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October 21, 2016

Council Member Rosie Mendez
New York City Council
250 Broadway
Room 1734
New York, NY 10007

Dear Council Member Mendez:

At your request the Independent Budget Office (IBO) has estimated the cost of a draft City Council proposal, Intro 385-B, which would set new rules for handling violations of the city's Housing Maintenance Code regarding indoor asthma allergens—specifically mold and pests. Passage of proposed Intro 385-B as drafted on January 25, 2016 would increase the expenses of the Department of Housing Preservation and Development (HPD) and the Department of Health and Mental Hygiene (DOHMH). Our findings are summarized below, and the enclosed memo details the data, assumptions, and methodology used for this analysis.

Under proposed Intro 385-B, more violations would be classified as Class C emergency housing code violations compared with current enforcement guidelines. The city may correct Class C violations left unaddressed by the building owner through HPD's Emergency Repair Program (ERP), although proposed Intro 385-B does not require the city to do so. The extent of increases to HPD's budget largely depends upon whether the agency chooses to correct these violations through ERP. The cost also depends on how much—if at all—the number of complaints, and therefore violations, rise as the bill increases public awareness of indoor allergen hazards. As there is no relevant precedent to serve as the basis for an estimate of how the volume of complaints would increase in response to the legislation, IBO has instead created an incremental analysis that may then be scaled up or down to model different scenarios of complaints.

Holding indoor allergen complaint and violation levels at their current levels, IBO estimates that the annual cost to HPD could range from \$1.6 million to nearly \$3.5 million, depending on whether HPD makes emergency repairs for the newly classified C violations. Even if the city does pay for emergency repairs spurred by the new legislation, over time some of these additional costs will be recouped by the city.

When the city corrects a violation through ERP, the cost of the repair (with interest) is billed to the building owner, and if unpaid, may become a lien against the property. Through the lien process, part of the cost of the emergency repairs is recouped by the city in subsequent years. If the city were to spend \$3.5 million on emergency repairs under the Intro each year, IBO estimates that within two years approximately \$910,000 would be collected. Within five years, we estimate just over \$1.5 million would be collected. This would bring

the net annual cost to the city of proposed Intro 385-B, at current levels of complaints and rates of repair, to about \$1.9 million after five years of emergency repair collections.

For the incremental analysis, IBO found that each 10 percentage point increase in complaints would lead to an additional annual cost to HPD of about \$550,000 compared with the baseline complaint level assuming no additional emergency repairs are made. This cost reflects an increase in the number of inspections conducted and Class C violations issued. If HPD makes additional emergency repairs at the current repair rate, however, HPD's annual costs would rise by nearly \$900,000 compared with the baseline level. Within two years of issuing repair bills to property owners, an estimated \$170,000 would be collected by the city; within five years, an estimated \$280,000 would be collected. Therefore, the net annual cost to the city for each 10 percentage point increase in complaints, assuming HPD makes emergency repairs, would be about \$620,000 after five years of collections.

HPD would also experience a one-time upfront cost of \$100,000 to update its violation-tracking computer programs to reflect the classification and timeline changes created under the proposed Intro.

In addition to costs borne by HPD, the Department of Health and Mental Hygiene would incur expenses for preparing pamphlets and training materials, investigating for the presence of indoor allergen hazards in cases where the housing maintenance code enforced through HPD would not apply (such as mold hidden within wall cavities or construction dust), and implementing a referral system to allow physicians to arrange household inspections for patients with respiratory illnesses. DOHMH estimates expenses of about \$520,000 in upfront costs and \$430,000 annually, with each 10 percentage point increase in complaints adding an additional \$14,000 to annual costs.

If you have any questions or would like additional information, please feel free to contact me at ronniel@ibo.nyc.ny.us or 212-442-0225 or Sarah Stefanski who did the study, at sarahs@ibo.nyc.ny.us or 212-341-7367.

Sincerely,

A handwritten signature in blue ink that reads "Ronnie Lowenstein". The signature is written in a cursive, flowing style.

Ronnie Lowenstein

MEMORANDUM

DATE: October 21, 2016

TO: George Sweeting

FROM: Sarah Stefanski

SUBJECT: Fiscal Impact of Increasing Housing Maintenance Code Violations for Indoor Allergen Hazards

IBO estimated the fiscal impact of City Council proposed Intro 385-B as drafted on January 25, 2016, which would set new rules for handling violations of the city's Housing Maintenance Code regarding asthma-related indoor allergens. Under the proposed legislation, more violations resulting from mold and pests would be classified as emergency Class C violations of the housing code, resulting in a possible increase in repair work done by the Department of Housing Preservation and Development (HPD). It would also require the city's Department of Health and Mental Hygiene (DOHMH) to create informational pamphlets, implement a system for physicians to refer patients with respiratory illnesses for indoor allergen household inspections, investigate complaints of unsafe work practices related to allergen mitigation, and inspect for indoor allergen hazards not otherwise subject to HPD enforcement (such as hidden mold).

IBO separated its cost analysis into three parts. First, we estimated the increased costs to HPD associated with the new rules using the current levels of indoor allergen complaints and violations. The second part of the analysis assumed that the proposed legislation would heighten awareness about indoor allergens, especially for individuals with respiratory illnesses. As a result, tenant complaints would increase along with the number of violations issued and emergency repairs made by HPD. Lastly, our analysis presents the costs to DOHMH for creating informational materials, establishing a referral system, and conducting inspections. IBO did not estimate the costs associated with an increase in housing litigation; if this bill increases the number of violations, it may also increase the costs to the Housing Litigation Division. We also did not estimate how this bill may impact housing code violations for residential units within the New York City Housing Authority, which HPD does not inspect. Both of these considerations are outside the scope of the present analysis.

FISCAL IMPACT AT CURRENT VIOLATION LEVELS

Under the city's Housing Maintenance Code, HPD is charged with responding to tenant complaints regarding housing conditions by inspecting housing units, issuing violations, and—in certain instances—conducting emergency repairs. HPD assigns violations to one of three classes: A, B, or C. Class A violations are nonhazardous; owners are given 90 days to correct these violations and two weeks to certify the repair to remove the violation. Class B violations are considered hazardous; owners have 30 days to correct a B violation and two weeks to certify the correction to remove the violation. Class C violations are the most severe and are considered immediately hazardous. Typically, an owner has 24 hours to correct a Class C violation and five days to certify the correction to remove the violation. Some violations—such as lead paint

violations in homes with small children—are Class C, but for these Class C violations, the owners have 21 days to correct the violation. Currently, an owner certifies to HPD that a violation has been corrected and HPD only does follow-up inspections to verify corrections if complaints are made. When a landlord fails to rectify a Class C violation, HPD itself may conduct emergency repairs through its Emergency Repair Program (ERP) if it is necessary. Most but not all categories of Class C violations necessitate repairs by HPD.

New Violation Class Standards for Indoor Allergen Hazards. Under current code enforcement guidelines, the city classifies mold as a Class C violation if the area of mold exceeds 25 square feet in any room in a dwelling unit or 100 square feet in total. Smaller areas of mold in an apartment and any mold found on tile or grout in a bathroom are classified as Class A or B violations. Code enforcement guidelines currently classify pest infestations as either Class B or C violations. Rat infestations are classified as Class C while other types of pests (such as mice, bedbugs, and cockroaches) are considered Class B. In practice, there appears to be some discretion as to the classification level of both mold and pest violations on the part of the issuing inspector.

For mold, proposed Intro 385-B codifies the size threshold for a Class C violation as 30 square feet in any room of a dwelling unit, while areas of mold that are less than 30 square feet will be classified as a Class B violation. If, however, a Class B mold violation remains uncorrected over the 30-day period to correct or if it is falsely certified as corrected by the building owner, the violation will be reissued as a Class C violation. These new classification standards do not apply if mold is located on tile or grout. (Current code enforcement guidelines classify mold of any size located on tile or grout as Class B). Proposed Intro 385-B also specifies that mold in a common area greater than 30 square feet in one location or greater than 50 square feet in total will constitute a Class B violation. In common spaces, areas of mold that are less than 30 square feet in one location or 50 square feet in total will constitute a Class A violation.

For pests, proposed Intro 385-B would classify all infestations in either a dwelling unit or a common area as a Class C violation, substantially increasing the number of Class C violations issued.

Under the proposed law, the landlord would have 21 days to correct a Class C indoor allergen hazard violation and HPD would be required to reinspect all mold and pest violations to verify that they had been corrected. If the landlord does not remediate the condition, HPD may correct the violations through ERP, although the proposed legislation does not require the city to do so. If the violation is repaired through ERP, the landlord will be billed for the cost of the work incurred by HPD plus interest and, if the landlord fails to pay, the city will place a lien against the property for the amount due.

HPD would also experience a one-time cost of \$100,000 to restructure its computer programs used to track and record violations to reflect the classifications and timeline changes for indoor allergen hazards established in proposed Intro 385-B.

Reclassifying Current Types of Violations Under New Rules. To determine the baseline level of indoor allergen violations, IBO reviewed administrative data for all open and closed violations from 2011 through 2015 to estimate how many mold and pest-related violations would be reclassified under the new law. (All years refer to city fiscal years unless otherwise specified).

Although the number of square feet of mold is used to determine the violation level, the size of mold violations was only recorded in the violation description for just over one-third of mold-related violations. Using the subset of violations that did include a size description, IBO projected how the new size standards would apply to mold violations overall.

IBO does not expect the new rules outlined in the proposed legislation to result in a dramatic shift in the way mold violations are classified, particularly for Class C violations. From 2011 through 2015, on average, 13,832 mold violations were issued each year. Of those, 11 percent were Class A violations, 74 percent Class B violations, and 16 percent Class C violations. If the proposal had been in effect, fewer mold violations would have been classified as Class A (2 percent of violations), while more mold violations would have been classified as Class B (80 percent) and Class C (18 percent). The increase in the share of Class C violations results from initial Class B violations that would have been reclassified under the proposed law as Class C because they were either falsely certified as corrected or remained uncorrected.

There would be a considerable change, however, in how pest violations are classified. From 2011 through 2015, an annual average of 24,528 pest violations were issued, with most (96 percent) classified as Class B violations and the remaining 4 percent of violations were classified as Class C. The proposed legislation would require all pest violations to be classified as Class C.

In total, IBO estimates that 70 percent of all pest and mold violations would be classified as Class C violations under the new law, compared with just 8 percent under the current guidelines.

Proposed Intro 385-B Increases Class C Violations				
	Annual Average Violations for 2011-2015 Under Current Classifications		Projected Annual Classifications Under Proposed Intro 385-B	
Class A	1,468	4%	277	1%
Mold	1,468		277	
Class B	33,772	88%	11,065	29%
Mold	10,168		11,065	
Pests	23,604		0	
Class C	3,120	8%	27,018	70%
Mold	2,196		2,490	
Pests	924		24,528	
Total	38,360	100%	38,360	100%
SOURCE: IBO analysis of data from the Department of Housing Preservation and Development New York City Independent Budget Office				

Annual Cost to HPD at Current Complaint Levels. Proposed Intro 385-B could increase HPD costs in two ways. First, by classifying more violations as Class C, the proposed legislation would increase HPD’s inspection and administrative costs; all indoor allergen violations would have to be reinspected to verify the violations have been corrected and Class C violations require more administrative oversight than Class A and Class B violations due to their emergency nature. Second, HPD is authorized to repair conditions causing Class C

violations if they remain unresolved by the building owners. HPD does not correct all unresolved Class C violations, however, and the proposed legislation does not require the agency to correct the indoor allergen Class C violations. Therefore, HPD costs would only increase to the extent that the agency chooses to correct the newly classified violations through the Emergency Repair Program.

Assuming the agency does not make any additional repairs through ERP and complaints remain at their current levels, IBO estimates that proposed Intro 385-B would cost HPD \$1.6 million a year—\$1.4 million to re-inspect mold and pest violations and \$190,000 in administrative costs associated with issuing and tracking more Class C violations. If the agency chooses to use ERP to make repairs for the newly classified indoor allergen violations, we estimate that the annual cost to HPD would increase by \$1.9 million for a total cost of nearly \$3.5 million, with almost all of the cost increase due to the remediation of pest violations.

HPD does not currently engage in pest control through the Emergency Repair Program, even if the pest issue is designated a Class C violation. Under current guidelines, pest-related Class C violations are primarily for the presence of rats. According to HPD, rat control generally requires ongoing and whole-building treatment, combined with outdoor extermination efforts to be effective.¹ HPD does, however, perform whole building integrated pest management (IPM) for buildings in the Alternative Enforcement Program.² IPM involves professionally cleaning infested units to remove food sources for pests, sealing points of entry, baiting, and encouraging the use of garbage cans with lids, and food storage containers; commercial sprays and pesticides are not used. Proposed Intro 385-B calls for IPM to be employed in correcting pest violations. For this analysis, IBO assumed that, if addressing a pest violation through the Emergency Repair Program, HPD would conduct a one-time integrated pest management treatment in each of the affected units in the building with one follow up visit. HPD estimates a per-unit cost of \$400 for integrated pest management. From 2011 through 2015, HPD repaired an average of 14 percent of all emergency repair-generating Class C violations. If HPD were now to correct 14 percent of the newly classified Class C pest violations—with the number of violations issued remaining at current levels—the annual cost of these repairs including the follow up visit would be nearly \$1.9 million.

Currently, HPD does correct Class C mold violations through the Emergency Repair Program. According to HPD, the average cost of mold mitigation through the ERP was \$561 a project in 2015. Because the change in the number of Class C mold violations under the proposed legislation is relatively modest, the additional annual cost to HPD to remediate the newly classified mold violations under the proposed legislation—again assuming 14 percent of Class C violations are treated through ERP—would be only about \$32,000. When added to the pest repair charges, this brings the additional cost for repairs attributable to the legislation to about \$1.9 million.

Recovery of at Least Some Emergency Repair Program Costs. If HPD conducts additional repairs due to this legislation, the city would recoup some of the cost for the additional work over time. Under ERP, the Department of Finance (DOF) bills building owners for the cost of the emergency repairs and a fee to cover administrative costs associated with the city conducting the repair. (This fee does not cover the administrative costs associated with issuing and tracking violations in general, however.) The repair charge and any interest that accrues while the bill is outstanding becomes a lien placed against the property.

Despite the liens, the city does not immediately collect the cost of its emergency repairs. Based on historical collection data, approximately 50 percent of the emergency repair charges (including interest) are repaid within two years of DOF issuing the bill. Five years after the bill has been issued, around 87 percent of emergency repair charges (including interest) are repaid. Based on these repayment rates, IBO estimates that HPD would issue \$3.5 million (in 2016 dollars) in new ERP bills each year—this assumes HPD continues to address about 14 percent of Class C violations through ERP. After two years the city would collect about \$910,000 (in 2016 dollars) of the annual outlay and within five years collections would increase to around just over \$1.5 million (again, in 2016 dollars).³ With repayments through DOF offsetting the initial cost to HPD of additional indoor allergen repairs, IBO estimates the net annual cost to the city of proposed Intro 385-B at current complaint levels and repair rates would total \$1.9 million after five years of DOF collections.

Annual Cost to the City Depends on Rate of ERP Repairs		
	No Increase in Complaint Levels	
	No Additional Repairs Made by HPD	HPD Repairs 14 Percent of New Class C Violations
Annual Cost to HPD	\$1,600,000	\$3,500,000
Costs Recouped by DOF Within Five Years	\$0	(\$1,500,000)
Annual Cost to the City	\$1,600,000	\$1,900,000
<small>SOURCES: IBO analysis of Department of Housing Preservation and Development, Department of Finance, and Mayor’s Office of Management and Budget data NOTES: Totals may not sum due to rounding. Department of Finance collections have been adjusted for inflation and expressed in 2016 dollars.</small>		
<i>New York City Independent Budget Office</i>		

FISCAL IMPACT ESTIMATE FOR INCREASE IN COMPLAINT AND VIOLATION LEVELS

Complaints Related to Indoor Allergen Hazards Expected to Rise. The second part of this analysis estimates the additional cost the city would bear for each 10 percentage point increase in the annual number of complaints; a 10 percentage point increase in complaints related to indoor allergens would add about 8,200 complaints. This approach allows for comparison of costs at different complaint levels, rather than selecting an arbitrary projected number of complaints. Any costs associated with an increase in indoor allergen complaints would be in addition to the baseline costs at current complaint levels.

Estimating the increase in complaints that could result from proposed Intro 385-B is difficult because there is no precedent to provide a starting point for developing a model. Local Law 1, the city’s lead paint law, was initially considered but ultimately deemed too dissimilar because of extensive screening for possible violations by HPD inspectors in the field and by 311 operators—steps that would not be required under the proposed Intro. Nevertheless, there is evidence that many more tenants have indoor allergens in their apartments than complain to HPD, suggesting that more information about indoor allergens will likely lead to an increase in complaints. Based on data from the 2014 Housing and Vacancy Survey, approximately 770,000 occupied rental households in buildings with four or more units reported conditions that are linked to indoor allergens, such as the presence of pests or leaks that may cause mold. In 2015, however, HPD received about

82,000 unique complaints about pests and mold, which suggests that many households never complain to HPD about indoor allergens in their homes.

Annual Cost of Each 10 Percentage Point Increase in Complaints. Rather than provide a single estimate of the increase in complaint volume attributable to the proposed legislation IBO modeled the additional costs to the city for each 10 percentage point increase in the number of complaints. An increase in complaints would require additional inspections. IBO estimated the average cost of an HPD inspection and then multiplied by 8,200 new inspections. Additionally, IBO calculated administrative costs associated with an increase in Class C violations being issued. According to historical data, HPD on average issues one violation for every 1.35 complaints received, so an increase of 8,200 complaints would likely lead to around 6,100 new violations. Given the new classification rules, IBO estimates that 70 percent, or about 4,200 of these violations, would be Class C. In total, each 10 percentage point increase in the number of complaints would cost an estimated \$550,000 compared with the cost at current violation levels, assuming no additional repairs are made through the Emergency Repair Program.

If the city were to intervene to correct 14 percent (the historical share) of these new Class C violations through the Emergency Repair Program, each 10 percentage point increase in complaints would cost HPD nearly \$900,000 annually, including all of the costs of inspection, administration, and repair. As was discussed earlier, some of the emergency repair costs would be recouped. IBO estimates that measured in 2016 dollars, the city would collect about \$170,000 within two years of DOF billing for emergency repair work, and \$280,000 within five years. Assuming HPD continues to repair 14 percent of new Class C violations, the net additional cost to the city of each 10 percentage point increase in complaints in a year would be approximately \$620,000 after five years of collections compared with current violation levels.

Recoupment Through Billing Building Owners Offsets Some of Increased Cost		
	Additional Cost for Each 10 Percentage Point Increase in Complaints	
	No Additional Repairs Made by HPD	14 Percent Rate of Repairs for New Class C Violations
Annual Cost to HPD	\$550,000	\$900,000
Costs Recouped by DOF within Five Years	\$0	(\$280,000)
Net Annual Cost to City of 10 Percentage Point Increase in Complaints	\$550,000	\$620,000
<small>SOURCES: IBO analysis of Department of Housing Preservation and Development, Department of Finance, and Mayor’s Office of Management and Budget data NOTE: Department of Finance collections have been adjusted for inflation and expressed in 2016 dollars. <i>New York City Independent Budget Office</i></small>		

Using this incremental approach, if HPD experienced a 50 percentage point increase in the number of complaints (around 41,000 new complaints), the additional inspections and administration of Class C violations over the baseline amount would cost HPD \$2.7 million annually, increasing the cost of the proposed legislation to \$4.3 million without emergency repairs. With repairs of Class C violations through the Emergency Repair Program, the cost associated with a 50 percentage point increase in complaints would be roughly \$4.5 million above the current baseline, bringing the total annual cost of the legislation to \$7.9 million. After two years of collections of emergency repair charges, the city would have collected a total of

\$1.8 million, and after five years of collections, the city would have collected a total of \$2.9 million (in 2016 dollars). Thus, the net annual cost to the city of the legislation with a 50 percentage point increase in the number of complaints and HPD making emergency repairs would total \$5.0 million after five years of DOF collections.

ESTIMATED COSTS TO DOHMH UNDER PROPOSED INTRO 385-B

Besides the additional costs for HPD under the proposed legislation, DOHMH will also incur costs. IBO estimates proposed Intro 385-B would cost DOHMH \$520,000 in upfront costs and \$430,000 annually thereafter, with an additional \$14,000 a year for each 10 percentage point increase in complaint levels.

Proposed Intro 385-B would require DOHMH to create and translate pamphlets informing tenants and building owners about the health issues associated with indoor allergens and methods to correct indoor allergen hazards. The proposed legislation requires that the pamphlet be distributed to tenants as part of an indoor allergen-related inspection. IBO estimates that the initial cost to produce these pamphlets would total \$240,000. The annual costs of printing and distributing pamphlets would depend on the increase in the number of complaints received: totaling \$140,000 at the city's current level of complaints and an additional \$14,000 for each 10 percentage point increase in the number of complaints. Costs may be higher if the pamphlet is more widely distributed than just at inspections.

Proposed Intro 385-B requires DOHMH to create a physician referral system that allows health care workers to, with the patient's permission, request HPD to inspect the patient's housing unit for indoor allergen hazards. The bill also requires DOHMH to work with health care professionals to educate them on the issue of indoor allergen hazards as they relate to patients with asthma. IBO estimates that these components would cost the agency \$160,000 annually.

DOHMH would also be required to respond to complaints of unsafe work practices related to the mitigation of indoor allergen hazards and inspect for hazards that are not otherwise subject to HPD enforcement, which would include mold hidden within wall cavities or construction dust. IBO estimates the costs of these inspections to total \$130,000 annually.

Endnotes

¹ DOHMH currently operates a rat control program, but it targets whole blocks with high rat populations, and does not specifically address rats in private buildings.

² HPD annually selects 250 buildings with high levels of Class B and C housing code violations and outstanding ERP charges to be designated for the Alternative Enforcement Program (AEP). Owners of AEP buildings are given four months to correct housing code violations and repair the building's structural problems. If the violations are not corrected within four months, HPD will make the repairs and bill the owner.

³ IBO has adjusted future DOF collections for inflation and expressed the results in 2016 dollars.