# The Impact of PreK on School Overcrowding in NYC: Lack of Planning, Lack of Space 



## A report by <br> Class Size Matters <br> December 2018

## Executive Summary

New York City public schools are critically overcrowded. About 575,000 students, more than half of all students, attended schools that are at or above 100 percent capacity, according to the latest available data from the Department of Education, with about 43 percent of schools in that category. ${ }^{1}$

In recent years, overcrowding has worsened significantly, especially at the elementary school level. Nearly 60 percent of elementary schools were at 100 percent or more in 2016-2017 and 67 percent of elementary grade students attended these schools. This is due in part to the fact that enrollment in these grades has increased faster than new school construction. ${ }^{2}$ The expansion of universal prekindergarten has also exacerbated overcrowding in elementary schools, as this report will describe.

School overcrowding undermines quality education in many ways, from denying students the opportunity to have small classes, preventing their access to the cafeteria at reasonable lunch times, precluding them from having adequate time to exercise in the gymnasium and/or playground, and/or impeding their ability to receive art classes, music, counseling or mandated services in appropriate spaces. Students in overcrowded schools experience greater levels of stress, and teachers in overutilized schools are more likely to leave the profession quickly. ${ }^{3}$

Mayor de Blasio's Pre-K for All Initiative enrolls about 70,000 students, ${ }^{4}$ an increase from the 20,000 students provided with full-day pre-K prior to de Blasio taking office. ${ }^{5}$ About 35 percent of these students are enrolled in pre-K classes inside public elementary schools.

Our analysis finds that more than half of the 25,000 students who attended pre-K classes in DOE buildings in 2016-2017 were placed in 352 schools that at 100 percent or above, thus contributing to worse overcrowding for 236,000 students. Districts 25,27 and 31 each had over 1,000 pre-K students in overutilized schools during the 2016-2017 school year.

In about one quarter (22 percent) of these schools, the expansion of pre-K actually forced the school to these levels. 6 As of 2016-2017, 76 elementary schools, with a total of 45,124

[^0]students, became overutilized, according to the DOE's data, because of the additional number of pre-K students at their schools.

In addition, thirty schools or 60 percent of schools with Kindergarten waitlists had pre-K classes in 2017-2018, necessitating these children to be sent to schools outside their zone and sometimes far from home.

The DOE began to implement 3-K in 18 schools in two districts during the 2017-2018 school year. Three of these schools were already overcrowded in the prior year. ${ }^{7}$ Additionally, of the 61 additional schools adding 3-K during the current 2018-2019 school year, more than one fourth of them were already overcrowded, according to the latest available data. ${ }^{8}$ Several of these were also Renewal schools, meaning they were struggling with low performance and in danger of being closed. ${ }^{9}$

To make things worse, the NYC Department of Education failed for many years to update its methodology for projecting the need for new school capacity for many years, and its formula did not account for the expansion of thousands of new pre-K students in the schools. ${ }^{10}$

The Mayor and Chancellor proposed a new 2020-2024 Five-Year Capital Plan for schools on November 5, 2018. Although the press release from the Mayor's office claims that new plan includes "funding for 57,000 seats over the next five years, our analysis finds that 50,000 of these seats won't be completed until 2024 or later, long after the Mayor has left office. More than half of these seats - about 37,000 - actually won't be completed until after 2024, when the Five-Year Capital Plan is over. ${ }^{11}$ By that time it is likely that our schools will be even more overcrowded, lagging far behind the pace of new residential development and population growth throughout the city.

In addition, in the proposed Capital Plan, the DOE omitted any mention of identified seats need for the first time since November 2011. ${ }^{12}$ Many advocates including Class Size Matters have pointed out how the DOE's estimates of the need for seats over the years have been arrived at

[^1]using a non-transparent methodology that is impossible to fully understand or replicate. We have estimated that the need for seats is at least 100,000, given the number of overcrowded schools currently, the likelihood of enrollment growth due to increased population and housing trends, and the need for class size reduction. ${ }^{13}$ But to exclude any mention of a needs estimate from the document further undermines confidence in the adequacy of the plan.

If cramming more pre-K students into public schools worsens school overcrowding, increases class size, and/or sacrifices the space necessary for a well-rounded curriculum, then the educational benefits of the program will be undermined. A letter signed by more than seventy early childhood education and psychology researchers in 2014 made this point, and urged thenChancellor Farina to broaden her focus from merely expanding pre-K to reducing class size in the elementary grades as well. ${ }^{14}$

A recent large-scale experimental study in Tennessee found that pre-K is no silver bullet, and failed to produce gains in achievement. ${ }^{15}$ The chief investigators of the study emphasized that the lack of results underscored how the quality of the entire early childhood educational experience through $3^{\text {rd }}$ grade should be addressed, including the need for small class sizes, if improvements in student learning and other outcomes will be met. More on this below.

## Pre-K for All and its Impact on School Overcrowding

New York City's Pre-K for All program has been implemented in four different settings: public elementary schools, district pre-K centers owned and operated by DOE, NYC Early Education Centers (NYCEECs) run by community-based organizations, and charter schools. NYCEECs enroll a majority of students in Pre-K for All, while public elementary schools enroll about 36 percent. ${ }^{16}$ Charter schools represent only a small percentage of total pre-school enrollment.

[^2]Table 1 below shows the breakdown of pre-K students enrolled in the different types of settings over the last three years as of 2017-2018. ${ }^{17}$

| Table 1. Number \& Percent of Pre-K Students in Different Settings |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Type of Pre-K <br> Program | 2015-16 <br> Number of <br> Students | $\mathbf{2 0 1 5 - 1 6}$ <br> \% of <br> students | $\mathbf{2 0 1 6 - 1 7}$ <br> Number of <br> Students | $\mathbf{2 0 1 6 - 1 7}$ \% <br> of <br> Students | 2017-18 <br> Number of <br> Students | 2017-18 <br> \% of <br> Students |
| Public <br> elementary <br> schools | 25,183 | $36.7 \%$ | 24,606 | $35.4 \%$ | 24,743 | $36.1 \%$ |
| District pre-K <br> centers | 3,780 | $5.5 \%$ | 4,957 | $7.1 \%$ | 5,200 | $7.6 \%$ |
| NYCEECs | 39,174 | $57.1 \%$ | 39,458 | $56.8 \%$ | 38,000 | $55.5 \%$ |
| Charter <br> schools | 510 | $0.7 \%$ | 489 | $0.7 \%$ | 521 | $0.8 \%$ |
| Total Citywide | 68,647 | $\mathrm{~N} / \mathrm{A}$ | 69,510 | $\mathrm{~N} / \mathrm{A}$ | 68,464 | $\mathrm{~N} / \mathrm{A}$ |

Only a small number of students in district pre-K centers and NYCEECs are housed in public elementary school buildings. ${ }^{18}$ Some charter schools with pre-K students are also co-located in public school buildings, but they are few in number.

Table 2 shows the number and percentage of pre-K students in schools with a utilization rate of 100 percent or more in 2016-2017, as a share of the total number of pre-K students housed in public school buildings and as a share of all students in Pre-K for All. ${ }^{19}$

Table 2: Pre-K Students in Overcrowded Public Schools

| School Year | Number of pre-k <br> students in <br> overutilized public <br> schools | Number of pre-k <br> students <br> attending class in <br> DOE buildings | Percent of pre-k students in <br> overcrowded elementary <br> schools out of total attending <br> class in DOE buildings | Percent of pre-K <br> students in <br> overcrowded <br> elementary schools <br> out of all pre-K <br> students |
| :--- | :--- | :--- | :--- | :--- |
| 2015-2016 | 14,788 | 26,844 | $55.1 \%$ | $21.5 \%$ |
| $2016-2017$ | 14,220 | 25,960 | $54.4 \%$ | $19.9 \%$ |

[^3]As shown in the above table, more than half of the students enrolled in pre-K programs located in NYC elementary schools were attending classes in 2016-2017 in overcrowded schools, and a fifth of all pre-K students overall in overcrowded schools.

Figure 1 below shows these percentages broken down by district. The percentages listed are the share of pre-K students in each district who attended classes in overcrowded public elementary schools, out of all those pre-K students enrolled in public schools.

As would be expected, the highest percentages of pre-K students in overcrowded schools were found in some of the most overcrowded districts overall, including District 11 in the Bronx, Districts 15 and 20 in Brooklyn, and Districts 24, 25, 26 and 27 in Queens. In each of these districts nearly three quarters of the pre-K students enrolled in public schools were in overcrowded schools.

Figure 1
Percent of Pre-K Students in public schools enrolled in overutilized schools, 2016-2017


Figure 2 shows the number rather than the percentage of pre-K students enrolled in overcrowded public schools by district. ${ }^{20}$ Districts 25,27 and 31 had over 1,000 pre-K students in overutilized schools during the 2016-2017 school year.

## Figure 2

Number of pre-K students in Overutilized Schools, 2016-2017


While many schools were already overcrowded prior to the expansion of pre-K, others were pushed over the 100 percent limit by the addition of pre-K students.

Our calculations show that as of 2016-2017, 76 schools, with a total of 45,124 students, were made overcapacity because of the addition of pre-K programs. ${ }^{21}$ These schools are listed in the Appendix. Every district but three (Districts 4, 20, and 32) had at least one such school, and five districts had five or more such schools (Districts 8, 9, 10, 21).

In addition, in another 276 schools with a total of 191,082 students, pre-K students exacerbated existing overcrowding in schools that were already at 100 percent or more. ${ }^{22}$

[^4]Figure 3 shows the percentage of pre-K students in overcrowded elementary schools by borough, as a percentage of all pre-K students. ${ }^{23}$ Staten Island had the highest percentage of pre-K students in overcrowded schools, at more than 25 percent, and Queens had the second highest percentage at 20 percent.

Figure 3
The Percentage of All Pre-K Students in Overcrowded Elementary Schools, by Borough, 2016-2017


## Pre-K and its Effect on Kindergarten Waitlist

An additional impact of the Pre-K for All program was its effect on Kindergarten waitlists. According to DOE data, 590 rising Kindergartners at fifty schools were waitlisted at their zoned schools for the 2017-2018 school year, forcing these children to attend another school sometimes miles away. There were pre-K programs in 30, or 60 percent, of these schools, which enrolled 1,057 pre-K students. ${ }^{24}$

If pre-K classes were not in these buildings, there presumably would be space to offer another Kindergarten class at most of the schools. Twenty-seven of these schools had waitlists of less than 25, meaning that they would need just one additional kindergarten class to eliminate their waitlist. Three of the schools had especially large waitlists of 48 or more, and they would have shorter waitlists in the absence of pre-K programs. Table 3 lists elementary schools with both a pre-K program and a waitlist for Kindergarten in 2017-2018, with both the number of pre-K students and the number of students on the waitlist.

[^5]
## Table 3. 2017-2018 Kindergarten Waitlists

| School Name | \# of pre-K students <br> (2017-2018) | Number of students on Fall 2018 waitlist |
| :---: | :---: | :---: |
| P.S. 6 Lillie D. Blake | 78 | $\leq 5$ |
| P.S. 40 Augustus Saint-Gaudens | 36 | $\leq 5$ |
| P.S. 9 Sarah Anderson | 18 | 24 |
| P.S. 87 William Sherman | 18 | 48 |
| P.S. 165 Robert E. Simon | 31 | $\leq 5$ |
| P.S. 028 Wright Brothers | 34 | $\leq 5$ |
| The Family School | 36 | $\leq 5$ |
| P.S. 9 Ryer Avenue Elementary School | 71 | $\leq 5$ |
| Young Voices Academy of The Bronx | 34 | 14 |
| P.S. 196 | 18 | 17 |
| Archer Elementary School | 18 | $\leq 5$ |
| P.S. 20 The Clinton Hill School | 54 | $\leq 5$ |
| P.S. 58 The Carroll School | 54 | 10 |
| The Maurice Sendak Community School | 48 | $\leq 5$ |
| P.S. 195 Manhattan Beach | 18 | 20 |
| P.S. 236 Mill Basin | 49 | 17 |
| P.S. 315 | 36 | 9 |
| P.S. 28 Thomas Emanuel Early Childhood | 14 | $\leq 5$ |
| Learners and Leaders | 33 | $\leq 5$ |
| P.S. 22 Thomas Jefferson | 36 | $\leq 5$ |
| P.S. 32 State Street | 33 | 21 |
| P.S./I.S. 178 Holliswood | 38 | 20 |
| P.S./M.S. 42 R. Vernam | 36 | $\leq 5$ |
| P.S. 196 Grand Central Parkway | 18 | 63 |
| P.S./I.S. 78 | 34 | 73 |
| P.S. Q222 Christopher A. Santora School | 40 | $\leq 5$ |
| P.S. 228 Early Child. Magnet School of the Arts | 35 | $\leq 5$ |
| P.S. 55 Henry M. Boehm | 36 | $\leq 5$ |
| Kathleen Grimm School for Leadership and | 18 | 7 |
| P.S. 123 Suydam | 35 | $\leq 5$ |

A specific example illustrates the larger problem. District 20 has the most overcrowded schools in the city, with an average utilization rate of 130 percent for elementary schools. ${ }^{25}$ Yet the DOE has continued to place pre-K classes in already overcrowded District 20 schools, despite the presence of alternatives.

In the spring of 2017, P.S. 204 had 40 pre-K students, a utilization rate of 137 percent, and an average class size of 27, with classes as large as 32 students. District 20 Pre-K Center at $135584^{\text {th }}$ Street, one avenue and one block away from P.S. 204, had 57 slots available in Round 2 of the school selection process. But the District 20 Pre-K Center in question ended up enrolling only

[^6]115 students in 2017-2018, despite having space for 162 students. ${ }^{26}$ Thus, this Pre-K Center could have taken nearly 50 pre-K students from P.S. 204.

Meanwhile, the adjacently zoned P.S. 176 at 152 percent utilization had a Kindergarten waitlist, and sent these students many miles away to schools in Borough Park, without providing transportation for them. ${ }^{27}$ At least some of these waitlisted Kindergarten students could have been sent to P.S. 204 if the P.S. 204 pre-K classes had been moved to the district pre-K center. When then-President of the Community Education Council in District 20 Laurie Windsor urged Josh Wallack, Deputy Chancellor in charge of pre-K implementation, to fill the seats in the nearby pre-K center with those currently assigned to P.S. 204, rather than further overcrowd P.S. 204 and/or force P.S. 176 Kindergarten students to travel far across the borough, he responded that pre-K parents prefer to send their children to district public schools.

If this preference among some parents is indeed true, it may only be a result of the mistaken belief that if their children attend pre-K in a particular elementary school that would increase the chances that their children will be able to attend Kindergarten in that same school - which is incorrect. The DOE does not provide any admissions preferences to children who attend pre-K in the school over other applicants. ${ }^{28}$ In any case, there is no justification for favoring the preference of pre-K families over the right of Kindergarten students to attend their zoned schools.

In recent testimony before the New York City Council, Lisa Caswell, a senior policy analyst with the Day Care Council of New York, a federation of 91 non-profits which run child care programs, addressed the fact that DOE had diverted students not only from DOE pre-K centers but also from CBO centers to public schools. She testified that in previous years, the DOE had been engaged in the "recruitment of children directly from our [CBO] settings to fill UPK seats," which added to public school pre-K enrollment while leaving seats empty in CBOs, causing these centers loss of students and having to refill their classes multiple times. ${ }^{29}$

The DOE's willingness to draw additional pre-K children into already overcrowded DOE buildings to the detriment of both CBOs and students already enrolled in these schools reveals a lack of concern about the problem of school overcrowding and its impact on class size and other opportunities afforded students in in the other elementary grades.

[^7]
## The Expected Impact on Overcrowding of 3-K for All

3-K for All was introduced in 2017-2018, in 18 public schools in Districts 7 and 23, as well as two DOE pre-K centers and 8 NYCEECs. Prior to this, the city had funded pre-school for about 11,000 3-year old students exclusively in CBO-run Early Childhood Centers. ${ }^{30}$

Of these 18 public schools, three were already overcrowded in 2016-2017, according to DOE data: P.S. 25 Bilingual School, P.S. 30 Wilton, both in District 7, and P.S. 156 Waverly in District 23. P.S. 25 Bilingual School had a 112 percent utilization rate and lacked three cluster rooms, meaning rooms for art, music or science, given its school population, according to the DOE utilization formula. P.S. 30 Wilton had a 123 percent utilization rate and also lacked three cluster rooms, and P.S. 156 had a 103 percent utilization rate and lacked four cluster rooms. ${ }^{31}$

Of the 75 schools scheduled to have 3-K classes in the 2018-2019 school year, 17 were already overcrowded. Table 4 includes a list of those schools, one of which, P.S. 284 Gregory Jocko Jackson, is a Renewal K-5 school.

Among the already overcrowded schools that received a 3-K class this year, four are in District 4, one in District 5, three in District 7, two in District 23 and seven in District 27. If these schools force class sizes even higher in these schools, then the impact of 3-K may further disadvantage the students in these schools and their opportunity to learn.

Several of these schools already have extremely large class sizes. P.S. 100 Glen Morris in District 27 has an average class size of 27.4 this fall, with $1^{\text {st }}, 2^{\text {nd }}, 4^{\text {th }}$ and $5^{\text {th }}$ grades having class sizes of 30 students or more. P.S. 60 Woodhaven also in District 27 has classes that large in grades $2^{\text {nd }}$ and $3^{\text {rd }}$. These schools may not have the space necessary to run high-quality $3-K$ and pre-K programs, while preventing further damage to the quality of education provided their K-5 students.

Two schools in the Renewal Program as of 2018-2019, P.S. 123 Mahalia Jackson and P.S. 298 Dr. Betty Shabazz, added 3-K to their buildings in 2018-2019. As of the 2018-2019 school year, P.S. 123 Mahalia Jackson had at least one class of 30 or more students, while P.S. 298's largest class was 33 . These classes were far too large, especially for high-poverty elementary schools. ${ }^{32}$ Given the challenges these schools have faced as Renewal schools, it would have been wiser for the DOE to use available space in their buildings to reduce class size in these schools, in order to boost student achievement, rather than add 3-K classes.

[^8]Table 4. Seventeen schools that were overcrowded in 2016-2017 with 3-K Programs in 2018-2019
$\left.\begin{array}{|l|c|c|c|c|}\hline \text { Name of School } & \text { District } & \begin{array}{c}\text { Utilization Rate } \\ (\mathbf{2 0 1 6 - 2 0 1 7 )}\end{array} & \begin{array}{c}\text { Average Class Size } \\ \text { K-5 }\end{array} \\ (\mathbf{2 0 1 8 - 2 0 1 9 )}\end{array}\right)$ Maximum Class Size

The city expanded into four more districts in 2018-2019: Districts 4, 5, 16, and 27, with four additional districts planned for the following year: Districts 6, 9, 19, and 31. Several of the districts selected for early 3-K already had high rates of overcrowding.

In particular, the elementary schools in Districts 6, 9, 12, 27, and 31 have an average elementary school utilization rates of above 100 percent, and also extremely large average class sizes. Most elementary school students in these districts attend overcrowded schools. Even in districts where the average utilization of elementary schools is under 100 percent, significant numbers of students attend overcrowded schools, such as in Districts 4, 7, and 19.

Table 5 shows the districts selected for early 3-K implementation, the district's utilization rate as of the 2016-2017 school year. ${ }^{33}$

Table 5. Districts with Early Implementation of 3-K

| District | Year of 3-K <br> implementation | Elementary School <br> Utilization Rate <br> (2016-2017) | Percent of Elementary School Students in <br> Overcrowded Schools <br> (2016-2017) |
| :---: | :---: | :---: | :---: |
| District 7 | $2017-2018$ | $91 \%$ | $42 \%$ |
| District 23 | $2017-2018$ | $77 \%$ | $38 \%$ |
| District 4 | $2018-2019$ | $90 \%$ | $49 \%$ |
| District 5 | $2018-2019$ | $82 \%$ | $20 \%$ |
| District 16 | $2018-2019$ | $56 \%$ | $20 \%$ |
| District 27 | $2018-2019$ | $111 \%$ | $80 \%$ |
| District 6 | $2019-2020$ | $106 \%$ | $51 \%$ |
| District 9 | $2019-2020$ | $101 \%$ | $67 \%$ |
| District 19 | $2019-2020$ | $83 \%$ | $46 \%$ |
| District 31 | $2019-2020$ | $111 \%$ | $78 \%$ |
| District 12 | $2020-2021$ | $100 \%$ | $57 \%$ |
| District 29 | $2020-2021$ | $95 \%$ | $52 \%$ |
| Citywide | $2021-2022$ | $102 \%$ | $67 \%$ |

## Pre-K and $3-\mathrm{K}$ in the New Five-Year Capital Plan

Mayor de Blasio has announced plans to expand 3-K to all three-year-old children over the next four years, with plans to ultimately enroll over 60,000 students by $2021,{ }^{34}$ assuming the city is able to obtain additional operational funding from the state and federal governments. ${ }^{35}$ By the 2020-2021 school year, the city estimates it will be spending $\$ 203$ million annually just to staff this program - not counting facility costs. ${ }^{36}$ Where all these children will attend school is as yet unknown.

[^9]At the Fiscal 2019 budget adoption of the current plan, $\$ 771.8$ million was added to the budget specifically for the construction of 5,035 3-K seats. ${ }^{37}$ The new proposed 2020-2024 Capital Plan states $\$ 550$ million will be spent "Early Education Initiatives: Pre-K and $3-K$ for all". Yet the plan is unclear how this amount will be spent and how it relates to the funds allocated last spring for $3-K$. The proposed plan contains information only on specific projects costing $\$ 117$ million, in terms of which particular districts will gain additional seats. ${ }^{38}$ There are 576 Pre-K seats and 675 $3-K$ seats in new plan listed in the appendix. ${ }^{39}$

The number of seats expected to be built in each district for $3-\mathrm{K}$ as opposed to $\mathrm{K}-12$ can be in Table 6 according to the current and new 2020-2024 Capital Plan.

| TABLE 6. 3-K and K-12 Capacity Funds by district in 2015-2019 and 2020-2024 Capital Plan |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| School District | 3-K Capacity Funded in 2015-2019 Capital Plan | 3-K Capacity Funded in 2020-2024 <br> Capital Plan | K-12 Seats funded in 2015-2019 Capital Plan | $\begin{aligned} & \text { K-12 Seats } \\ & \text { funded } \\ & \text { In 2020-2024 } \\ & \text { Capital Plan } \end{aligned}$ | Elementary School Utilization |
| 6 | 316 | 0 | 0 | 0 | 106\% |
| 9 | 0 | 150 | 0 | 1620 | 101\% |
| 12 | 435 | 75 | 912 | 934 | 100.2\% |
| 19 | 20 | 0 | 1000 | 476 | 83.3\% |
| 27 | 745 | 0 | 972 | 1756 | 111.2\% |
| 29 | 1038 | 450 | 0 | 1048 | 94.8\% |
| 31 | 2471 | 0 | 1737 | 3680 | 111.0\% |

- District 6 has no new elementary school seats funded in either the current or proposed 2020-2024 Capital Plan, though their elementary schools' utilization rate averages 106 percent.
- District 29 has 16 overcrowded elementary schools, which enroll over 8,000 K-5 students. The district has no seats funded in the current plan and only $1,048 \mathrm{~K}-12$ seats funded in the new 2020-2024 Capital Plan. However, these seats are not planned to be completed until 2026. In contrast, the district has $4503-K$ seats funded in the new 2020-2024 plan, estimated to be finished in 2020.

[^10]- District 31 (Staten Island) has extremely overcrowded schools. There is funding for 2,471 $3-K$ seats in the current Capital Plan, while there are only 1,800 Staten Island pre-K students attending school in public schools or district pre-K centers currently, in addition to the 1,989 pre-K students in CBOs. ${ }^{40}$

In contrast, only about half of the needed for K-12 were funded for Staten Island in the current plan at 1,737- though the DOE identified the need as of November 2017 for 3,348 K8 seats and 400 in high school for a total of 3748 seats. In the new 2020-2024 Capital Plan, 3,680 K8 seats are funded for Staten Island, but 3,072 of those seats will have to wait to be completed after the new proposed 2020-2024 Capital Plan has ended.

## DOE's Faulty School Planning Process

One of the major flaws with the expansion of Pre-K and $3-K$ is how the DOE has failed to incorporate this initiative into the manner in which it estimates the need for new school seats.

Whenever new housing is proposed, City Planning and the DOE multiply the number of new housing units with building permits by a multiplier, called the Projected Public School Ratio, to predict the additional number of public school students that will be needed to be accommodated in public schools. The School Construction Authority is then supposed to use this formula, along with separate enrollment projections developed by their consultants, in determining the need for new schools. ${ }^{41}$ These projections are also used by City Planning and their consultants in developing Environmental Impact Statements, in order to assess how infrastructure and basic services, including neighborhood schools, will be affected by major new developments or re-zonings.

Yet the Projected Public School Ratio, which estimates how many new students will be generated by new housing units by borough, has until recently been based on a formula drawn from 2000 Census data, nearly twenty years old. ${ }^{42}$ In October 2018, the DOE updated the formula based upon more recent data in the American Survey Community Survey from 20122016 , which presumably attempted to analyze the impact of new housing on the need for pre-K seats, but does not account for any of the new $3-K$ students that the Mayor intends to enroll in the public schools. ${ }^{43}$ Nor do the consultants that prepare separate enrollment projections for DOE include any estimate of $3-\mathrm{K}$ students in their analyses.

[^11]Simply put, Pre-K for All has significantly boosted the number of students in our elementary schools by tens of thousands, and 3-K is likely to do the same, without the city adjusting its planning to take into account the additional need to provide space for all these children.

Thus, the city will almost certainly worsen school overcrowding in the future with the expansion of $3-K$, as has already occurred with the Pre-K for All program.

## Cost and Timing of Pre-K Seats vs. K-12 Seats

In the current 2015-2019 Capital Plan, \$872 million was allocated to fund space for Pre-K for All. ${ }^{44}$ There were 71 pre-K projects listed in the plan, which together were projected to lead to the creation of 8,771 seats. Most of these projects were completed in 2015, before any of the K12 projects listed in the current Capital Plan were finished. Only 1,296 pre-K seats remained to be built as of March 2018. ${ }^{45}$ The DOE's ability to build thousands of seats so quickly shows that when the city prioritizes creating new space for students, it is able to do so fairly rapidly. Even as only about the half of the seats necessary for K-12 were funded in the 2015-2019 Capital Plan, about two-thirds of them are projected not to be completed until after 2021. In contrast, only two percent of pre-K seats will have to wait that long. ${ }^{46}$

Figure 4 shows the capacity of K-12 projects completed and projected to be finished each year in the current Capital Plan from 2016-2023, while Figure 5 shows the same data for pre-K projects, revealing how much more priority has been placed on creating space for pre-K students in an efficient and manner compared to students in grades K-12. ${ }^{47}$

[^12]Figure 4
Capacity of Completed
K-12 Projects by Year


Figure 5

## Capacity of Completed Pre-K Projects by Year



There are also irregularities in the funding of the pre-K projects listed in the current Five-Year Capital Plan. For example, the City Council's analysis of the 2017 Adopted Capital Plan found that the cost per seat for pre-K projects ranged from $\$ 25,000$ to $\$ 335,000 .{ }^{48}$ The most expensive project, a pre-K at $85015^{\text {th }}$ Avenue in Brooklyn, cost six million dollars to renovate a leased space, a former Dunkin Donuts, with a capacity of only 18 students. ${ }^{49}$

These disparities in cost raise concerns about whether the most expensive pre-K projects are an efficient allocation of resources. Pre-K seats also seem to have become more expensive over time; in the current Five-Year Capital Plan, the average cost per seat for projects not yet completed is $\$ 153,000$, compared to $\$ 103,000$ for projects that have been completed. ${ }^{50}$

## Class Size Reduction Category Cut by $\$ 340$ Million

A category in the Capacity section of the current Capital Plan is called Class Size Reduction. This category was created in the February 2014 version of the Capital Plan and funded with $\$ 490$ million. Yet the spending under this program was inadequate and long-delayed - despite the fact than 336,000 students are crammed into classes of 30 or more, according to the class data reported by DOE in November 2018. ${ }^{51}$

Over the last five years, only three projects in this category were identified. These three projects will cost a total of $\$ 258$ million and will lead to the addition of only 1,386 seats. Only one of these projects, an addition to P.S. 19 in District 11, is currently under construction. As a recent

[^13]City Council report pointed out, it is unclear how any these projects were chosen, and "exactly how the projects identified will reduce class size." ${ }^{52}$

This means that nearly half of the already limited funds allocated to make space for smaller classes will not have been spent in the current Five-Year Capital Plan, despite the huge number of students in overcrowded classrooms and schools.

As a City Council report on the Capital Plan pointed out, there are unanswered questions about "why excess funding in this category has not been reallocated to other project areas or moved to the outyears." ${ }^{53}$

To make things worse, the proposed 2020-2024 Capital Plan cuts the funding in the class size reduction category by $\$ 340$ million - and identifies not a single new school to be built from these funds. ${ }^{54}$

## Research on Pre-K and Class Size

Most researchers agree that the benefits of high quality pre-K are clear, especially for disadvantaged students. ${ }^{55}$ Yet a recent large-scale randomized experimental study - the gold standard in research - showed no positive academic effects. ${ }^{56}$ Researchers from Vanderbilt University followed a thousand randomly selected, economically disadvantaged students in Tennessee from pre-K through third grade and compared them to a control group who did not attend Pre-K. Not only did students who missed pre-K catch up within a year or two, but the students who attended pre-K had fallen behind their peers on many achievement measures by the third grade.

[^14]The lead researchers of this Vanderbilt study have speculated about why the program failed to produce positive results. Co-investigator Dale Farran said this:
"Pre-K is a good start, but without a more coherent vision and consistent implementation of that vision, we cannot realistically expect dramatic effects... Too much has been promised from one year of preschool intervention without the attention needed to the quality of experiences children have and what happens to them in K-12. ${ }^{157}$

Farran and the other Vanderbilt lead researcher, Mark Lipsey, warned that even with an optimal pre-K program, expecting too much from this extra year of education alone is unwarranted:
"Even if we get the quality right, however, and implement a new vision of scaled up pre-K with consistency, and even if this results in children gaining more from pre-K than they have so far, we still need to question the presumption that pre-K alone will fix the problems poor children encounter in schools." ${ }^{58}$

In addition, Lipsey pointed out that the study raises important questions about what was happening in the other early grades to cause these students to fall behind:
"The biggest mystery here is what in the world is going on as these kids hit kindergarten, first, second, third grade, that is not building on what they seem to have come out of pre-K with?"59

As a Tennessee education advocate pointed out, there is abundant research showing the educational benefits to reducing class size, especially in the early grades:
"Raj Chetty, in a study of early grades education in Tennessee, specifically points to improved teacher training, early career mentoring, and reducing class sizes as policies that could work to improve the overall quality of early ( $K-3$ ) classrooms.

That is, it's not enough to simply provide an intervention that sends kids to Kindergarten ready to learn and that has positive benefits through first grade, our state must also invest in the supports and resources necessary to allow early grade learning to build on the foundation established by Pre-K." ${ }^{\prime 60}$

Universal pre-K and expanded 3-K may indeed benefit for New York City children - but only if these programs do not lead to negative unintended consequences, including worse overcrowding and larger classes in the elementary grades. Research shows that larger classes

[^15]undermine student learning, while smaller classes provide a wide range of benefits, including higher achievement, more student engagement and fewer behavior problems, and lower teacher attrition rates. ${ }^{61}$

All these positive impacts are most pronounced in classrooms with large numbers of disadvantaged children and students of color, which describe the majority of NYC public schools. ${ }^{62}$ If pre-K students are not provided with favorable classroom conditions in grades $\mathrm{K}-3$, as the Vanderbilt study suggests, all the gains they made in pre-K may melt away.

## Class Size Goals and Trends

A panel of education experts in New York convened by the plaintiffs in the Campaign for Fiscal Equity called lawsuit for class sizes of 14 students per class in high poverty elementary schools, and 17 students per class in low poverty elementary schools. ${ }^{63}$ A 2008 survey of NYC principals recommended class sizes of no more than 20 in grades $\mathrm{K}-3$ and 23 in grades 4-5. ${ }^{64}$

When Mayor Bill de Blasio first campaigned for mayor, he committed to lowering class sizes and to comply with the city's 2007 Contract for Excellence class size reduction plan established in 2007, with goals of lowering class size to no more than 20 students on average in K-3, 23 students in grades 4 through 8 , and 25 students in high school classes. ${ }^{65} \mathrm{He}$ has not followed through on this pledge. Instead, class sizes have decreased only slightly from when de Blasio took office and remain far higher than they were in 2007. As of November 2018, the average class size for students in grades K-3 is 23.9; for grades 4-8, the average is 26.6 , and for high schoolers the average is 26.4 according to data from the DOE. ${ }^{66}$

These averages obscure the number of students enrolled in significantly larger classes. For example, the number of Kindergarten students in classes of 25 or more citywide has increased by more than 53 percent since 2007, illustrated in Figure 6. ${ }^{67}$ The increased number of students

[^16]in $1^{\text {st }}$ through $3^{\text {rd }}$ grades in very large classes of 30 or more has been even more explosive, increasing by nearly 3,000 percent since 2007. ${ }^{68}$ In the 2007-2008 school year, less than one percent of students in grades 1-3 were in classes of 30 or more, compared to nearly 20 percent of students in grades 1-3 in November 2018. ${ }^{69}$

Figure 6


Figure 7


Several years ago, over seventy early education and psychology researchers and professors wrote an open letter to then-Chancellor Farina, urging her to invest in reducing class size in grades K-3 and warning her that many of the expected gains from pre-K would likely be undermined unless she did:
"We commend you for your commitment to expanding prekindergarten programs, but as you know, early childhood education does not begin and end at age 4. We urge you now to focus on lowering class sizes in all grades." 70

Two of the letter's co-authors, Jacqueline Shannon, chair of the Early Childhood Education program at Brooklyn College, and Assistant Professor Mark Lauterbach of Brooklyn College, followed up with an op-ed:
"While we acknowledge that the new administration is taking some very positive steps in educational policy, we are extremely concerned that the benefits of these reforms, such as increasing access to prekindergarten, establishing community schools, and inclusion for students with disabilities, may be undermined unless the trend of ballooning class sizes is reversed." 71

[^17]They received no response from the DOE to their letter or the op-ed and class sizes have not significantly diminished since then.

## Conclusion and Recommendations

Expanding pre-K and 3-K programs, without providing sufficient space in the schools in which they are implemented, has increased overcrowding in many NYC elementary grades. This is neither a viable early-education strategy nor a positive path to boosting student performance.

Universal pre-kindergarten is a laudable goal, but the Department of Education needs to ensure that its implementation does not undermine the quality of education provided to other students, especially in grades K-3, where class sizes have ballooned to unacceptable levels in many schools.

In too many schools, Pre-K for All has contributed to increased overcrowding, and thus jeopardizes the gains likely to be achieved by the expansion of the program. The focus needs to be on improving learning conditions for all elementary school students, including alleviating overcrowding and reducing class size in their schools. This cannot happen without a smarter and more transparent school planning process that systematically takes account of the need to provide additional pre-K and $3-K$ seats, sufficiently utilizes available seats in CBOs, and provides sufficient space for students in the other elementary grades. At this point, the city has no apparent plan to achieve any of the above goals.

The city needs to update their enrollment projections to account for all the additional pre-K and $3-K$ students to be served, and refrain from inserting these classes into schools that are already overcrowded, are likely to become so, have Kindergarten waiting lists, or could more productively use these classrooms to reduce class size. In all cases, the utilization of space in district pre-K centers and CBOs should be maximized.

Creating 3-K and Pre-K seats should no longer be prioritized over K-12 seats in the Capital Plan, and school construction to alleviate overcrowding and provide space for smaller classes needs to be accelerated and fully funded. In future, improving the quality of instruction and learning conditions in grades $K-12$ seats should be considered just as urgent as the expansion of pre-K and $3-K$ and this will depend upon providing students with the smaller classes they need and deserve.

Although the newly proposed Capital Plan has funding for 57,000 seats, more than 50,000 will not built until 2024 or later. ${ }^{72}$ The DOE must stop its practice of making overcrowding worse in our already overutilized elementary schools by jamming more pre-K and $3-K$ classes in these schools, or else the opportunities of students in the other grades will be seriously impaired by even larger class sizes and loss of access to art, music, and support services in appropriate spaces. At the same, the Mayor must increase the number of seats in the capital plan and build them in a more efficient, accelerated manner, or else his legacy will be seriously marred by even more extreme overcrowding and educational neglect.

[^18]| Appendix <br> 76 Schools over 100 percent utilization as a result of additional Pre-K classes |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DBN <br> Number | School Name | Overall Enrollment | Pre-K <br> Enrollment | Utilizatio n Rate | Difference between Utilization and Enrollment |
| 01M110 | P.S. 110 Florence Nightingale | 383 | 32 | 101 | 4 |
| 02M198 | P.S. 198 Isador E. Ida Straus | 468 | 55 | 101 | 4 |
| 02M217 | P.S./I.S. 217 Roosevelt Island | 613 | 28 | 103 | 18 |
| 02M225 | Ella Baker School | 311 | 38 | 108 | 24 |
| 03M084 | P.S. 084 Lillian Weber | 565 | 36 | 102 | 9 |
| 03M149 | P.S. 149 Sojourner Truth | 256 | 22 | 112 | 3 |
| 05M197 | P.S. 197 John B. Russwurm | 309 | 20 | 101 | 2 |
| 06M098 | P.S. 098 Shorac Kappock | 536 | 80 | 108 | 5 |
| 06M128 | P.S. 128 Audubon | 622 | 80 | 107 | 41 |
| 06M192 | P.S. 192 Jacob H. Schiff | 281 | 36 | 109 | 23 |
| 07X005 | P.S. 5 Port Morris | 722 | 34 | 103 | 24 |
| 07X065 | P.S. 065 Mother Hale Academy | 425 | 35 | 106 | 23 |
| $08 \times 036$ | P.S. 036 Unionport | 743 | 54 | 102 | 12 |
| 08X069 | P.S. 069 Journey Prep School | 605 | 54 | 102 | 7 |
| $08 \times 072$ | P.S. 072 Dr. William Dorney | 858 | 71 | 108 | 66 |
| 08X075 | P.S. 75 School of Research and Discovery | 641 | 66 | 103 | 21 |
| $08 \times 152$ | P.S. 152 Evergreen | 936 | 71 | 133 | 49 |
| 08X304 | P.S. 304 Early Childhood School | 490 | 35 | 100 | 1 |
| 09×028 | P.S. 028 Mount Hope | 751 | 46 | 104 | 32 |
| $09 \times 110$ | P.S. 110 Theodore Schoenfeld | 469 | 35 | 108 | 33 |
| 09X199 | P.S. 199X - The Shakespeare School | 799 | 41 | 101 | 7 |


| DBN <br> Number | School Name | Overall Enrollment | Pre-K <br> Enrollment | Utilization Rate | Difference between Utilization and Enrollment |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 09×274 | The New American Academy at Roberto Clemente State | 807 | 65 | 108 | 63 |
| 09X555 | Mount Eden Children's Academy | 432 | 53 | 113 | 50 |
| $10 \times 009$ | P.S. 9 Ryer Avenue Elementary School | 861 | 75 | 118 | 22 |
| $10 \times 051$ | P.S. 051 Bronx New School | 232 | 18 | 102 | 5 |
| 10X054 | P.S./I.S. 54 | 501 | 53 | 108 | 38 |
| 10X059 | P.S. 059 The Community School of Technology | 604 | 59 | 107 | 34 |
| 10X360 | P.S. 360 | 507 | 49 | 104 | 21 |
| $10 \times 386$ | School for Environmental Citizenship | 617 | 69 | 112 | 67 |
| $11 \times 016$ | P.S. 016 Wakefield | 404 | 37 | 107 | 25 |
| 13K282 | P.S. 282 Park Slope | 821 | 53 | 104 | 28 |
| 14K059 | P.S. 059 William Floyd | 318 | 23 | 100 | -1 |
| 15K024 | P.S. 024 | 677 | 40 | 103 | 18 |
| 15K130 | P.S. 130 The Parkside | 806 | 72 | 114 | 57 |
| 15 K 516 | Sunset Park Avenues Elementary School | 351 | 60 | 109 | 30 |
| 16K628 | Brooklyn Brownstone School | 244 | 36 | 105 | 11 |
| 17 K 316 | P.S. 316 Elijah Stroud | 489 | 50 | 107 | 33 |
| $18 \mathrm{K066}$ | P.S. 66 | 814 | 18 | 100 | -4 |
| 19K089 | P.S. 089 Cypress Hills | 462 | 18 | 100 | 2 |
| 19K149 | P.S. 149 Danny Kaye | 704 | 71 | 120 | 9 |
| 19 K 290 | P.S. 290 Juan Morel Campos | 537 | 18 | 102 | 10 |
| 21K199 | P.S. 199 Frederick <br> Wachtel | 521 | 32 | 100 | 2 |
| 21K209 | P.S. 209 Margaret Mead | 713 | 35 | 102 | 15 |
| 21K212 | P.S. 212 Lady Deborah Moody | 697 | 54 | 103 | 19 |
| 21K216 | P.S. 216 Arturo <br> Toscanini | 739 | 95 | 109 | 64 |


| DBN <br> Number | School Name | Overall Enrollment | Pre-K <br> Enrollment | Utilization Rate | Difference between Utilization and Enrollment |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 21K288 | P.S. 288 The Shirley Tanyhill | 681 | 36 | 104 | 27 |
| 22K236 | P.S. 236 Mill Basin | 544 | 48 | 105 | 27 |
| 23K156 | P.S. 156 Waverly | 762 | 35 | 103 | 23 |
| 23K284 | P.S. 284 Lew Wallace | 476 | 17 | 100 | 1 |
| 24Q068 | P.S. 068 Cambridge | 681 | 50 | 105 | 32 |
| 24Q081 | P.S. 810 Jean Paul Richter | 757 | 61 | 106 | 37 |
| 24Q091 | P.S. 091 Richard Arkwright | 765 | 73 | 106 | 45 |
| 240199 | P.S. 199 Maurice A. Fitzgerald | 976 | 52 | 135 | 39 |
| 24Q239 | P.S. 239 | 584 | 36 | 101 | 4 |
| 24Q290 | A.C.E. Academy for Scholars at the Geraldine Ferra | 546 | 36 | 102 | 12 |
| 24Q305 | Learners and Leaders | 617 | 32 | 105 | 18 |
| 250107 | P.S. 107 Thomas A Dooley | 963 | 72 | 108 | 68 |
| 250165 | P.S. 165 Edith K. Bergtraum | 758 | 51 | 105 | 37 |
| 25Q201 | P.S. 201 The Discovery School for Inquiry and Rese | 522 | 66 | 105 | 26 |
| 25Q219 | P.S. 219 Paul Klapper | 672 | 49 | 106 | 39 |
| 26Q213 | P.S. 213 The Carl Ullman School | 464 | 69 | 113 | 54 |
| 270100 | P.S. 100 Glen Morris | 974 | 69 | 107 | 60 |
| 27 Q155 | P.S. 155 | 538 | 54 | 105 | 25 |
| 27Q316 | Queens Explorers Elementary School | 356 | 144 | 104 | 15 |
| 27Q362 | Wave Preparatory Elementary School | 559 | 54 | 105 | 25 |
| 280117 | P.S. 117 J. Keld / Briarwood School | 1,051 | 70 | 103 | 30 |
| 290034 | P.S. 034 John Harvard | 569 | 32 | 111 | 30 |


| DBN <br> Number | School Name | Overall <br> Enrollment | Pre-K <br> Enrollment | Utilization <br> Rate | Difference <br> between <br> Utilization <br> and <br> Enrollment |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 29Q116 | P.S./I.S. 116 William C. <br> Hughley | 766 | 54 | 106 | 40 |
| 29Q251 | P.S. 251 Queens | 354 | 33 | 108 | 27 |
| 30Q234 | P.S. 234 | 558 | 35 | 101 | 3 |
| 31R016 | P.S. 016 John J. Driscoll | 557 | 54 | 100 | -1 |
| 31R018 | P.S. 018 John G. <br> Whittier | 575 | 36 | 103 | 16 |
| 31R058 | Space Shuttle Columbia <br> School <br> DREAM Charter School | 730 | 535 | 37 | 102 |
| Bronx Charter School <br> 84M382 Better Learning | 551 | 18 | 100 | 13 |  |
| 84X718 | 42 | 42 | 109 | 0 |  |
| Z040 | The Little Brooklyn Pre- <br> K Center at 4222 4th <br> Avenue | 42 |  | 17 |  |


[^0]:    1 "Demographic Snapshot 2016-2017," New York City Department of Education, originally posted April 12, 2017, not currently accessible. "2016-2017 Blue Book," New York City Department of Education, December 2017. For the purposes of this report, overutilized schools are defined as schools with a utilization rate of 100 percent or more.
    ${ }^{2}$ Leonie Haimson and Katie Donnelly, "Seats Gained and Lost in NYC Schools: The Untold Story," Class Size Matters, September 2017, 8. https://www.classsizematters.org/wp-content/uploads/2017/09/Web-Seat-Loss-Report.pdf
    ${ }^{3}$ Leonie Haimson, "Space Crunch in New York City Public Schools," Class Size Matters, 2014, 7-9. https://www.classsizematters.org/wp-content/uploads/2014/06/SPACE-CRUNCH-Report-Final-OL.pdf

    4 "Demographic Snapshot 2017-2018," New York City Department of Education, originally posted April 6, 2018. http://infohub.nyced.org/docs/default-source/default-
    documentlibrary/demographicsnapshot201314to201718public_final.xlsx?sfvrsn=89dfbe5b_2
    3-K enrollment is included the 2017-2018 enrollment figures.
    ${ }^{5}$ Erin Durkin, "New York City Makes History by Starting First Day of School with All Kids in Pre-K," New York Daily News, September 9, 2015. http://www.nydailynews.com/new-york/education/nyc-history-kids-pre-k-school-article1.2354349
    ${ }^{6}$ This analysis is based on the 2016-2017 Blue Book and the 2016-2017 Demographic Snapshot.

[^1]:    ${ }^{7}$ Enrollment data is from the 2017-2018 Demographic Snapshot, while utilization rates are based on the 2016-2017 Blue Book.

    8 "3-K For All," New York City Department of Education, accessed July 9"t, 2018.
    https://www.schools.nyc.gov/enrollment/enroll-grade-by-grade/3k
    The link above currently contains the list of 3-K locations for 2018-2019.
    9 "Renewal Schools," New York City Department of Education via Wayback Machine. https://web.archive.org/web/20180614220143/http://schools.nyc.gov/AboutUs/schools/RenewalSchools/default
    ${ }^{10}$ The DOE uses something called the Public School Ratio to estimate the growth in enrollment due to the addition of new housing; this formula is cited on the 2014 CEQR document on page 6-3,6-4 here:
    https://www1.nyc.gov/assets/oec/technical-manual/2014_ceqr_technical_manual_rev_04_27_2016.pdf
    ${ }^{11}$ This compares to the current plan that when it was first proposed, 62 percent of the seats were supposed to be completed within the five-year plan period, and another 21 percent in time for the 2020-2021 school year. See: https://ibo.nyc.ny.us/cgi-park2/2014/08/the-citys-2015-2019-capital-plan-for-public-schools-how-many-new-seats-when-will-they-be-ready/
    ${ }^{12}$ Personal communication, Kaitlyn O'Hagan, Financial analyst, NYC Council, December 11, 2018.

[^2]:    ${ }^{13}$ Leonie Haimson, "Space Crunch in New York City Public Schools," Class Size Matters, 2014, 7-9. https://www.classsizematters.org/wp-content/uploads/2014/06/SPACE-CRUNCH-Report-Final-OL.pdf
    ${ }^{14}$ https://www.classsizematters.org/wp-content/uploads/2014/09/Letter-Reducing-Class-size-to-Farina.pdf. See also: Jacqueline Shannon and Mark Lauterbach, "Opinion: De Blasio Must Put Reducing Class Sizes at Top of His Agenda," Schoolbook, November 6, 2014. https://www.wnyc.org/story/opinion-de-blasio-must-put-reducing-class-size-first/
    ${ }^{15}$ Dale C. Farran and Mark W. Lipsey, "Expectations of Sustained Effects from Scaled up Pre-K: Challenges from the Tennessee Study," The Brookings Institution, October 8, 2015, 6. https://www.brookings.edu/wp-content/uploads/2016/06/Expectations-of-sustained-effects-from-scaled-up-preK-Tennessee-study_4.pdf
    ${ }^{16}$ Sarah Gonser, "Can Private Pre-K for All Providers Survive in New York City?" Hechinger Report, February 24, 2017. http://hechingerreport.org/can-private-pre-k-providers-survive-new-york-city/

[^3]:    17 "Demographic Snapshot 2016-2017" and "Demographic Snapshot 2017-2018."
    ${ }^{18}$ Some DOE pre-K centers are co-located with public elementary schools. We were able to locate these by searching for the center's address listed in the Demographic Snapshot and determining whether there were any public schools at the same location. In 2016-2017, there were at least 6 NYCEECs (not run by the DOE) co-located with public elementary schools. We were able to identify these six NYCEECs because their names in the Demographic Snapshot mention their location in a public school. For the purposes of this report, we assume that all other NYCEECs are located outside of DOE buildings.

    19 "2016-2017 Blue Book." "2016-2017 Demographic Snapshot." Throughout this report, to include the NYCEECs and district pre-K centers co-located with public schools, we used the utilization rate for the building as a whole, as there is no utilization rate for those specific programs. Utilization percentages are taken from the 2016-2017 Blue Book. For schools with mini-buildings, annexes, or multiple buildings, the utilization rate from the building with the greatest enrollment is used.

[^4]:    ${ }^{20}$ Figures 1 and 2 are based on data from the 2016-2017 Demographic Snapshot and the 2016-2017 Blue Book.

    21 "2016-2017 Demographic Snapshot." "2016-2017 Blue Book."
    These calculations include the following schools: public schools, co-located charters, district pre-K centers colocated with elementary schools, and the six NYCEECS in DOE buildings. The calculations exclude other district pre-K centers, other charters, other NYCEECs, D75 schools, and public schools for which utilization data is not presented in the 2016-2017 Blue Book. We counted a school as overcrowded if any of the buildings in the school were overcrowded. To determine whether pre-K students were the tipping point in making the school overcrowded, we calculated whether the number of pre-K students was greater than or equal to the difference between the school's enrollment and capacity in the overcrowded building. In the event that a school had multiple overcrowded buildings, we used the building with the highest enrollment. For schools with TCUs, we added the enrollment in TCUs to the main building's enrollment.
    ${ }^{22}$ Leonie Haimson and Sebastian Spitz, "Schools where Pre-K has Exacerbated Existing Overcrowding (2016-2017)," last modified June 19, 2018. https://docs.google.com/spreadsheets/d/1Twmv_DqLDRd8AhMnUcLaMk6Ig3KxYbR5WWgxdHt72g/edit\#gid=0. A full list of these schools can be found at the link above.

[^5]:    ${ }^{23}$ Borough data is used because the district in which a NYCEEC is located is not readily accessible, while the NYCEEC's borough can be found in the Demographic Snapshot. This analysis conducted using data from the 20162017 Blue Book and the 2016-2017 Demographic Snapshot.
    ${ }^{24}$ Philissa Cramer, "Here are the 50 New York City Schools with Kindergarten Waitlists in 2018," Chalkbeat, March 22, 2018. https://www.chalkbeat.org/posts/ny/2018/03/22/here-are-the-50-new-york-city-schools-with-kindergarten-waitlists-in-2018/. For a list of schools with waiting lists, see the link above. The 2017-2018 Demographic Snapshot was used to determine if those schools had pre-K programs. These official figures most likely undercount the actual number of rising kindergartners who are waitlisted. Some parent leaders have observed that starting in 2016, the DOE assigned zoned Kindergarten students to different schools outside their attendance zones without ever placing the student on a waitlist, which the DOE used to do. Moreover, in many neighborhoods, parents sign up for Kindergarten during the summer or right before school begins in early September, and if there is no space in their zoned schools, their children never are reported on any waiting list. The result has been a substantial undercount of the number of actual Kindergarten students prevented from attending their locally zoned school who are waitlisted.

[^6]:    25 "2016-2017 Blue Book"

[^7]:    26 "2017-2018 Demographic Snapshot". A DOE document reports there was space for 162 additional students in the pre-K center. See NYC DOE, 2017 NYC Pre-K Round 2 Program List - BROOKLYN, April 14, 2017, p. 16; Accessed July 2018 at: http://proxy.nycboe.org/NR/rdonlyres/DF73D74C-7AA8-48C4-9884 963992563549/0/2017NYCPreKRound2ProgramListBROOKLYN.pdf
    ${ }^{27}$ This account is from personal correspondence with Laurie Windsor, the former President of CEC 20, supported by documentation she provided. The number of pre-K students at P.S. 204 is from the 2016-2017 Demographic Snapshot.
    ${ }^{28}$ Chancellors Regulations A-101, Admissions, Readmissions, Transfers and List Notices for All Students, issued March 2018; https://cdn-blob-prd.azureedge.net/prd-pws/docs/default-source/default-document-library/a101-admissions-readmissions-transfers-english.pdf?sfvrsn=c6ede71a_44
    ${ }^{29}$ Oversight - Implementation of UPK and 3K Expansion and the Transition of EarlyLearn NYC to DOE: Testimony before the Committee on Education Jointly with Committee on General Welfare, New York City Council (2018) (statement of Lisa Caswell, Senior Policy Analyst for the Day Care Council of New York), http://legistar.council.nyc.gov/View.ashx?M=F\&ID=6390320\&GUID=C136BFEB-EB9F-44A1-84F1-DB7E680BCE72

[^8]:    30 "Mayor de Blasio Announces 3K for All," City of New York, April 24, 2017. https://www1.nyc.gov/office-of-the-mayor/news/258-17/mayor-de-blasio-3-k-all\#/0
    ${ }^{31}$ This analysis was conducted with data from the 2016-2017 Blue Book and the 2017-2018 Demographic Snapshot.
    32 "Renewal and Rise Schools," New York City Department of Education. https://www.schools.nyc.gov/about-us/initiatives/renewal-and-rise-schools

[^9]:    33 "November 2018 Preliminary Class Size Report," New York City Department of Education, last updated November 15, 2018. https://infohub.nyced.org/reports-and-policies/government/intergovernmental-affairs/class-size-reports. "Mayor de Blasio Speeds up 3-K For All Rollout and Announces 4 New Districts," City of New York, February 2, 2018. http://www1.nyc.gov/office-of-the-mayor/news/078-18/mayor-de-blasio-speeds-up-3-k-all-rollout-announces-4-new-districts\#/0 "2016-2017 Blue Book."
    ${ }^{34}$ Kate Taylor, "New York City Will Offer Free Preschool for All 3-Year-Olds," New York Times, April 24, 2017. https://www.nytimes.com/2017/04/24/nyregion/de-blasio-pre-k-expansion.html

    Anthony O’Reilly, "3K For All Coming to Queens Districts," Queens Chronicle, October 12, 2017. http://www.qchron.com/editions/k-for-all-coming-to-queens-districts/article_e8cec4ec-af7b-11e7-8b9d3ffe67ff3df6.html

    35 "Mayor de Blasio Speeds up 3-K For All Rollout and Announces 4 New Districts."
    Felipe De La Hoz, "UPK Was A Big Success. 3K For All Won't Be So Easy," City and State New York, March 19, 2018. https://www.cityandstateny.com/articles/policy/education/upk-was-big-success-3k-all-wont-be-so-easy.html

    36 "Mayor de Blasio Speeds up 3-K For All Rollout and Announces 4 New Districts."

[^10]:    ${ }^{37}$ Jeffrey Baker and Andrea Vazquez, "Oversight: Implementation of UPK and 3K Expansion and the Transition of EarlyLearn NYC to DOE," New York City Council, June 27, 2018, 10. https://legistar.council.nyc.gov/View.ashx?M=F\&ID=6331361\&GUID=F482B05C-A96C-4B16-8D01-EB3B96982A71
    ${ }^{38}$ 2020-2024 Capital Plan, page 23, C15, C17. We calculated the given amount spent for each Pre-K and 3-K projects by finding the total sum of costs of the "Funding Req'd FY 20-24" column.
    ${ }^{39}$ 2020-2024 Capital Plan, page C17. However, it is unclear how these 675 seats relate to the 5,035 3-K seats funded at Fiscal 2019 budget adoption. Are these 675 seats the new total seats funded for fiscal years 2020-2024, eliminating thousands of seats proposed in Fiscal adoption 2019? Or are they in addition or subsumed within the 5,035 seats?

[^11]:    40 "2017-2018 Demographic Snapshot."
    ${ }^{41}$ Working Group on School Planning and Siting, "Planning to Learn," 19-21.
    ${ }^{42}$ Working Group on School Planning and Siting, "Planning to Learn," 41.
    ${ }^{43}$ As of October 2018, the DOE posted a new public school ratio, based on housing data 2012-2016 American Community Survey data - including several years prior to the expansion of pre-K, so it is not clear how it takes this into account in its projections.
    https://dnnhh5cc1.blob.core.windows.net/portals/O/Capital_Plan/Housing_Projections/2018\%20Housing\%20Multip liers\%20Final\%2011022018.pdf?sr=b\&si=DNNFileManagerPolicy\&sig=1XUUO4VQSvq4cfUJVXX3W6NrDAsvCwasXvyx fcGsr5w\%3D

[^12]:    44 "FY 2015-2019 Proposed Five Year Capital Plan Amendment: February 2018," New York City School Construction Authority, February 2018, 25. Accessible at https://dnnhh5cc1.blob.core.windows.net/portals/0/Capital_Plan/Capital_plans/02222018_15_19_CapitalPlan.pdf? sr=b\&si=DNNFileManagerPolicy\&sig=OZhC\%2FTlqMoFVv5n5yGt3HanljlU5LaudtcVVXeD3loc\%3D
    ${ }^{45}$ Ibid., C15-C19.
    ${ }^{46}$ Kaitlyn O’Hagan et al., "Report of the Finance Division on the Fiscal 2019 Preliminary Capital Budget, the February 2018 Proposed Amendment to the FY2015-2019 Five-Year Capital Plan, and the Fiscal 2018 Preliminary Mayor's Management Report for the Department of Education and the School Construction Authority," New York City Council, March 26, 2018, 13. Accessible at https://council.nyc.gov/budget/wp-content/uploads/sites/54/2018/03/FY19-Department-of-Education-and-the-School-Construction-Authority.pdf
    ${ }^{47}$ Ibid., 11-12. Years not shown have no capacity projects scheduled to be completed. Both figures are based on charts in the above report, which in turn is based upon data supplied by DOE.

[^13]:    ${ }^{48}$ Working Group on School Planning and Siting, "Planning to Learn," 25.
    ${ }^{49}$ Selim Algar, "City Spends \$6.5M to Fix Up this Pre-K school - For 18 Kids," New York Post, June 9, 2016. https://nypost.com/2016/06/09/city-spends-6-5m-to-fix-up-this-pre-k-school-for-18-kids/

    50 "FY 2015-2019 Proposed Five Year Capital Plan Amendment: February 2018," C15-C19. Locations for which there were multiple projects had the projects' cost and capacity totals combined for the purposes of calculating the cost per seat.

    51 "November 2018 Preliminary Class Size Report."

[^14]:    $5^{52}$ O'Hagan et al., "Report of the Finance Division," 13.
    "2016-2017 Blue Book." "November 2017 Preliminary Class Size Report." "FY 2015-2019 Five Year Capital Plan Amendment: February 2018," C23. Phillip Habib \& Associates, AKRF, and Fleming-Lee Shue, "East New York Rezoning Proposal Chapter 4: Community Facilities and Services" New York City Planning Commission, February 12, 2016, 4-1. https://www1.nyc.gov/assets/planning/download/pdf/applicants/env-review/east-new-york/04_feis.pdf There does not seem to have been clear criteria for selecting the schools in the class size reduction program. Two of the three schools, P.S. 131 and East New York Family Academy, have 190 students or more in temporary classroom units or trailers, and the capacity project seems to be targeted at eliminating TCUs rather than reducing class size. The funding to build a school for East New York Family Academy also seems to be driven by an increase in enrollment in response to the area being rezoned for 6,492 additional residential units, not lowering class size. East New York Family Academy and its building currently have a capacity of 347 and are forecasted to have a capacity of 602 after the construction of the new building.
    ${ }^{53}$ O'Hagan et al., "Report of the Finance Division," 13.
    54"FY 2020-2024 Proposed Five-Year Capital Plan Amendment: November 2018," pg. 23.
    ${ }^{55}$ Deborah A. Phillips et al., "Puzzling It Out: The Current State of Scientific Knowledge on Pre-Kindergarten Effects: A Consensus Statement," The Brookings Institution, 2017, 5-6. https://www.brookings.edu/wp-content/uploads/2017/04/consensus-statement_final.pdf
    ${ }^{56}$ Mark W. Lipsey, Dale C. Farran, Kerry G. Hofer, "A Randomized Control Trial of a Statewide Voluntary
    Prekindergarten Program on Children's Skills and Behaviors through Third Grade," Peabody Research Institute of Vanderbilt University, 2015. https://peabody.vanderbilt.edu/research/pri/VPKthrough3rd_final_withcover.pdf

[^15]:    ${ }^{57}$ Blake Farmer, "Long-Awaited Vanderbilt Pre-K Study Finds Benefits Lacking," Nashville Public Radio, September 28, 2015. http://nashvillepublicradio.org/post/long-awaited-vanderbilt-pre-k-study-finds-benefits-lacking\#stream/0
    ${ }^{58}$ Dale C. Farran and Mark W. Lipsey, "Expectations of Sustained Effects from Scaled up Pre-K: Challenges from the Tennessee Study," The Brookings Institution, October 8, 2015, 6. https://www.brookings.edu/wp-content/uploads/2016/06/Expectations-of-sustained-effects-from-scaled-up-preK-Tennessee-study_4.pdf
    ${ }^{59}$ Blake Farmer, "Vanderbilt's Unflattering Pre-K Study Strikes A Nerve, But What Does It Really Say?" Nashville Public Radio, September 28, 2015. http://nashvillepublicradio.org/post/vanderbilt-s-unflattering-pre-k-study-strikes-nerve-what-does-it-really-say\#stream/0
    ${ }^{60}$ Andy Spears, "Should TN Abandon Pre-K," Tennessee Education Report, October 5, 2015. http://tnedreport.com/2015/10/should-tn-abandon-pre-k/

[^16]:    ${ }^{61}$ Institute of Education Science, Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User Friendly Guide, 2003. See also fact sheets at http://www.classsizematters.org/fact-sheets-on-the-benefits-of-class-size/
    ${ }^{62}$ Leonie Haimson and Katie Donnelly, "Class-Size Reduction and Black Male Student Outcomes" Class Size Matters, March 2017. https://www.classsizematters.org/wp-content/uploads/2011/04/CSR_Black-Male-Outcomes-Report3.18.pdf
    ${ }^{63}$ For middle schools, the recommended class size was 22.6 students, and high schools at 18.4 to 29.1 , depending on the poverty level of the school. See American Institutes of Research and Management Analysis and Planning, Inc., "The New York Adequacy Study: "Determining the Cost of Providing All Children in New York an Adequate Education", Volume 1: Final Report, March 2004 at:
    https://www.classsizematters.org/wp-content/uploads/2018/10/ny-adequacy-study-in-CFE.pdf
    ${ }^{64}$ Emily Horowitz and Leonie Haimson, "How Crowded Are Our Schools? New Results from a Survey of NYC Public School Principals," October 2, 2008; posted at: https://www.classsizematters.org/wp content/uploads/2011/04/principal_survey_report_10.08_final1.pdf
    65 "2017 Mayoral Report Card" NYC Kids PAC, September 5, 2017, 5-6. https://nyckidspac.org/2017-mayoral-reportcard/

    66 "November 2018 Preliminary Class Size Report."
    ${ }^{67}$ Ibid.

[^17]:    68 "Data \& Charts with 2017 Class Size Data, Showing Sharp Increases since 2007" Class Size Matters, November 20, 2017. https://www.classsizematters.org/in-2017-class-sizes-increase-once-again-according-to-doe-data/

    69 "Preliminary 2007-2008 Class Size Report," New York City Department of Education, last updated February 15, 2008. https://infohub.nyced.org/reports-and-policies/government/intergovernmental-affairs/class-size-reports/class-size-reports-archive. "November 2018 Preliminary Class Size Report."
    ${ }^{70}$ Jacqueline D. Shannon et al to Chancellor Farina, "73 Education Professors Urge the Chancellor and the Mayor to Reduce Class Size," Class Size Matters, September 22, 2014. https://www.classsizematters.org/73-education-professors-urge-the-chancellor-and-the-mayor-to-reduce-class-size/
    ${ }^{71}$ Jacqueline Shannon and Mark Lauterbach, "Opinion: De Blasio Must Put Reducing Class Sizes at Top of His Agenda," WNYC, November 6, 2014. https://www.wnyc.org/story/opinion-de-blasio-must-put-reducing-class-sizefirst/

[^18]:    ${ }^{72}$ FY 2020-2024 Proposed Five-Year Capital Plan Amendment: November 2018,"C7-C11.

