation.<sup>193</sup> Most landlords should invest part of that money to make the apartment lead-safe by removing lead-based paint from the door and window friction surfaces.
- In many cases, the landlord could replace the windows and doors entirely and recover the replacement costs through a reasonable rent increase. The Rent Stabilization Code allows owners to claim a Major Capital Improvement ("MCI") or Apartment Improvement ("AI") rent increase for replacement of windows or doors that are 25 years old or older.<sup>194</sup> This allowance was established in 1985 as an incentive for landlords to conduct more maintenance work on their buildings. The "MCI" or "AI" rent increase becomes a permanent part of the base rent upon which further rent increases are allowed each year by the Rent Guidelines Board. Even if a landlord had installed a door or window in 1959 -- the last year before lead-based paint was banned for use in the interior of dwellings -- it would be eligible for replacement under the Code now.

It should be noted that landlords of rent-controlled apartments would be the least affected by a "lead safe" law.

- The number of rent-controlled apartments in the City currently is fewer than 71,000, which is less than 4% of all rental apartments, and it continues to decline. The number of rent-controlled apartments fell 30% from 1993 to 1996.
- The median age of occupants of rent-controlled apartments is 70; only 4% of these rent-controlled apartments -- or approximately 2,700 units -- include children under the age of six.<sup>195</sup>

The landlord of a rent-controlled apartment would incur costs upon vacancy if the dwelling contains lead-based paint, especially since many of these apartments have significant peeling paint

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<sup>193</sup>See Office of the Public Advocate, *Rent Destabilization Study II: An Analysis of the Fairness to Landlords of Rent Increases Granted by the Rent Guidelines Board for Stabilized Apartments* (May 18, 1997).

<sup>194</sup>N.Y.S. Division of Housing and Community Renewal ("DHCR"), Office of Rent Administration, "New York City Rent Stabilization Code Operational Bulliten 90-2 (September 26, 1990)." To make use of the Apartment Improvement increase -- which is for improvements made in an individual dwelling unit -- the landlord must obtain the approval of the tenant for the renovation activity if the apartment is occupied. If the apartment is vacant, however, no such approval is required.

<sup>195</sup>1996 NYC Housing and Vacancy Survey, Table 8.

conditions. But under the new rent regulation law recently passed in the State Legislature, all rent-controlled apartments change from rent controlled to rent stabilized upon vacancy and thus are eligible for a significant rent increase.

The landlords who are and would continue to be the ones most affected by lead poisoning prevention requirements -- if their apartments contain lead-based paint -- are those who own unregulated apartments, who are able to charge whatever rent the market will bear, or landlords of regulated apartments in buildings constructed before 1947. Many of these apartments have peeling paint problems and a significant percentage of the units contain children under the age of six. Appendix C compares various rental apartment categories in terms of percentage of rental housing stock, presence of children in dwellings, and the occurrence of peeling paint.

The City's *in rem* buildings constitute the housing category with the highest concentration of deteriorated paint conditions, although the actual number of units is relatively small. *In rem* apartments constitute 2% of all units. While data on peeling paint and broken plaster could only be obtained for the boroughs of the Bronx and Manhattan (which each contain more than 5,000 units of *in rem* housing), the statistics were very high -- 41% in Manhattan and 26% in the Bronx. No data on the number of such apartments containing young children was available.<sup>196</sup>

The City's public housing has many deteriorated paint problems, but much of that paint reportedly does not meet the definition of lead-based. Because lead-based paint was more expensive than non-lead paint, it was seldom used on walls or ceilings in public housing. It was, however, used on metal equipment and fixtures such as pipes and radiators and in areas where mold could be a problem, such as windows, where its anti-corrosive properties would be helpful.<sup>197</sup>

**C. *A Landlord in Violation Would Incur Reasonable Costs to Remedy the Problem -- and a Responsible Landlord Would Avoid Violations***

The cost to violators of the prohibition against deteriorated lead-based paint -- landlords who fail to be vigilant in preventing lead-based paint hazards and are issued a violation by the City -- is greater.

- They must take the legal steps necessary to respond to the code violation and repair the deteriorated lead-based paint conditions following the specific dust control requirements of the NYC Health Code.

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<sup>196</sup>See Appendix C.

<sup>197</sup>Telephone interview of Diane Kiel, Director of Lead Poisoning Control, March 28, 1996.

- Also, it is likely that the amount of deteriorated paint that they must repair will be greater because of their failure to identify and repair it at an earlier date.<sup>198</sup>
- Finally, they may be required to take action to address friction surfaces on windows and doors before vacancy if HPD determines that their apartments present a high risk, based on factors to be determined by HPD which may include the age of the dwelling, the prevalence of lead-based paint hazards in the building, outstanding violations and related issues.<sup>199</sup> (A similar provision was included in a bill introduced at the request of the Mayor in 1993.<sup>200</sup>

But it is worth considering how such landlords could have avoided these violations:

- Tenants already have a right under the Housing Maintenance Code to have their apartments repainted every three years.<sup>201</sup> If landlords did this, most apartments would contain little or no peeling paint.
- Landlords already are required by the Housing Maintenance Code to repair ordinary peeling paint and the water leaks that frequently are the cause of peeling paint conditions.<sup>202</sup>
- Landlords who conduct annual inspections of apartments are unlikely to find large amounts of peeling paint except under unusual circumstances, such as a major unexpected plumbing or roof failure or substantial damage to an apartment caused by an irresponsible tenant.

While some landlords with poor business judgement may unknowingly purchase buildings which have been poorly maintained for many years and could incur higher costs than most other responsible landlords to make their apartment units lead safe, generally the price paid for a building that contains lead-based paint should include the cost of making the building lead safe. The potential liability for failure to safely manage lead hazards in dwellings has been known for decades. A good businessperson buying real estate would consider this in the negotiating costs.

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<sup>198</sup>The chances of a landlord being falsely accused of failing to abate a lead paint hazard because the presumption that a building constructed before 1960 contains lead paint is incorrect in a particular case is small. In the first six months of 1997, only 15% of DOH's orders for lead abatement were rescinded or modified based on a landlord's test results. Affidavit of Susan Klitzman, City DOH Assistant Commissioner for Environmental Risk Assessment and Communication in Opposition to Plaintiff's Motion to Vacate Statutory Stays, *New York City Coalition to End Lead Poisoning v. Rudolph Giuliani* (N.Y. Co. Index No. 42780/85, September 12, 1997), at 4.

<sup>199</sup>Int. 956, § 27-2056.8(b).

<sup>200</sup>The bill was introduced by Councilmember Archie Spigner at the request of the Mayor and titled, Int. 436.

<sup>201</sup>N.Y.C. Admin. Code, § 27-2013(a).

<sup>202</sup>N.Y.C. Housing Maintenance Code, §§ 27-2005(a) and 27-2026.

Also, the new federal disclosure law on lead, which requires owners to disclose to prospective buyers any known presence of lead-based paint on premises and to allow them to conduct lead-based paint tests prior to purchase,<sup>203</sup> has made such a scenario less likely to occur.

The two tables below summarize the responsibilities and costs for landlords to comply with the Housing Maintenance Code, a "lead safe" law such as Int. 956, and Local Law 1 of 1982. The tables are based on the example of an apartment with two bedrooms, six windows and six doors. It is assumed that a poorly monitored apartment would have peeling paint in two rooms, with at least ten square feet of peeling paint. While a carefully maintained apartment is likely to contain no more than five square feet of peeling paint, in a single room, the tables consider that a water leak or other unforeseen incident could cause an amount of peeling paint similar to that found in a poorly maintained apartment. New York State does not yet have a certification program for lead abatement contractors, but many lead-based paint inspection and abatement contractors operating in the City are certified in other states, and it is not believed that a certification program would have a significant impact on the costs listed in this table.<sup>204</sup>

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<sup>203</sup>Congress passed the Residential Lead-Based Paint Hazard Reduction Act in 1996. This law requires property owners of most housing built before 1978 to disclose to prospective buyers or renters whatever they know about the presence of lead-based paint hazards in their properties and to allow buyers to have a lead-hazard inspection conducted prior to purchase.

<sup>204</sup>Interview of Joan Byron, Architectural Director and William Riley, Senior Construction Projects Manager, Pratt Planning and Architectural Collaborative, November 6, 1997. See also, "Calling in the Experts on Hazard Abatement," *New York Times* (July 15, 1997).

**Table II  
Landlord Responsibilities for "Sample" Two Bedroom Apartment**

<b>Condition</b>	<b>Action Already Required by Housing Maintenance Code for non-lead paint</b>	<b>Further Preventive Action Required by Int. 956 if Child Under Age Six Resides in Apartment</b>			<b>Preventive Action Currently Required by Local Law 1 for All Landlords (not already required by Housing Maintenance Code)</b>
		<b>For Responsible Landlord</b>	<b>For Violator</b>	<b>Note: Additional Remedial Action DOH Would Likely Order Under Existing Rules if Child is Lead-Poisoned<sup>g</sup></b>	
Intact Paint (not on door or window surfaces)	No action except to repaint every three years. <sup>b</sup>	Inspect at least once a year if paint is known or presumed to be lead-contaminated	Inspect at least once a year if paint is known or presumed to be lead-contaminated	DOH may, for example, require removal of lead paint from chewable surfaces and two walls	Remove or cover <i>all</i> lead paint on walls, ceilings using legally-mandated safety procedures <sup>c</sup>
Water Leak (example of defect causing paint to deteriorate) <sup>d</sup>	Repair water leak (or any other significant building defects)	None	None	None	None
Peeling or Chipping Lead Paint	Repair <sup>e</sup>	Repair immediately using safe methods but not necessarily following DOH regulations precisely	Repair immediately using legally-mandated safety procedures	DOH may, for example, require removal of peeling lead paint from radiators and risers as well as walls.	Same as for intact paint
Window Friction Surfaces Containing Intact Lead Paint	No action required	Occupied: Generally no action other than inspection (until mid-2005) <sup>f</sup>  Vacancy: Replace or cover lead paint using safe methods	Occupied: Generally no action other than inspection (until mid-2005) <sup>g</sup>  Vacancy: Replace or cover lead paint using safe methods	As directed by DOH (see above regarding chewable surfaces)	Remove <i>all</i> lead paint using legally-mandated safety procedures
Door Friction Surfaces Containing Intact Lead Paint	No action required	Occupied: Generally no action required (until mid-2005) <sup>h</sup>  Vacancy: Replace or cover lead paint using safe methods	Occupied: Generally no action required (until mid-2005) <sup>i</sup>  Vacancy: Replace or cover lead paint using safe methods	As directed by DOH (see above regarding chewable surfaces)	Remove <i>all</i> lead paint using legally-mandated safety procedures

- a. Under Int. 956, the additional requirements would be established on a case-by-case basis by DOH. DOH must order abatement of any lead paint which is a lead hazard because of its condition, location or accessibility to children if a child under the age of 18 has a blood lead level of 20 µg/dL or higher, and may also do so if a child has a blood lead level of 15-19 µg/dL. N.Y.C. Health Code, § 173.13(d)(2). But DOH also has more general authority to order the abatement of a lead paint hazard "as it deems essential" or "to protect the life and health of the occupants of such apartment or room." N.Y.C. Health Code, § 173.13(d)(1).
- b. N.Y.C. Housing Maintenance Code, § 27-2013(b)(2). A landlord may have to repaint an apartment more often if required by contract or other provision of law. A landlord can obtain permission to repaint less often by obtaining a determination from the Department that the paint used is exceptionally durable. Also, the tenant and landlord can, by mutual written agreement, extend the deadline for repainting by no more than two years. See N.Y.C. Housing Maintenance Code, § 27-2013(d).
- c. Despite court decisions affirming that Local Law 1 requires complete abatement of lead paint on interior walls, ceilings, window moldings and doors, the City continues to dispute this interpretation of the law.
- d. Such water leaks would be "underlying defects" which would have to be repaired upon vacancy under Int. 956 if the landlord had not already complied with the existing duty under the Housing Maintenance Code to repair it. Other underlying defects could include crumbling or "unkeyed" plaster.
- e. The City is appealing a court ruling that would require landlords to use legally-mandated safety procedures whether or not a lead paint violation has been cited. *New York City Coalition to End Lead Poisoning v. Giuliani*, 173 Misc.2d 235, 660 N.Y.S.2d 634 (S.Ct. N.Y. Co. 1997), *appeal pending*. This report will compare the costs of lead paint laws with the costs of complying with the Housing Maintenance Code for non-lead paint.
- f. If the window friction surface is creating a lead hazard, the landlord would be required to remedy it. Also, all apartments containing a child under six years of age would be required to remove or cover lead paint on window and door friction surfaces by July 1, 2005, whether the apartment is vacant or not. See Int. 956, § 27-2056.8(b).
- g. In addition to requiring that all landlords replace or cover lead paint on door and window friction surfaces by July 1, 2005, Int. 956 would require City DOH to establish a schedule for compliance with these friction surfaces abatement requirements in occupied apartments for dwelling units in which a child under six years of age resides under certain conditions, which may include the age of the dwelling, the prevalence of lead-based paint hazards, outstanding violations and related issues. See Int. 956, § 27-2056.8(b).
- h. If the door is creating a lead hazard, the landlord would be required to remedy it, and friction surfaces must be abated by July 1, 2005 whether the apartment is vacant or not. See note f above.
- i. See note g above.

**Table III**  
**Estimated Costs of Compliance**  
**for "Sample" Two Bedroom Apartment With Six Windows and Six Doors<sup>a</sup>**

Condition of Apartment	Cost of Action Required by Housing Maintenance Code ("HMC") for non-lead paint and other repairs	Cost of Further Preventive Action Required by Int. 956if Child Under Age Six Resides in Apartment (subtracts costs of actions already required under HMC)			Cost of Preventive Action Currently Required by Local Law 1 for All Landlords (not already required by HMC)
		For Responsible Landlord	For Violator	Additional Remedial Action DOH Would Likely Order Under Existing Rules If Child Is Lead-Poisoned <sup>b</sup>	
Intact lead paint ( <i>not on door or window friction surfaces</i> )	\$0 (but repaint every three years - \$750)	\$20-\$300 <sup>c</sup>	\$20-\$300	\$2,350-\$3,450 (to abate windowsills, baseboards, two walls) <sup>d</sup>	\$6,500 <sup>e</sup>
Water leaks that could cause paint to peel (radiator leak)	\$150 or more <sup>f</sup>	0 (already required by HMC)	0 (already required by HMC)	0 (already required by HMC)	0 (already required by HMC)
Peeling or chipping lead paint ( <i>Up to 5 sq ft in one rm for responsible landlord; 10 sq ft in 2 rms for "unusual" case or violator</i> )	\$150 (5 sq ft, one rm)  \$300 <sup>g</sup> (10 sq ft, two rms)	\$150-\$450 (5 sq ft or less, one rm)  or \$900-\$1,500 (10 sq ft, two rms in <i>unusual</i> case, such as an unexpected water leak) <sup>h</sup>	\$1,100-\$1,700+ <sup>i</sup> (at least 10 sq ft, two rms)	\$1,000  (to remove lead paint from 3 radiators and 4 risers; <sup>j</sup> abatement of two walls and use of safety measures included above)	\$6,200  (cost for peeling paint is same as cost for intact paint, minus cost of work already required by HMC)
Window friction surfaces w/intact lead paint (six windows, 2.8' x 6')	0	Occupied: 0  Vacancy: \$750-\$1,800 <sup>k</sup>	Occupied: 0  Vacancy: \$750-\$1,800	\$750 <sup>l</sup> (occupied apartment)	\$1,800 (occupied apartment)
Door friction surfaces w/intact lead paint (six standard doors)	0	Occupied: 0  Vacancy: \$600 <sup>m</sup>	Occupied: 0  Vacancy: \$600	\$1,650 <sup>n</sup> (occupied apartment)	\$1,650 (occupied apartment)
Total (range depends on the conditions of the apartment)	\$0-\$450 (\$1,200 every 3 years if all repairs conducted)	Occupied: \$170-\$1,800  Vacancy: \$1,350-\$3,900	Occupied: \$1,120-2,000+  Vacancy: \$2,450-4,100+	\$5,750-\$6,850 (occupied apartment)	\$9,650-9,950 <sup>o</sup> (occupied apartment)

a. Source for cost estimates is an average of costs and cost-estimates compiled by the Pratt Planning & Architectural Collaborative.

- b. Under Local Law 1, all lead paint on walls, ceilings, windows and doors inside an apartment must be removed whether a child is poisoned or not. This column assumes that law has been replaced by Int. 956 or similar legislation.
- c. Range reflects difference in cost between an inspection conducted by the landlord or building superintendent on five or more units in a 20-unit building and a professional lead-based paint hazard inspection, which might or might not include dust testing. *See also*, "Calling in the Experts on Hazard Abatement," *New York Times* (July 15, 1997)(one consultant stated that a full inspection with testing might cost \$300-\$400.) Int. 956 does not *specifically* require a full professional inspection, but it would be particularly advisable in a building that is in poor repair and may well be advisable in a well-maintained apartment on a periodic basis.
- d. Estimate includes \$950 to remove and replace windowsills and baseboards, based on a price of approximately \$450 for windows (*i.e.*, \$70-\$75 each for six windows) and \$500 for baseboards (\$2.50 per foot for 40 feet of baseboards on average per room). The cost for baseboards could be lower if the landlord chooses not to replace the baseboards or else covers them instead of removing them. Also includes estimate of \$900-1,500 to sheetrock two walls, which DOH often requires in the case of a child poisoned at a level above 20 µg/dL. (DOH may, for example, order abatement of all walls but the landlord may successfully contest the requirement for most of the walls.) Complying with safety regulations is estimated to add \$500 to \$1,000 to the total cost.
- e. Estimate is based on an average cost of \$1,300 per room to install drywall and remove paint from fixed trim. If faced with de-leading an entire apartment, most landlords would install drywall rather than try to remove the paint from the walls. A landlord most likely would only seek to remove the paint if it were necessary to preserve a designated historic landmark and the extra cost for maintaining the apartment as a landmark generally would be reflected in the rent.
- f. Estimate is based on the cost to replace a leaking radiator valve -- which is the kind of leak most likely to cause peeling paint. Assumes that the radiator is in relatively good condition and painters did not paint over the valve. While a more serious water problem, such as a leaking roof or a need to repair the outside surface of the building (through repointing, for example), would present a much higher expense, that expense also would already be required under the Housing Maintenance Code or the Building Code and should not be attributed to any lead poisoning prevention law.
- g. Estimate is based on an average cost of \$150 per room for repairing peeling paint on one wall *without* using lead-paint safety methods. (As noted above, the City is appealing a court decision that would require use of mandated lead paint safety methods whether or not a violation has been cited.) If an entire room must be painted, the cost would be \$300. A law-abiding landlord should have been painting the apartment every three years, therefore it should not be necessary to repaint the entire room just to address the peeling paint problem. If the paint on other walls has aged, it is probably time to repaint the room pursuant to the Housing Maintenance Code anyway.
- h. First estimate is based on a total cost of \$300-600 to repair 5 square feet or less of peeling paint in one room -- the maximum one would normally expect if a responsible landlord inspects the apartment annually as would be required under Int. 956. Second estimate is based on a total cost of \$1,200-\$1,800 to repair 10 square feet of peeling paint in two rooms, which would occur in a well-maintained, regularly inspected apartment only under unusual conditions, such as a plumbing failure or gross tenant misconduct. Both cost ranges subtract the expense of the work that would already be required by the Housing Maintenance Code. It should be noted that by avoiding violations, a landlord has some flexibility in choice of safe methods for abatement, which could reduce these costs.
- i. Estimate is the same as that for an "unusual" case, but approximately \$200 is added related to paperwork and violation response costs. Also, the (+) sign is present to indicate that a serious violator is likely to have more than ten square feet of peeling paint in two rooms.
- j. Estimate assumes the work is accomplished using a wire brush on a drill, or similar method, with misting to control dust.
- k. Estimate is based on cost per window of \$125 if paint is wet-scraped or removed from friction surfaces using chemical gel, and uses the high end of the range of \$200-300 for the cost if the landlord chooses to replace the entire window (sash and stop moldings), using safe methods.
- l. Estimate is based on cost of using chemical gel rather than replacing window, to avoid double-counting of cost of window repairs. Also, a landlord undertaking a substantial abatement project is more likely to take advantage of the less expensive window abatement option in order to reduce overall costs.
- m. Estimate is based on a cost of \$100 per door to remove the paint on friction surfaces using a chemical gel.
- n. Estimate is based on a cost of \$200 per inside door to replace the door and frame, and \$600-\$650 to replace the entrance door, assuming DOH determines that the door's non-friction areas present a chewable surface or impact risk to the lead-poisoned child.
- o. Range reflects subtraction of costs already required under the Housing Maintenance Code if peeling paint is present.

**D. Financial Assistance for Lead Abatement Is Available to Some Landlords with Low Income Tenants**

As in all forms of industry and enterprise, some landlords are better and more responsible business people than others. It does not make sense to reward landlords for ignoring their property until it becomes terribly dilapidated. Nevertheless, in some instances landlords really do need assistance. While most rent controlled apartments do not house young children, some apartments have extremely low rent simply because the available tenants cannot pay more. As one writer noted:

Landlords who cannot maintain their property because of escalating costs and declining ability of tenants to pay rent should be distinguished from those who minimize operating expenses to pay debt service on imprudent debt, or those who have problems caused by bad management.<sup>205</sup>

Some financial assistance for landlords with low income tenants is available to abate lead-based paint. In 1994, HPD and DOH were awarded \$6.75 million by the Federal Department of Housing and Urban Development ("HUD") for a Lead-Based Paint Hazard Reduction Program. Under this program, the City funded lead-based paint hazard reduction in approximately 540 apartments and expects to undertake such work in an additional 25 to 50 units. For 300 of these units, the City's Primary Prevention Program awarded property owners approximately \$5,000 per unit to reduce dust-lead levels. This program currently focuses on the four Brooklyn neighborhoods that account for a third of the City's childhood lead-poisoning cases: Bedford-Stuyvesant, parts of Fort Greene, Crown Heights and Bushwick.<sup>206</sup> In 1996, HUD granted the City an additional \$1.6 million for the program.<sup>207</sup> HPD plans to use those funds to abate approximately 150 more units, expanding its work in Fiscal Years 1998 and 1999 to include Washington Heights/Hamilton Heights (Manhattan) and West Tremont (Bronx).<sup>208</sup>

The Program is designed to help landlords whose tenants are unable to pay market-based rents. To be eligible for a HUD-funded forgivable loan, as implemented by HPD, half of the dwelling units in the building must be occupied by households earning no more than 50% of area median income and only households earning no more than 80% of area median income must occupy the remaining units (except that in buildings with five or more units, 20% of the units may exceed 80% of the area median income if the building is not owner-occupied). The City forgives the loan after three years if HPD determines that the abatement work is completed properly (which

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<sup>205</sup>Donald A. Lash, "Cost Allocation of Lead Paint Abatement," *Journal of Affordable Housing* 6: 299-308, 302 (Summer 1997).

<sup>206</sup>*Mayor's Management Report FY 1997*, Vol. I, p. 86; telephone interview of Ellis Goldman, Lead Poisoning Control Program, Department of Housing and Urban Development, December 5, 1997. See also *City DOH 1997 Grant Application to CDC*, at 63.

<sup>207</sup>Telephone interview of Ellis Goldman, Lead Poisoning Control Program, Department of Housing and Urban Development, December 5, 1997.

<sup>208</sup>*Mayor's Management Report FY 1997*, Vol. I, p. 86 and Summary, p. 20.

includes dust clearance testing to ensure that the abatement work was effective).<sup>209</sup> The forgivable loan is \$7,500 per dwelling unit, on a building-wide average.<sup>210</sup>

Some landlords, especially those managing larger buildings or many buildings, may still be reluctant to participate in the HUD-funded program because of concerns that the testing of paint and monitoring of children's blood lead levels before and after the work is completed could expose them to liability.<sup>211</sup> If screening of children's blood lead levels is expanded as planned, so that more lead-poisoned children are identified through regular City DOH programs, the testing of blood lead levels of children in apartments abated under HUD-funded programs will become less of a disincentive to participation.

#### **IV. A "LEAD SAFE" APARTMENT WILL NOT BE "SAFE ENOUGH" WITHOUT REGULAR INSPECTIONS AND TIMELY, CAREFUL REPAIRS**

While the Childhood Lead Poisoning Prevention Bill contains specific requirements to ensure that lead-paint is inspected regularly and that repairs of deteriorated paint are conducted promptly and safely, a competing bill which was introduced in City Council in 1994, known as Int. 388-A, and a similar bill considered in 1996, did not do so. As explained in the History section of this Report, lead poisoning prevention advocates have declared a willingness to compromise on the level of abatement that should be required in an apartment for lead poisoning prevention purposes, but no one should be willing to compromise on the matters of regular inspections, timely and safe repairs, and strict enforcement.

- Any lead-based paint that remains on the wall of a dwelling can be disturbed not only by subsequent water leaks or structural problems but also by renovation activity and even such ordinary activities as hammering in a nail to hang a picture or shoving furniture or bicycles against the wall. These disturbances can present a hazard depending on the extent to which they generate lead-based paint dust in the apartment in an area accessible to children.
- Unfortunately, the current level of inspection and maintenance is inadequate to guard against such occurrences. Under existing law, landlords are not required to inspect their apartments annually for lead-based paint hazards. Even where a tenant risks the landlord's ire by contacting HPD and making a formal complaint about lead-based paint, HPD may not respond properly.

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<sup>209</sup>*City DOH and HPD 1997 Grant Application to HUD*, at 16 and 23. Other eligibility also apply, related to number of existing housing code violations and status of tax arrears, among other considerations. *Id.*, at 26.

<sup>210</sup>*City DOH and HPD 1997 Grant Application to HUD*, at 23.

<sup>211</sup>Interview of Jim Buckley, Director, University Neighborhood Housing, January 12, 1998.

- Lack of specific, strict inspection and enforcement requirements gives an inappropriate amount of discretion to the City Administration. This is particularly of concern because the City is a landlord. It may be reluctant at times to hold landlords to a high standard of care because its own actions or inactions also will be measured against that standard -- especially in litigation.

The strategy of repairing immediate or imminent lead-based paint hazards rather than completely removing or covering all lead-based paint will save landlords money, but it will not protect children unless it includes an effective, strictly enforceable system of ongoing inspection and maintenance.

#### **A. *Intact Lead-based paint Can Become Deteriorated and Poison a Child***

The major compromise that lead poisoning prevention advocates have been willing to make in supporting the Childhood Lead Poisoning Prevention Bill has been to move from a standard of "lead free" to "lead safe," leaving intact lead-based paint on walls, windowsills, baseboards, molding and ceilings in place. While such a compromise may be needed to bring down the costs of lead poisoning prevention to an achievable level, it is risky. Intact lead-based paint left inside a dwelling is a "ticking time bomb;" it can become deteriorated and cause lead poisoning. As Dr. John F. Rosen, an expert who regularly treats lead-poisoned children in New York City, explains:

No one can predict when intact paint is going to deteriorate, but eventually it will. It can happen because of a water leak or when a bed is shoved against the wall. Some apartments get very humid in the summer, and this can cause the paint to weather. Ultimately, the source of all lead-based paint dust and chips is paint that was once intact.<sup>212</sup>

While DOH claims that "DOH intervention is in general associated with a decline in children's blood lead levels,"<sup>213</sup> neither HPD nor DOH is well-equipped to follow up on partial abatements to make sure that the remaining lead-based paint does not deteriorate. Consequently, exceptions to that general rule can occur -- and when they do, a child's ability to reach his or her full potential is impaired.

One mother submitted an affidavit in a lawsuit against the City regarding its implementation of Local Law 1 which stated that four times -- in 1985, 1989, 1991 and 1995 --

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<sup>212</sup>Public Advocate Office telephone interview of Dr. John Rosen, Professor of Pediatrics, Albert Einstein College of Medicine, January 23, 1998.

<sup>213</sup>Affirmation in Opposition to Plaintiff's Motion for Injunctive Relief and Contempt, by Andrew Goodman, M.D., City DOH Assistant Commissioner for Community and Occupational Health, in (December 6, 1996), p. 14, in *New York City Coalition to End Lead Poisoning v. Giuliani* (Index No. 42780/85).

her apartment was inspected and found to contain peeling paint. Each time, the City abated only the peeling lead paint. She reports that children born between and after the successive abatements were poisoned. In all, four children became lead poisoned while living in this apartment.<sup>214</sup>

The recent survey of 86 Caucasian and 86 African-American children found that lead-based paint in poor condition generated more highly contaminated dust in the home and that children living under such circumstances tended to have higher blood lead levels. The average level of paint lead concentration in Caucasian children's homes was 7.9 mg/cm<sup>2</sup>, compared with an average level of 6.4 mg/cm<sup>2</sup> in African-American children's homes (both levels are over six times the City's regulatory limit). The researchers found higher levels of contaminated dust in the households of the African-American children and noted that "[p]ainted surfaces in white children's homes generally had a higher lead content but were in better condition." The average blood lead level for African-American children was 8.8 µg/dl while the average for the Caucasian children was 4.7 µg/dl.<sup>215</sup> Similarly, the 1995 *Rochester Study* found that the African-American children it surveyed "were exposed to dust lead levels that were significantly higher than White children, lived in rental property that was not as well maintained as the homes of the more affluent White children, and were largely impoverished.... [P]reliminary analyses... indicate that the racial disparity in urban children's blood lead levels may largely be due to differences in environmental exposures."<sup>216</sup>

Clearly, the more that lead-based paint is allowed to deteriorate, the greater the health risk presented to young children.

City DOH and HPD acknowledge that a "lead safe" apartment requires special maintenance. In a recent proposal to HUD for funding of an "Alternative Interim Control Project" in the West Tremont (Bronx) and Washington and Hamilton Heights (Manhattan), which would involve only removal of peeling paint and paint on friction surfaces,<sup>217</sup> City DOH and HPD stated:

The Program emphasizes that since it treats rather than abates lead hazards, owners must take care that lead-based painted surfaces remain intact and free of friction. This approach is conceptually different from what owners may have envisioned. The Program will distribute the guidance to owners at set intervals after intervention. Additionally, residents whose apartments are chosen to participate in the Alternative Interim Control Project are provided with cleaning

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<sup>214</sup>Affidavit of Debra Battle (Nov. 16, 1996), in *N.Y.C. Coalition to End Lead Poisoning v. Giuliani*, N.Y. Co. Index No. 42780/85.

<sup>215</sup>Bruce P. Lanphear, *et al.*, "Racial Differences in Urban Children's Environmental Exposures to Lead," *Amer J Pub Health* 86: 1460, 1461-2 (1996).

<sup>216</sup>*Rochester Study*, at 43.

<sup>217</sup>*City DOH and HPD 1997 Grant Application to HUD*, Appendix A, p. 39-B.

supplies and instruction on proper maintenance techniques designed to reduce lead hazards once interventions have been completed.<sup>218</sup>

**B. Annual Inspections and Requirements to Conduct Repairs Safely Are Necessary to Keep "Lead Safe" Apartments Safe**

HPD's Division of Code Enforcement is required to issue a lead paint violation when an inspector finds lead-based paint hazards in a building built before 1960 where a child under the age of seven resides. The issuance of such a violation is based on a presumption of the presence of lead, which the landlord can contradict ("rebut") by testing. Unfortunately, there are several weaknesses in this system which must be corrected before a "lead safe" policy can be adopted by the City.

**1. Most HPD inspections are conducted only in response to tenant complaints**

While landlords have been held by the court to have "constructive" notice of the existence of a lead-based paint violation, they are not specifically required to conduct inspections of apartments on any particular schedule. Some landlords may feel that it is in their best interests *not* to inspect. In fact, one legal expert actually gave such advice in her discussion of federal and New York City laws at a conference on lead-based paint issues held in 1997:

There's a lot of discussion about performing inspections; and the disclosure rules require that you *disclose what you know*. You have to be very careful about getting information.

Doing an inspection is a smart thing -- you should know where your risks are. *You should never inspect if you don't intend to correct*. It's the worst thing you can do for yourself. If you're planning to undertake an inspection, think very long and hard about what you can do in response to the results.... Set out a plan. Do the inspection and be sure you know what you're planning on doing afterward. If you're not going to do anything, don't get any information -- don't inspect.<sup>219</sup>  
(*Emphasis in original*)

HPD reportedly has fewer than 200 inspectors who are responsible for ensuring compliance with the City's Housing Maintenance Code in 1,700,000 rental units. In 1992, it had more than

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<sup>218</sup>City DOH and HPD 1997 Grant Application to HUD, at 28.

<sup>219</sup>Susan Rosmarin, Counsel, Stryker, Tams and Dill, "How the Courts Are Viewing Landlords' Liabilities in Lead Poisoning Cases," *Deleading* (September 1997)(excerpted from presentation at the session, "How the Courts Are Viewing the Liability of Inspectors, Risk Assessors, Consultants, Contractors, and Property Owners and Managers," held at the 1997 National Lead-Safe Housing Conference & Exposition in Washington, D.C.), p. 22.

twice that number.<sup>220</sup> Until about six years ago, HPD conducted "cyclical inspections" of apartments citywide for various code violations and also "lead belt" inspections that targeted high risk areas for lead-based paint violations. Unfortunately, when State funding for inspections was cut back in 1990 and 1991, these initiatives were dropped. Today, HPD generally does not conduct preventive inspections of apartments for violations of the Housing Maintenance Code, which means that it generally is not conducting preventive inspections of apartments for lead-based paint hazards.<sup>221</sup> Overall, cuts to HPD's budget resulted in a decrease in field inspections from 409,000 in 1989 to 175,000 in 1994.<sup>222</sup> Anne Pasmanick, Executive Director of the Community Resource and Training Center, explains:

The City used to conduct Cyclical Inspections throughout New York City. The goal was to inspect multiple dwellings in all areas. This enabled HPD to develop appropriate strategies for intervention and landlords were reminded of their code enforcement obligations. Also, the City provided technical services to owners -- energy audits and weatherization resources -- that helped to preserve housing and improved the quality of life for tenants.<sup>223</sup>

While HPD has stated, "Code Enforcement also proactively inspects for peeling paint if they are called to an apartment for any reason and observe a child under 7 in an apartment built before 1960,"<sup>224</sup> tenants and community organizers report that many times this does not occur.<sup>225</sup> Moreover, the inspectors are not required to *ask* the tenant whether a child resides in the apartment. Thus, even if an HPD inspector enters an apartment and issues violations for another problem -- such as heat or plumbing violations -- and witnesses a lead-based paint hazard, he or she will not necessarily always take action against the lead-based paint violation.

If almost all inspections are conducted only in response to tenant complaints, it is possible that needy children are being ignored. A tenant may not know about HPD's complaint process. Michael McKee, Policy Director of the New York State Tenants & Neighbors Coalition, observes,

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<sup>220</sup>Letter from HPD Commissioner Deborah Wright to N.Y.C. Comptroller Alan Hevesi and N.Y.S. Senator Franz Leichter, January 19, 1995, p. 2.

<sup>221</sup>Statement of Joseph Corso, President, Allied Building Inspectors, Local 211, in Community Training and Resource Center and Cornell University Cooperative Extension Program, *A Report on the Landlord Training Program* (December 1997), p. 13; interview of Anne Pasmanick, Executive Director, Community Training and Resource Center, January 15, 1998.

<sup>222</sup>Office of the N.Y.C. Comptroller, *The New York City Department of Housing Preservation and Development's Enforcement of the Housing Maintenance Code*, Audit No. MJ95-098A (June 30, 1995), pp. 50-51.

<sup>223</sup>Interview of Anne Pasmanick, Executive Director, Community Training and Resource Center, January 15, 1998.

<sup>224</sup>*City DOH and HPD 1997 Grant Application to HUD*, at II-34.

<sup>225</sup>Public Advocate Office interview of Michael McKee, Policy Director, New York State Tenants & Neighbors Coalition, January 21, 1998.

"Many tenants don't know that HPD exists. They don't know there's such a thing as a code enforcement program. The City does very little, if anything, to advertise it."<sup>226</sup>

Even tenants who do know how to go about making a complaint to HPD may be reluctant to "make trouble" with a landlord. McKee states,

Tenant fear is much more widespread than people realize. It's shocking how many tenants are afraid to take any action against their landlord. Many of them don't know that they have a right to a lease renewal, for example. They may fear retaliation -- and some landlords have been known to retaliate against a tenant who complains, even though it's illegal."<sup>227</sup>

As a result, some poorer neighborhoods of the City may not be receiving their fair share of enforcement action from HPD. In six of the seven districts in which HPD issued 10 or more violations per thousand children, more than 15% of apartments reportedly had some peeling paint. See Appendix B. Sixteen NYC community districts have peeling paint problems in 15% or more of rental apartments, and the average number of violations served by HPD in those districts was nine per thousand children. But in six of these districts HPD issued four or fewer violations. While no data is available to determine the age of the housing for which the U.S. Census Bureau reports the occurrence of peeling paint, the possibly underserved districts were:

Bronx CD 1	(Mott Haven/Melrose)	17% peeling; 3 viol/1000
Bronx CD 9	(Parkchester/Unionport)	21% peeling; 4 viol/1000
Brooklyn CD 6	(Red Hook/Park Slope)	15% peeling; 4 viol/1000
Brooklyn CD 16	(Brownsville/Ocean Hill)	18% peeling; 3 viol/1000
Manhattan CD 3	(Lower East Side)	16% peeling; 2 viol/1000
Manhattan CD 11	(East Harlem)	15% peeling; 3 viol/1000

Even where a complaint is made, a timely inspection is not guaranteed. Jim Buckley, Director of the University Neighborhood Housing Program, states:

Code enforcement is a big problem. They're just not out there. Tenants should be able to call and be reasonably confident there will be an inspection and follow-up. These days, we're more confident that there *won't* be. Specifically, when tenant associations submit tenant petition complaints during the heat season, it has been stated

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<sup>226</sup>Public Advocate Office interview of Michael McKee, New York State Tenants & Neighbors Coalition, January 21, 1998.

<sup>227</sup>*Id.*

very clearly that HPD can't respond because they have to prioritize heat and hot water complaints.<sup>228</sup>

While shortage of inspectors is an important issue, HPD also could use its current inspection staff more effectively and efficiently by prioritizing inspections and making better use of inspectors' time. Grouping multiple complaints from a single building together for a single inspection and having the inspector look for other high risk problems while on premises besides the specific subject of the complaint could improve the efficiency of HPD's inspection program. Housing expert Anne Pasmanick notes:

HPD has a severe shortage of inspectors, a result of budget cuts by the State Legislation and attrition from the City's workforce. While heat is a sensible priority, many other hazardous violations occur and end up in the general category of "maintenance" complaints. Preemptive inspections and inspections that impact more than an individual complainant are most effective, but these initiatives were disbanded when the budget shrunk. An organized tenant association used to be able to secure a roof-to-cellar inspection, which provided access for inspectors to public areas and apartments and which resulted in a comprehensive report on violations in a building.<sup>229</sup>

The Childhood Lead Poisoning Prevention bill would mandate that inspectors inquire about the presence of children under the age of six when conducting inspections of apartments for any purpose and survey the apartment for lead-based paint hazards if informed that a young child does live in the apartment. It also would require that HPD develop an affirmative inspection program to address high risk areas.<sup>230</sup> In addition, HPD would be required to provide training for its lead-based paint inspectors (with DOH) equal to that required by EPA to certify lead paint inspectors.<sup>231</sup>

**2. *HPD's currently lax enforcement policy allows -- and may encourage -- landlords to make unsafe repairs which can increase rather than decrease lead dust in a dwelling***

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<sup>228</sup>Interview of Jim Buckley, Director, University Neighborhood Housing Program, January 12, 1998. Anne Pasmanick, Executive Director of the Community Training and Resource Center, agrees, stating, "During the winter, HPD devotes its inspection staff almost exclusively to heat complaints. It's hard to get an inspector for any other kind of complaint." Interview of Anne Pasmanick, Executive Director, Community Training and Resource Center, January 15, 1998.

<sup>229</sup>Interview of Anne Pasmanick, Executive Director, Community Training and Resource Center, January 15, 1998.

<sup>230</sup>Int. 956, §27-2056.9(a) and (d).

<sup>231</sup>Int. 956, §27-2056.10(a).

The current regulations governing safe lead based paint abatement become a requirement only if the work is "directed by order of the [DOH] Commissioner or directed or ordered by the Commissioner of Housing Preservation and Development."<sup>232</sup> In other words, they apply only if the landlord has received a notice of a lead based paint violation.<sup>233</sup> While one could make arguments under general "habitability" clauses that lead abatement work must be carried out safely, the landlord is not held to specific statutory or regulatory requirements for doing so, and the City Department of Environmental Protection ("DEP") generally only inspects lead abatement work conducted pursuant to a violation.<sup>234</sup> Consequently, less responsible landlords can benefit financially by lax enforcement -- and especially by warnings of impending inspections.

HPD recently informed a State court that when the agency receives a tenant complaint about peeling paint, it does not conduct a "surprise" inspection. The agency stated,

When a complaint of a possible violation of HMC §27-2013(h)(2) is received by HPD's Central Complaint Bureau (the "CCB"), a Notice of Complaint is sent to the owner of the building in question. In addition, CCB attempts to contact the owner by telephone *prior to referring the complaint for inspection. (emphasis added)*<sup>235</sup>

In other words, instead of conducting an inspection, HPD first sends a notice of the complaint to the landlord -- a notice which fails to advise that the landlord must abide by legally-mandated safety procedures in repairing the lead-based paint. It also attempts to telephone the landlord to urge the landlord to repair the paint before referring the complaint for inspection. The "call-back script," like the notice, contains no language informing the landlord of the safety methods for abating lead-based paint.<sup>236</sup>

Moreover, while HPD explains that it "defers to DEP for enforcement of the lead abatement safety standards in the Health Code," it also states that, "HPD does not report to either DOH or DEP complaints of possible violations of HMC § 27-2013(h)(2) that are resolved prior to sending an inspector or placing a violation."<sup>237</sup>

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<sup>232</sup>N.Y.C. Health Code, §173.14(a)(1).

<sup>233</sup>As noted above, the Supreme Court recently directed that the safety standards apply to all lead abatements in New York City, whether or not a violation has been placed by a City inspector, *see NYCCELP VII*, but the City has appealed that order.

<sup>234</sup>While N.Y.C. Health Code § 173.14(3) authorizes DEP to enforce the Health Code safety requirements, which apply in the case of a violation, the agency also can enforce general dust control requirements in *common areas* of a building and thus might, in response to a dust complaint, inspect paint repair work in such areas of apartment building.

<sup>235</sup>"Municipal Defendants' Responses to Plaintiffs' Fifth set of Interrogatories" (by Richard T. Roberts, Commissioner of HPD by his attorney, Paul A. Crotty, Corporation Counsel), *New York City Coalition to End Lead Poisoning v. Giuliani* (Index No. 42780/85)(April 14, 1997), p. 3, with Attachments including Notice of Complaint and CCB Owner Call-Back Script.

<sup>236</sup>*Id.*

<sup>237</sup>*Id.*, at 6-7. When faced with a City DOH order of abatement of a dwelling in which a lead poisoned child has been identified, the landlord is required to file a notification with the City DEP specifying the date that the

When peeling paint is removed by sanding, scraping or use of heat guns, it can generate large amounts of lead dust or fumes. Even if parents try to keep the area clean and their children's hands clean, blood lead levels can rise as a result of such activity.<sup>238</sup> Former DOH Commissioner Margaret Hamburg testified in opposition to a bill proposed in City Council in 1996 that essentially would have codified this procedure by allowing landlords a "grace period" to respond to lead-based paint complaints with no requirement to conduct repairs safely. Dr. Hamburg stated:

Unfortunately, the risk to young children is actually increased by work that disturbs lead-based paint if it is done without appropriate safety precautions.... To reduce safety requirements solely on the voluntary and rapid response of an owner, with no risk assessment, is not logical.<sup>239</sup>

In particular, after work is completed, "clearance dust samples" must be tested to verify that lead-based paint dust is not present before the apartment may be reoccupied.<sup>240</sup> As noted above, the concern over hazards created by improper lead-based paint activities caused Congress to require the federal EPA to establish a lead-based paint worker training and certification program. The new rule will apply to lead-based paint abatement activities in New York State beginning March 1, 1999.

Based on its statements to the court, HPD's working policy appears to be at odds with the DOH position, and reflects an approach that the City Council declined to adopt in 1996. Housing expert Jim Buckley states:

Without the stick there is not enough incentive to do things right. The violation is the only thing I know of, the only threat to get some landlords to do things correctly. Many will be conscientious, but many of them won't.<sup>241</sup>

HPD's policy of informally encouraging landlords to voluntarily remedy lead-based paint violations before the agency inspects the premises and places a violation for such conditions acts as an incentive for landlords to avoid complying with the Health Code's safety standards. HPD

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remediation work will begin so that DEP can inspect to ensure that the work is being performed according to regulation.

<sup>238</sup>Florini and Silbergeld, at 36.

<sup>239</sup>Testimony of City DOH Commissioner Margaret Hamburg, M.D., on Lead Poisoning Prevention Before the NYC Council Committee on Housing and Buildings, April 29, 1996, p. 2. Commissioner Hamburg expressed special concern about the need for adequate dust containment during abatement work and for "clearance testing after work is completed to ensure that lead dust was cleaned up."

<sup>240</sup>N.Y.C. Health Code § 173.14(e); *See also*, HUD, *Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing* (June 1995), pp. 15-11 to 15-15.

<sup>241</sup>Interview of Jim Buckley, Director, University Neighborhood Housing Program, January 12, 1998.

should suspend this practice and develop -- in coordination with City DOH -- a new written protocol for responding to peeling paint conditions, inviting public review and comment.

**3. *The lack of deadlines for conducting inspections and issuing notices of violation allows violations to go uncorrected***

Recently, a State appeals court held that HPD must establish time limits for conducting inspections of lead-based paint violations or for issuing notices of violations. The court noted that general landlord-tenant law in the City provides that, if HPD fails to issue a notice of violation within thirty days of receiving a request, a tenant may apply for a court order directing the owner and HPD to appear before the court, at which time the court may direct the owner to correct the violation.<sup>242</sup> Nevertheless, the court reasoned, the purpose and intent of Local Law 1 would be defeated if this tenant remedy were the only standard of care and "became the rule rather than the exception by rendering HPD's participation and duties largely superfluous."<sup>243</sup>

The Childhood Lead Poisoning Prevention Act (Int. 956) would establish a date certain by which inspections must be conducted. The table below compares existing HPD inspection responsibilities under Local Law 1 and the Housing Maintenance Code with the responsibilities that would be established under Int. 956.

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<sup>242</sup>N.Y.C. Admin. Code, § 27-2115(h)(1993).

<sup>243</sup>*New York City Coalition to End Lead Poisoning v. Giuliani*, 1997 N.Y. App. Div. LEXIS 12871 (December 9, 1997).

**Table VI**  
**Comparison of Inspection Responsibilities of HPD**  
**Under Existing and Proposed Laws**

Area of Agency Responsibility	Action Already Required by HMC	Further Action Required by Local Law 1	Further Action Required by Int. 956	Benefit of Further Action Required by Int. 956
Inspections in response to complaints unrelated to lead-based paint in pre-1960 buildings	Inspect condition which is the subject of the complaint	No additional requirement	Determine if child under age of six resides in dwelling; if so, inspect for peeling paint and underlying defects. <sup>244</sup>	Preventive inspection is conducted at minimal cost to City because inspector already is on the premises
Inspections in response to complaints about lead-based paint	Inspect peeling paint condition; tenant can apply for a court order if HPD does not inspect within 30 days <sup>245</sup>	No additional requirement	Inspect within five business days of receiving a complaint; <sup>246</sup> must inspect not only paint but also for underlying defects. <sup>247</sup>	Provides deadline for action on complaint; ensures that inspection covers conditions that could lead to further peeling paint
Inspections based on agency knowledge	No requirements	No additional requirement	Develop inspection program to identify and inspect high risk dwellings so that some inspections may be conducted without receipt of complaint. <sup>248</sup>	Helps protect children of tenants do not complain to HPD out of ignorance or fear of landlord retaliation; helps City take action before child is poisoned.

<sup>244</sup>Int. 956, § 27-2056.9(a). In response to a concern raised by HPD with regard to earlier lead poisoning prevention bills, Int. 956 § 27-2056.9(b) allows HPD to delay conducting a full inspection of the unit's lead paint hazards within five days when HPD is inspecting heat or hot water complaints, to avoid interfering with the agency's scheduling of these urgent inspections.

<sup>245</sup>N.Y.C. Admin. Code, § 27-2115(h)(1993).

<sup>246</sup>Int. 956, § 27-2056.9(c).

<sup>247</sup>Int. 956, § 27-2056.9(a) and (c).

<sup>248</sup>Int. 956, § 27-2056.9(d).

**4. Lack of deadlines for correction, lack of reinspections and weak penalties encourage noncompliance with abatement orders**

In addition to more stringent inspection requirements, a "lead safe" standard will not be protective unless City Council strengthens and clarifies enforcement provisions in the law in several ways. The current law contains no date certain by which a lead-based paint hazard must be corrected. It also fails to require agency verification that the abatement has been completed, and fails to provide effective penalties for noncompliance.

**Deadline to complete abatement.** Under current law, the owner is required to comply with an order to abate a dwelling within 24 hours, which generally is not enough time to select and obtain a lead abatement contractor and schedule the work, but HPD can grant a postponement for an essentially unlimited amount of time.<sup>249</sup> Int. 956, in contrast, would provide a reasonable date certain upon which the violation must be corrected, requiring that abatement must be completed within 21 days after service of notice of violation, with a postponement for good cause limited to no more than 60 days from the notice of violation.<sup>250</sup>

**Verification that abatement has been completed.** Under current law, HPD is not required to inspect an apartment after receiving notice that a violation has been corrected -- the violation is simply "deemed corrected seventy days from the date of receipt of such certification" unless HPD does conduct an inspection and determines that it has not been corrected. The burden is placed on the tenant to notify HPD that the violation has not been corrected.<sup>251</sup> In the case of a lead abatement ordered by HPD or City DOH, the owner must hire an inspector to test dust in the apartment after abatement has been completed to ensure that lead dust levels do not exceed standards, but the regulations only require that dust clearance test results be provided to City DOH "upon request."<sup>252</sup>

While HPD has a "callback" program under which calls are placed to the complainant to ask if the violation has been corrected, many people question the effectiveness of this program.<sup>253</sup> Moreover, a tenant is unlikely to have sufficient knowledge to be certain that a lead-paint abatement project has been carried out completely. Some landlords are willing to take the calculated risk that their failure to correct the violation will never be uncovered. In 1995, a joint investigation by the Office of the Comptroller and Office of Senator Leichter found that HPD reinspects only about 10% of the 100,000 violations that landlords certify that they have repaired.

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<sup>249</sup>N.Y.C. Admin. Code §§ 27-2013(h) and 27-2115(c)(3). The law contains no limit on the length of the postponement.

<sup>250</sup>Int. 956, § 27-2115(l)(1). While the landlord may request a postponement for cause, such as inability to gain access to the dwelling unit or to obtain labor or materials, such a postponement could not exceed a total of 60 days from the date of service of the notice of violation under Int. 956.

<sup>251</sup>N.Y.C. Admin. Code, § 27-2115(f)(3) and (4)(1993).

<sup>252</sup>N.Y.C. Health Code, § 173.14(e)(4)(dd)(1996).

<sup>253</sup>Statement of Joseph Corso, Allied Building Inspectors, Local 211, at 13; interview of Jim Buckley, University Housing Program, January 12, 1998; interview of Anne Pasmanick, Community Training and Resource Center, January 15, 1998.

The report also found that, in a sample of 803 violations reinspected in 1994, landlords had lied about correcting the violations in 40% of the cases.<sup>254</sup> The problem of false certifications has been acknowledged by HPD; the agency recently reported that it has established a special team to investigate and take enforcement action against landlords who falsely certify corrections of violations.<sup>255</sup> Nevertheless, such after-the-fact efforts will not be enough to protect children from uncorrected lead-based paint violations.

The Childhood Lead Poisoning Prevention Bill would require HPD to reinspect the apartment within 10 days after the deadline for completion of abatement to verify that the violation has been corrected; if it has not, HPD must conduct the abatement itself -- charging the landlord for the costs -- within the next 14 days.<sup>256</sup>

**Effective penalties.** HPD has complained that the penalty for false certification by owners of the correction of violations is too low.<sup>257</sup> While existing law allows a penalty of \$125 per day to be levied against a violator for an uncorrected lead-based paint violation and a penalty of \$50-\$250 for a person who wilfully makes a false certification of correction regarding a notice of violation,<sup>258</sup> Int. 956 would allow a penalty of \$250 per day for an uncorrected lead-based paint violation and a penalty of \$1,000 to \$3,000 for each false certification wilfully made.<sup>259</sup>

### **C. Additional Action Is Needed to Ensure that "Lead Safe" Apartments Do Not Become Unsafe During Renovation**

Many of New York City's "urban pioneers," who took on the task of rehabilitating dilapidated buildings to make attractive and affordable homes for themselves and others, had no idea that they might be creating a health hazard for themselves or their children by disturbing lead-based paint. This problem has occurred in rural areas as well.<sup>260</sup>

Currently, EPA's requirements for lead-based paint worker training and certification do not apply to renovation activity that could disturb lead-based paint. The Residential Lead-based Paint Hazard Reduction Act of 1992 requires EPA to study the extent to which persons engaged in specific renovation activities are exposed to lead or create lead hazards in the conduct of such work. Based on the results of that study and other information gathered, EPA must decide

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<sup>254</sup>Letter from N.Y.C. Comptroller Alan Hevesi and Senator Franz Leichter to Deborah C. Wright, HPD Commissioner, January 6, 1995.

<sup>255</sup>*Mayor's Management Report Fiscal Year 1997*, Vol. I, p. 86.

<sup>256</sup>Int. 956, § 27-2115(l)(3).

<sup>257</sup>See Letter from Deborah Wright, HPD Commissioner to N.Y.C. Comptroller Alan Hevesi and N.Y.S. Senator Franz Leichter, January 19, 1995, pp. 1-2.

<sup>258</sup>N.Y.C. Admin. Code, § 27-2115(a).

<sup>259</sup>Int. 956, § 27-2115(l)(6) for per day penalty and § 27-2115(l)(5) for false certification.

<sup>260</sup>P. Marino, P. Landrigan, J. Graef, A. Nussbaum, G. Bayan, K. Boch and S. Boch, "A Case Report of Lead Paint Poisoning During Renovation of a Victorian Farmhouse," *Am J Public Health* 80:1183-85 (1990)

whether to amend its regulations to apply to renovation and remodeling activities that create a lead-based paint hazard.<sup>261</sup>

EPA should consider expanding its regulations to apply to renovation and remodeling activity. In the meantime, the Childhood Lead Poisoning Prevention Bill would require that when lead-based paint or paint of unknown lead content is disturbed during repair or renovation work, the owner must "protect the safety" of the dwelling's occupants until the work is properly completed and clean-up is properly performed.<sup>262</sup>

## CONCLUSION

The scourge of lead poisoning is still with us, and at a greater magnitude than commonly is known. Whether children are poisoned at severe levels or at lower levels, this poisoning is causing them harm that is permanent and irreversible but completely preventable.

While lead poisoning prevention advocates have been willing to consider reducing their goal from "lead free" to "lead safe," it is important to recognize that this compromise is a gamble and that the cognitive functioning of children is at risk. The Childhood Lead Poisoning Prevention Bill, known as Int. 956 in 1997, contains important measures to help reduce that risk. It also requires HPD to provide the City Council and the public with essential information to evaluate the successes and/or failures of this approach.<sup>263</sup> Finally, it sets goals to measure the success of the approach and requires DOH to recommend changes to the law if those goals are not met.<sup>264</sup>

Changing the lead abatement standard from "lead free" to "lead safe" will save landlords money, and because the City itself is a landlord, it is possible that the City will be more willing to enforce a law that places a lower financial burden on landlords. If the "lead safe" standard is implemented responsibly, with regular inspections and careful, timely correction of hazards, it should result in fewer lead-poisoned children. But if the lead abatement standard is changed from

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<sup>261</sup>See 15 U.S.C. § 2682(c)(1995). The Residential Lead-based Paint Hazard Reduction Act amended the Toxic Substances Control Act ("TSCA"), authorizing EPA to establish standards for the conduct of lead-based paint activities. 15 U.S.C. §§ 2682 and 2684 (1997).

<sup>262</sup>Int. 956, § 27-2056.11.

<sup>263</sup>See Int. 956, § 27-2056.12(a), which requires HPD to provide an annual report to City Council on the costs of the program; the number of dwelling units inspected, subject of peeling paint complaint, subject of violation; the number of violations corrected by owner and by HPD; and an evaluation of HPD's ability to inspect dwellings on a timely basis, serve notices of violation within the period allowed under law and enforce correction of violations.

<sup>264</sup>See Int. 956, § 27-2056.12(b), requiring DOH to make recommendations to amend the law if the number of children in NYC with 20 µg/dl blood lead levels or higher exceeds 1,000 in FY 2000 or 750 in FY 2002. DOH also must make recommendations to amend the law if the rate of children who are screened for lead poisoning is less than 75% in Fiscal Year 2000.

"lead free" to "lead safe" without strong inspection, maintenance and enforcement provisions, it will fail to prevent the exposure of children to lead.

Thus, while cost considerations certainly are important, the City Council must continue to make the protection of children's health its top priority in considering any change to Local Law 1.

## APPENDIX A

### Rate of Documented New Incidences of Elevated Blood Lead Levels (10 µg/dl and above) for Children Under Age Six, by Health District<sup>1</sup> 1996

Health Districts of the Bronx	Community Districts Included	# of Children	Rate per Thousand Children Screened
Fordham/Riverdale	7, 8	343	29
Tremont/North Bronx	5, 6	464	29
Morrisania/South Bronx	3, 4	314	27
Pelham Bay	12, part of 10 & 11	224	27
Mott Haven	1, 2	223	26
Westchester	9, most of 10 & 11	184	18
Health Districts of Brooklyn	Community Districts Included	# of Children	Rate per Thousand Children Screened
Bedford-Stuyvesant	8, 9, most of 3	805	62
Bushwick	4, north part of 5	805	62
Fort Greene/Brooklyn Hts	2 (most), north part of 3	473	59
Flatbush	most of 18, 17, 14, most of 12	651	39
Brownsville	5 (most), south half of 16, NE part of 18	508	36
Wmsburg/Greenpoint	1	254	35
Red Hook/Rowanus	6, south part of 2	125	35
Sunset Park	7, NW part of 12	206	28
Bay Ridge	10, 11	123	21
Gravesend/Homecrest	13, 15	120	20
Health Districts of Manhattan	Community Districts Included	# of Children	Rate per Thousand Children Screened
Washington Hts/Upper W Side	12, north part of 9	353	27
Central Harlem	10	138	24

<sup>1</sup>Lead data for 1996 is derived from City DOH tables: "Less Than or Equal to 10 µg/dl for Children 6 Months to Less than 6 Yrs by Borough and Health District NYC 1993-1996" and "Number of Children Tested for Lead Poisoning by Borough and Health District 1993-1996."

Lower West Side/Lower Manhattan	1, 2, 4, 5, south part of 7	60	19
Riverside	7 (most), south part of 9	68	17
Lower East Side	3, south part of 6	55	16
East Harlem	11	76	14
Kips Bay	8, north parts of 5 and 6	29	9
<b>Health Districts of Queens</b>	<b>Community Districts Included</b>	<b># of Children</b>	<b>Rate per Thousand Children Screened</b>
Jamaica East	12, most of 13, south part of 8	524	38
Jamaica West	10, 9	448	32
Forest Hills/Maspeth	5, 6	124	24
Astoria/Long Island City	1, 2	177	23
Corona	3, 4	295	23
Flushing	7, 11, north parts of 13 and 8	143	17
<b>Health Dists of Staten Island</b>	<b>Community Districts Included</b>	<b># of Children</b>	<b>Rate per Thousand Children Screened</b>
Richmond/Staten Island	1, 2, 3	245	22

## APPENDIX B<sup>2</sup>

### Comparison of Number of Apartments Having 8 1/2" x 11" area or More of Peeling Paint, by Community District, with Number of HPD Violations Issued for Lead-based Paint Violations per Thousand Children

Bronx Community Districts	% of rental apts with some peeling paint	# lead violations per 1000 children
1. Mott Haven, Melrose, Port Morris	17%	3
2. Hunts Point, Longwood, Intervale Valley	17%	13
3. Morrisania, Bathgate, Claremont, Melrose	19%	5
4. Concourse, Highbridge	20%	10
5. University Hts, W Tremont, S Fordham	19%	12
6. E Tremont, S Bronx, Belmont, West Farms	19%	9
7. Fordham, Bedford Pk, Kingsbridge Hts	19%	11
8. Riverdale, Fieldston, Spuyten Duyvel	15%	5
9. Unionport, Soundview, Parkchester	21%	4
10. Co-op City, Throggs Neck, Pelham Bay	9%	.4
11. Pelham Parkway, Morris Park, Van Nest	12%	4
12. Williamsbridge, Baychester, Edenwald	12%	3
Brooklyn Community Districts	% rental apts w/peeling paint	# lead violations
1. Williamsburg, Greenpoint	9%	2
2. Ft. Greene, Brooklyn Hts, Boerum Hill	9%	4
3. Bedford-Stuyvesant, Tompkins Pk N	12%	7
4. Bushwick	12%	7
5. East New York, Starrett City, Spring Crk	7%	3
6. Park Slope, Carroll Gardens, Red Hook	15%	4
7. Sunset Park, Windsor Terrace	7%	3
8. Crown Hts N, Prospect Hts, Weeksville	15%	9
9. Crown Hts S, northern Flatbush/Midwood	13%	6
10. Bay Ridge, Dyker Heights, Fort Hamilton	5%	2

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<sup>2</sup>Lead paint violations data were provided by the City HPD; peeling paint (including broken plaster) statistics are taken from the U.S. Bureau of the Census, *Housing and Vacancy Survey 1996* background data, analyzed by the Rent Guidelines Board.

11. Bensonhurst, Mapleton, Gravesend	4%	2
12. Borough Park, Dahill, Kensington	2%	2
13. Coney Island, Brighton Beach, Sea Gate	12%	.3
14. Flatbush, Midwood, Ocean Pkwy	10%	6
15. Sheepshead Bay, Manhattan Beach	8%	1
16. Brownsville, Ocean Hill, Broadway Jnct	18%	3
17. East Flatbush, NE Flatbush, Rugby	9%	6
18. Canarsie, Flatlands, Marine Park	9%	.4
<b>Manhattan Community Districts</b>	<b>% rental apts w/peeling paint</b>	<b># lead violations</b>
1. Battery Park, Tribeca	6%	0
2. Greenwich Vill., Little Italy, SoHo, NoHo	6%	1
3. Lower East Side, parts of Chinatown	16%	2
4. Chelsea, Clinton	9%	4
5. Midtown Business Dist., Midtown South	9%	1
6. Murray Hill, Stuyvesant, Turtle Bay	9%	1
7. Upper West Side, West Side, Lincoln Sq	14%	4
8. Upper East Side, Yorkville, Lenox Hill	11%	2
9. Manhattanville, Hamilton Hts	12%	15
10. Central Harlem	20%	11
11. East Harlem	15%	3
12. Washington Hts, Inwood	17%	21
<b>Queens Community Districts</b>	<b>% rental apts w/peeling paint</b>	<b># lead violations</b>
1. Astoria, Long Island City	8%	2
2. Sunnyside, Woodside, part L.I. City	6%	3
3. Jackson Hts, N Corona, East Elmhurst	6%	2
4. Elmhurst, Corona, Corona Hts	2%	1
5. Ridgewood, Glendale, Middle Village	2%	2
6. Rego Park, Forest Hills	4%	1
7. Flushing, Bay Terrace, Beechurst	9%	1
8. Fresh Meadows, Hillcrest, Briarwood	11%	1
9. Woodhaven, Kew Gardens, Richmond H	6%	1

10. Howard Beach, part Ozone Park	3%	.3
11. Bayside, Douglaston, Hollis Hills	8%	.2
12. Jamaica, S. Jamaica, St. Albans, Hollis	7%	1
13. Queens Village	5%	.2
14. Rockaways	10%	1
<b>Community Districts of Staten Island</b>	<b>% of apts w/peeling paint</b>	<b># lead violations</b>
1. Willowbrook, North Shore	10%	.1
2. South Beach, New Springville	3%	0
3. Tottenville, South Shore, Charleston	1%	0

## APPENDIX C

### Occurrence of Peeling Paint/Broken Plaster by Apartment Housing Type Including Data on Percentage of Apartments Containing Children Under Age Six<sup>3</sup>

Borough	Unregulated <i>30% of units</i> <i>21% children</i>	Public Housing <i>9% of units</i> <i>21% children</i>	Rent Stabilized		Rent Controlled <i>4% of units</i> <i>4% children</i>
			Pre-'47 <i>38% of units</i> <i>18% children</i>	Post-'47 <i>14% of units</i> <i>11% children</i>	
Bronx	18%	17%	23%	11%	21%
Brooklyn	5%	21%	11%	6%	16%
Manhattan	8%	21%	14%	8%	12%
Queens	3%	16%	7%	8%	7%
Staten Is.	no data	no data	no data	5%	no data

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<sup>3</sup>Source: U.S. Census, *NYC Housing and Vacancy Survey of 1996* (borough data on housing conditions analyzed by Rent Stabilization Board). The percentage figures for housing units and units containing children under age six is taken from U.S. Bureau of the Census, *NYC Housing and Vacancy Survey*, Table 1, except that the number of *in rem* buildings is from Department of City Planning, *1996 Annual Report on Social Indicators* (April 1997), p. 63. Mitchell Lama units are not included; Census data indicates that they constitute only 4% of all units and only 4-8% of them have peeling paint problems.

## **RESOLUTION CALLING FOR A STRONG CHILDHOOD LEAD POISONING PREVENTION ACT**

The undersigned community leaders, elected officials, medical professionals, scientists, and civic, religious, public health and environmental organizations make the following resolution with regard to the need for a more specific and comprehensive local law to prevent lead poisoning of children.

### WHEREAS:

Lead is a poison that accumulates in blood, bone and soft tissue and can damage the brain, the kidneys, the central nervous system and blood-forming organs;

Infants and children are particularly susceptible to harm from lead poisoning;

Children who become lead poisoned can suffer:

central nervous system damage and loss of intelligence;

shortened attention spans and behavioral disorders; and/or

anemia and impaired metabolism of vitamin D;

These effects may develop at blood lead levels as low as 10-20 micrograms per deciliter ( $\mu\text{g}/\text{dl}$ ) of blood, and much of this damage is permanent and irreversible;<sup>4</sup>

At least 1,500 to 2,000 *more* children in NYC become poisoned by lead *each year* at levels high enough to require medical case management (20  $\mu\text{g}/\text{dl}$  or higher) -- and this is an underestimate because many children are not screened for lead;

Thousands more children are at risk because their blood lead levels exceed the 10  $\mu\text{g}/\text{dl}$  threshold for harm;

The potential liability of the City for failing to solve this problem rises with every new lead poisoned child;

The cost to educate a lead poisoned child can be many times higher than a "mainstream" education, and the cost of health care for a lead poisoned child can be exorbitant;

The cost to parents in grief over their child's lost abilities and the cost to the child in lost human potential can never be measured adequately;

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<sup>4</sup>U.S. Dept. of Health and Human Services, Centers for Disease Control, *Preventing Lead Poisoning in Young Children* (1991); Herbert Needleman and Philip Landrigan, *Raising Children Toxic Free* (New York: Farrar, Straus & Giroux, 1994), pp. 67-80; National Research Council Committee on Measuring Lead in Critical Populations, *Measuring Lead Exposure in Infants, Children and Other Sensitive Populations* (Washington, D.C.: National Academy Press, 1993), pp. 3-4. Note: a microgram is a millionth of a gram, and a deciliter is a tenth of a liter (or, 3.4 fluid ounces).

NOW THEREFORE, the undersigned community leaders, elected officials, medical professionals, scientists and civic, religious, public health and environmental organizations urge that prevention of childhood lead poisoning must become a top priority goal for both City Council and the City Administration. To achieve this goal, a more specific and comprehensive local law to prevent lead poisoning of children from contaminated paint ("lead paint") is needed which would, at a minimum:

**Find the hazards:** Require landlords to inspect the condition of lead paint annually (or more often when needed) in any apartment where a child under the age of six resides;

Require the Department of Housing Preservation and Development ("HPD") to look for peeling lead paint and conditions that could lead to peeling paint whenever it conducts any inspection of an apartment containing a child under the age of six and to establish an affirmative inspection program that does not rely solely on tenant complaints;

Continue to presume -- subject to disproof only by testing of the paint at issue -- that a hazardous lead paint condition (a class "C" violation) exists in any apartment with peeling or deteriorated paint if the building was constructed before 1960 and contains a child less than six years old;

**Eliminate the hazards:** Set firm, prompt deadlines for HPD to conduct inspections, issue orders to correct, and *achieve actual correction* (either by the landlord or HPD) of lead paint violations;

Mandate correction of underlying building defects, such as plumbing or roof leaks, that may cause lead paint to peel or deteriorate;

Require that lead paint on window friction surfaces and contact areas of doors in an apartment be removed or permanently covered upon vacancy of the unit -- or, where a child under the age of six resides, upon a schedule to be set by the City Dept. of Health ("DOH") or by July 2005.

**Make sure the problem is really solved:** Adopt lead paint clean-up and dust clearance testing standards at least as strict as existing City DOH Regulations and the standards urged by the federal Housing and Urban Development Guidelines for the Evaluation and Control of Lead-Based Paint in Housing (the "HUD Guidelines");

**Protect the child at school and daycare:** Require annual lead paint inspections and correction of lead paint hazards in schools and daycare centers; and

**Set a target and make sure the City reaches it:** Establish specific goals for reducing the number of new cases of lead poisoned children in our City and require DOH and HPD to gather -- and make public -- information about the causes of lead poisoning in NYC.

Because Int. No. 956 contains these and other essential provisions to prevent more poisoning of New York City children by lead-contaminated paint, we give it our support.

**LIST OF ENDORSEMENTS OF THE RESOLUTION**  
**FOR A STRONG CHILDHOOD LEAD POISONING PREVENTION ACT**  
(as of January 30, 1998)

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Sharon Stall, M.P.H., Renal Nutritionist

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Bedford-Stuyvesant Family Health Center  
Center for Independence of the Disabled in NY  
Children's Health Fund  
Institute for Urban Family Health  
Lead Poisoning Prevention Project  
Physicians for Social Responsibility  
William F. Ryan Community Health Center

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Educators for Social Responsibility  
Env'tl. Health & Safety in NYC Schools Comm.  
Manhattan Mothers and Others  
New Life Head Start  
Parent Association of M.S. 181B  
Parent Association of P.S. 178Q  
Parent to Parent NY, Inc.  
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NYS Tenants and Neighbors Coalition  
Northern Manhattan Improvement Corp.  
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Queens League of United Tenants (QLOUT)  
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Bronx Independent Living Services  
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Clergy United for Racial Equality  
Community Environmental Center  
Concerned Grannies of East Harlem  
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Disabled in Action of Metro New York  
East New York United Front  
El Puente  
Environmental Action Coalition  
Environmental Advocates  
Environmental Defense Fund  
Fellowship Tabernacle Choir  
Fort Greene Senior Citizens Council  
Garden of Prayer Church  
Greater Faith Baptist Church  
Greater NY Labor/Religion Coalition  
Haitian Women's Program  
Harlem Environmental Impact Project  
Harlem Independent Living Center  
Harriet Tubman Family Center  
Iona Walker Senior Citizens Center  
Jewish Community Council  
The Learning Alliance  
Magnolia Tree Earth Center  
Natural Resources Defense Council  
NYC Coalition to End Lead Poisoning  
NYC Environmental Justice Alliance  
NY Committee for Occupational Safety and Health  
NY League of Conservation Voters  
New York Public Interest Research Group  
Our Lady of Lourdes Church  
Pratt Institute Center for Community and Environmental Development  
Rene Dubos Consortium  
Sierra Club - New York City Group  
St. Augustine Presbyterian Church  
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## APPENDIX E

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