

# New York City Public Schools

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## Management of the Student-School Matching Algorithm

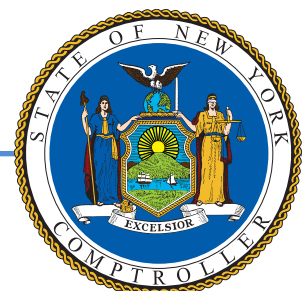
Report 2022-N-7 | July 2025

OFFICE OF THE NEW YORK STATE COMPTROLLER

Thomas P. DiNapoli, State Comptroller

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Division of State Government Accountability



# Audit Highlights

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## Objective

To determine whether New York City Public Schools (NYCPS) adequately managed selected aspects of the admissions process and the student-school matching algorithm used in high school admissions.<sup>1</sup> The audit covered selected high school admissions processes for school years 2018-19 through 2024-25.

## About the Program

As the nation's largest school district, NYCPS (formerly the New York City Department of Education) provides primary and secondary education to approximately 900,000 students, from early childhood through Grade 12, at approximately 1,600 public schools (excluding charter schools).

New York City (NYC) students apply to NYCPS' high school programs across NYC by submitting one application in which they may select up to 12 programs.<sup>2</sup> A single school can have multiple school programs (e.g., architecture, business, computer science/technology) to which students can apply. Students and their families complete applications for high school through MySchools, the official online platform for NYC families to search for and apply to public schools. Our audit focused on high school admissions. MySchools is also used to apply to 3K, pre-kindergarten, kindergarten, and middle school. Students receive offers to programs based on four key factors: the applicant's choices, each program's seat availability, admissions priorities, and admissions methods. For each school year from 2018-19 to 2024-25, more than 70,000 students applied to high school.

To match student applicants to school programs, NYCPS uses a deferred acceptance matching algorithm (algorithm) that employs a logic-based system based on the Gale-Shapley algorithm. NYCPS uses this algorithm for the majority of its admissions processes to school programs. NYCPS' Office of Student Enrollment is responsible for implementing and overseeing admissions processes at NYCPS, which includes management of the algorithm.

The algorithm uses preferences to match student applicants to school programs. Each student must have a preference of school programs, and each school program must have a preference of students. In NYCPS' implementation of the algorithm, student preferences come directly from the order in which students list their school program selections on their application. Students could apply to a maximum of 12 school programs (i.e., admission pathways).

As part of the admissions process, MySchools randomly generates and assigns each student a lottery number. This, along with how the applicant ranks the school programs on their application, the number of applicants in the priority groups, and the number of available seats for the school program, are factors in determining student matching to a given program.

Many schools in NYC give priority to certain students over others. Priorities vary and can be based on where a student lives, whether the student met the eligibility requirements for the free or reduced-price lunch program, or their academic performance. How students are prioritized among each other impacts the order in which students are placed in the limited number of seats available in each

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<sup>1</sup> The audit scope did not cover the specialized high school admissions process.

<sup>2</sup> For applications to school programs for the 2025-26 school year, which was outside of our audit testing, there is no maximum number of programs that can be selected.

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school program. Additional considerations include ranking students based on academic performance and other evaluations such as essays.

The algorithm considers every student for their first-choice school program. NYCPS considers the applicants who applied to each school program and tentatively matches applicants to the number of available seats based on their order (e.g., lottery number) and priority. Every student who is not tentatively matched is considered for their next choice. This process continues until every applicant is matched or all choices of unmatched students are considered. Students who were not matched can be manually placed in available school programs. In addition, NYCPS will routinely run multiple iterations of the matching algorithm as part of its process.

## Key Findings

NYCPS needs to strengthen its management of the student-school matching algorithm to ensure that all students are properly prioritized during the admissions process. We found significant weaknesses such as:

- Prioritization for students in temporary housing – For admissions into the 2023-24 school year, there were 7,000 students in temporary housing (such as homeless students) in NYC and there is no assurance these students were appropriately prioritized in the matching algorithm because the algorithm does not account for both the current and prior address—as required by the Chancellor’s Regulations for such students.
- Identifying and prioritizing low-income students – NYCPS uses data generally collected for a different purpose to identify low-income students. In a limited sample of 39 students for admission into the 2023-24 school year, we found 31 who were likely low-income because they lived with another student who was. However, NYCPS did not identify them as low-income. It is likely more students are low-income but have not been identified. Low-income students are given priority at certain school programs if NYCPS has identified them as low-income.
- Manual placement of students – For admissions into the 2023-24 school year, we found over 200 instances where students should have been manually placed in a school program but were either not manually placed or were not placed appropriately—according to NYCPS’ practices and business rules.

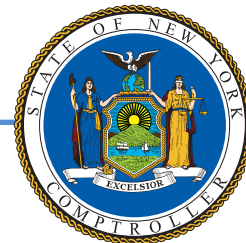
Despite the complexity of NYCPS’ matching process—with its many layers of criteria per school and program and the need to accommodate preferences for tens of thousands of students—we found that, for most of the algorithm processes, NYCPS had no written policies to guide implementation. Formal policies and procedures are essential to ensure the algorithm is working as intended, that all students’ applications are captured and given due consideration, and that errors are addressed and actions taken to correct them.

Additionally, NYCPS did not publish reports timely, as required by Local Law 72 of 2018, on applications, offers, and available seats, which are key inputs and outputs of the matching algorithm. NYCPS also posted incomplete enrollment reports. Timely and complete information is an important resource for families and those involved in the management and oversight of NYC’s education system. These types of delays hinder the goals of the Local Law that mandated these reports.

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## Key Recommendations

- Take action to improve management of the student-school matching algorithm to ensure students are appropriately identified to receive the admissions prioritization they are entitled to as noted throughout the report including, but not limited, to:
  - Students in temporary housing
  - Low-income students
  - Students who require manual placements
- Develop and implement written policies and procedures for the matching process to ensure the consistent and appropriate treatment of students across the matching process in line with the Chancellor's Regulations and other relevant requirements.
- Create policies and procedures that ensure complete and timely reports are publicly posted as required by Local Law 72 of 2018.



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**Office of the New York State Comptroller  
Division of State Government Accountability**

July 24, 2025

Melissa Aviles-Ramos  
Chancellor  
New York City Public Schools  
52 Chambers Street  
New York City, NY 10007

Dear Chancellor Aviles-Ramos:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for the tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is a report of our audit entitled *Management of the Student-School Matching Algorithm*. This audit was performed pursuant to the State Comptroller's authority under Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Division of State Government Accountability*

# Contents

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<b>Glossary of Terms</b>	<b>6</b>
<b>Background</b>	<b>7</b>
How the Algorithm Works	7
Matching and Placement	9
Reporting of Admissions and Enrollment Results	10
<b>Audit Findings and Recommendations</b>	<b>11</b>
Inputs	12
Outputs – Manual Placements	19
Outputs – Data Discrepancies	22
Lack of Policies and Procedures	23
Quality Assurance	24
Monitoring of Applications by Middle Schools	25
Challenging Results	25
Compliance With Local Law 72 Reporting Requirements	26
Scope Limitation	27
Recommendations	28
<b>Audit Scope, Objective, and Methodology</b>	<b>29</b>
<b>Statutory Requirements</b>	<b>31</b>
Authority	31
Reporting Requirements	31
<b>Agency Comments and State Comptroller's Comments</b>	<b>32</b>
<b>Contributors to Report</b>	<b>39</b>

# Glossary of Terms

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Term	Description	Identifier
NYCPS	New York City Public Schools, formerly the New York City Department of Education (DOE)	<i>Auditee</i>
Algorithm, Student-School Matching Algorithm, Matching Algorithm	Deferred acceptance matching algorithm	<i>Key Term</i>
ATS	Automate the Schools	<i>System</i>
DIA	Diversity in Admissions	<i>Key Term</i>
DIIT	Division of Instructional and Information Technology	<i>Auditee Office</i>
FRL	Free and reduced-price lunch	<i>Key Term</i>
GAGAS	Generally accepted government auditing standards	<i>Key Term</i>
LL72 or Local Law	Local Laws of the City of New York No. 72 of 2018	<i>Law</i>
MIT	Massachusetts Institute of Technology	<i>Contractor</i>
Multiples	Sibling, half-sibling, step-sibling, and/or foster sibling who lives in the same household as the child seeking admission or enrollment to a school	<i>Key Term</i>
MySchools	Official online platform NYC families use to search for and apply to schools	<i>System</i>
OSE	Office of Student Enrollment	<i>Auditee Office</i>
Regulations or Chancellor's Regulations	Regulations of the Chancellor of the New York City Public Schools	<i>Regulations</i>

# Background

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As the nation's largest school district, the New York City Public Schools (NYCPS)—formerly the New York City Department of Education—provides primary and secondary education to approximately 900,000 students, from early childhood through Grade 12, at approximately 1,600 public schools (excluding charter schools). For each school year from 2018-19 to 2024-25, more than 70,000 students applied to high school.

Generally, each high school offers an array of specialty programs. For example, on top of general education areas, many New York City public high schools focus on additional interest areas, such as animal science, architecture, business, computer science/technology, environmental or health sciences, and art/design. Students and their families—sometimes with the assistance of guidance counselors or NYCPS' Family Welcome Centers—submit applications through the MySchools application system (MySchools), which also houses directories of the schools and programs that students can apply to as well as eligibility requirements. Students submit one application in which they may select up to 12 programs (in order of priority).<sup>3</sup> For each school year from 2018-19 to 2024-25, more than 70,000 students applied to public high school programs.

For certain admissions processes, such as applying to high school, NYCPS matches student applicants to school programs using a deferred acceptance matching algorithm (algorithm)—a logic-based system based on the Gale-Shapley algorithm. This algorithm has been used for numerous real-world applications, including matching doctors to medical residency programs.

***In 2003, three economics professors created an algorithm for matching students to schools in NYC.***

Within NYCPS, the Office of Student Enrollment (OSE) is responsible for implementing and overseeing admissions processes at NYCPS, including managing the algorithm. The Division of Instructional and Information Technology (DIIT) provides technical support and delivery of MySchools. OSE works with DIIT to implement the algorithm.

## How the Algorithm Works

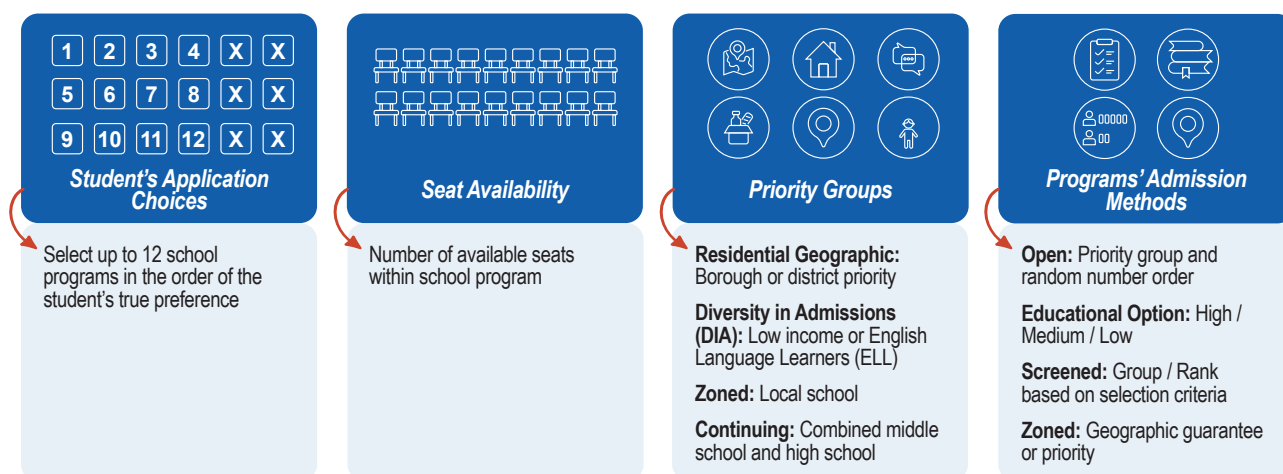
The algorithm uses preferences to match student applicants to school programs based on their highest mutual preference. Figure 1 illustrates the four overarching preference factors: the student's list of 12 preferred programs, in order of priority; the number of seats available; the program's priority group(s); and the program's admissions method.

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<sup>3</sup> For applications to school programs for the 2025-26 school year, which was outside of our audit testing, there is no maximum number of programs that can be selected.



**Figure 1 – Four Factors That Determine Student–Program Matches**



School programs' priorities vary and can be based on, for example, a student's academic performance or location of residence (i.e., if the student lives within a given school zone, school district, or borough). Also, as part of NYCPS' Diversity in Admissions (DIA) initiative, some programs give priority to certain students, such as those who are low-income.

As a final factor in the admissions process, MySchools randomly generates a lottery number for each applicant. These lottery numbers are a combination of 32 numerals (0–9) and letters (A–F), with lottery numbers starting with "00" considered the highest priority and those starting with "FF" the lowest.<sup>4</sup> NYCPS uses these lottery numbers to determine the order of placement when there are more applicants than seats available at a specific school program. NYCPS will also assign the same lottery number to students who are considered "multiples" (such as a half-sibling, step-sibling, and/or foster sibling) living in the same household as the student seeking admission. According to NYCPS officials, assigning "multiples" the same lottery number will help enable siblings to receive an offer to the same school program barring other admission requirements, such as an audition.

How students are prioritized among each other impacts the order in which they are placed in the limited number of seats available in each school program. Additional considerations can include students' rank based on academic performance or other evaluations such as essays or portfolios; these are referred to as screened programs. In addition, some school programs directly screen student applicants, such as when applicants are required to submit a portfolio as part of the admissions process. If the school program uses screening for its admissions, the ranks assigned

<sup>4</sup> As of the 2023-24 school year, once the family starts an application, NYCPS has made the lottery number associated with their child's application visible and available within the student's MySchools account. NYCPS also has a dedicated webpage to explain the lottery numbers.

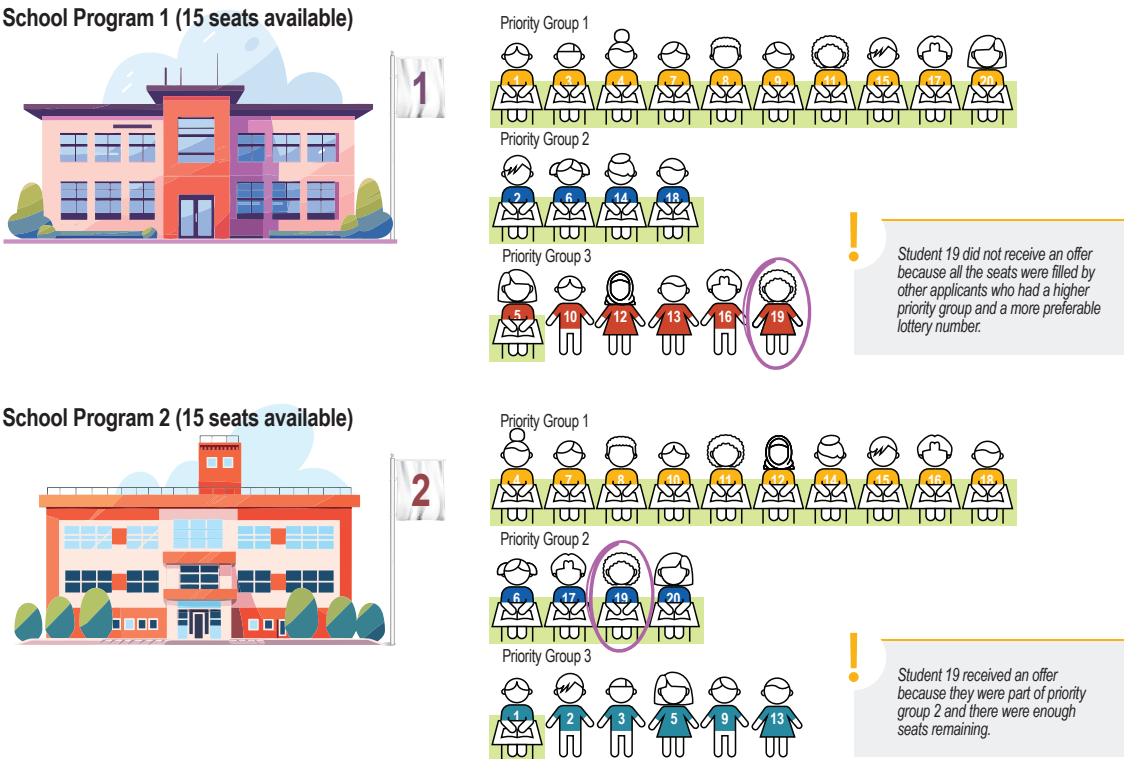
to students determine the order of selection. Otherwise, the lottery number is the final factor that determines the order of student selection (i.e., which student is considered next for admissions). In addition, where there is a ranking tie among applicants, the algorithm will use the lottery number as a tiebreaker.

## Matching and Placement

The algorithm considers every student for their first-choice school program and tentatively matches applicants up to the number of available seats based on student priority and order (e.g., lottery number). As successive matches are made, an applicant can lose their tentative seat to others who have a higher priority. For every student who is not tentatively matched, the algorithm will consider them for their next choice. This process continues until the algorithm matches every applicant or considers all the choices of those who remain unmatched. In addition, NYCPS will routinely run multiple iterations of the matching algorithm as part of its process.

Students who are not matched to one of the choices on their application are then manually placed by OSE, most often based on the student’s zoning (i.e., location). See Figure 2 for a general illustration of the placement process.

Figure 2 – NYC Student Placement into NYC Schools



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After offers are readied (either as a result of the match or manual placement), OSE will notify families that offers are posted in MySchools. In addition, students will automatically be added to the waitlist of any school program listed higher on their application than the school program to which they received an offer. Students may also add themselves to the waitlists of any school program to which they did not receive an offer.

## **Reporting of Admissions and Enrollment Results**

Pursuant to Local Laws of the City of New York No. 72 of 2018 (LL72 or Local Law), NYCPS is required to annually report on enrollment and admissions data, including the number of students who applied for admission, the number of students who received offers of admission, and the total number of seats anticipated to be available in the following school year, which are key inputs and outputs of the matching algorithm.

# Audit Findings and Recommendations

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NYCPS needs to strengthen its management of the student-school matching algorithm to ensure that all students are properly prioritized during the admissions process. We found significant weaknesses, particularly in regard to the accurate prioritization of students in temporary housing (such as homeless students)—a population of students that, for admissions into school year 2023-24, accounted for 7,000 eighth-grade students who could apply to high school. Furthermore, we found significant weaknesses in how NYCPS identifies low-income students and whether these students are appropriately prioritized. There were also over 200 instances where students should have been manually placed in a school program but were either not manually placed or were not placed appropriately—according to NYCPS’ practices and business rules.

Given the complexity of NYCPS’ matching process—with its many layers of criteria per school and program and the need to accommodate preferences for tens of thousands of students—formal policies and procedures are essential to ensure the algorithm is working as intended, that all students’ applications are captured and given due consideration, and that any errors are addressed and action is taken to correct them. We found that, for the majority of the algorithm processes, NYCPS had no written policies to guide implementation. Written documentation of NYCPS’ complex matching process would help ensure consistent application of those expectations and ensure that all students are treated appropriately and equally.

In addition, NYCPS did not report data on applications, offers, and available seats timely, which are key inputs and outputs of the matching algorithm. Timely and complete information is an important resource for families and those involved in the management and oversight of NYC’s education system. The goal of the Local Law is to create greater transparency regarding the applications received by NYCPS for school seats, offers made, anticipated number of school seats, and student enrollment. Delays and incomplete information hinder the fulfillment of this goal.

Finally, as discussed in the scope limitation section of the report, our audit team was not able to fully verify the reliability of MySchools data. NYCPS explained that data used by MySchools—specifically, identifying information of students who are enrolled in the free and reduced-price lunch (FRL) program—is protected under federal privacy regulations and cannot be shared by NYCPS. To perform our audit within this constraint, we met with NYCPS officials over several months (in part due to the lack of sufficient documentation) to develop specific and detailed audit procedures to work around NYCPS’ confidentiality concerns, and many restrictions were imposed on our testing, such as lack of read-only access and the scrambling of student identifiers. As a result of these restrictions, we were unable to determine the reliability of this data. Further, NYCPS did not disclose to auditors until late into fieldwork that, for the most recent matches, NYCPS had, in fact, received parental or guardian consent to use this data in the school match. Such information could have led to a significantly different testing environment.

## Inputs

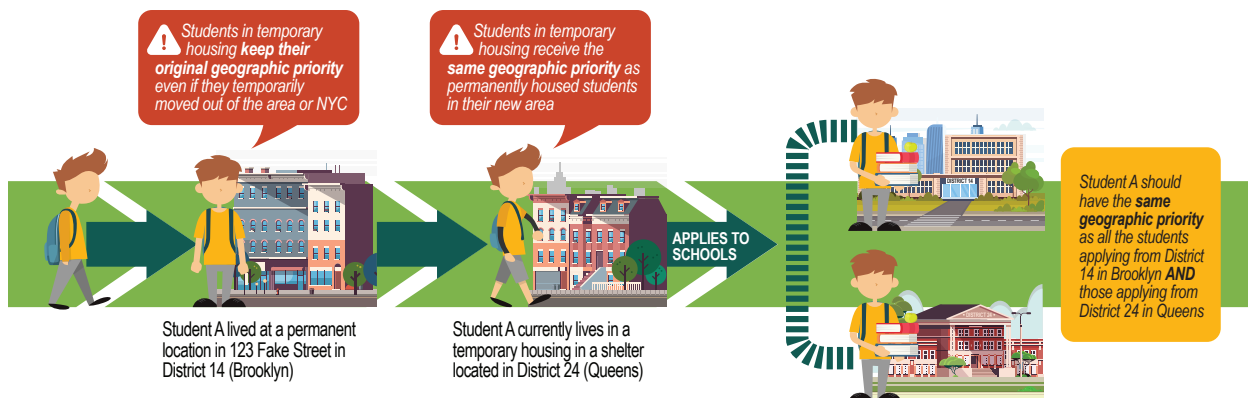
### Identifying Students in Temporary Housing and Homeless Students

The Chancellor's Regulations (Regulations) indicate that when students in temporary housing, including homeless students, apply to ninth-grade programs, NYCPS needs to consider both where the student is currently living and where the student is currently attending school as they may be in different geographic areas. School programs may prioritize one geographic area over another, impacting the student's high school placement the following school year.

### Using Address Data

Students in temporary housing retain their geographic priority while living elsewhere and are afforded equal priority as permanently housed students living in the same area (see Figure 3). As a result, NYCPS should use these students' current address and their prior address to provide students with all of their geographic priorities. However, NYCPS' matching algorithm considers only a single address to identify the geographic information (such as high school zone or borough residency) used by the match.

**Figure 3 – Students in Temporary Housing**



As a result of using only one address, NYCPS cannot appropriately give students in temporary housing the geographic priority of their prior address and their current address at the same time. For example, Student A lived in School District 14 in Brooklyn. However, he is currently living in a homeless shelter located in School District 24 in Queens, but his address on file does not reflect this change. He decides to apply to a school program in Queens that prioritizes Queens residents over others. However, as NYCPS uses only one address in the matching algorithm and this address is the prior Brooklyn address, the student does not receive the geographic benefit of currently living in Queens—despite the Regulations' requirements

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regarding students in temporary housing. Conversely, if Student A's address was updated to reflect his current address in Queens, the matching algorithm would not give him the geographic benefit of his previous Brooklyn address.

NYCPS officials agreed that the matching process does not consider students' original and current geographic data when matching based on location.

According to data reported to the State Education Department by NYCPS, for the 2022-23 school year, there were 7,000 eighth-grade students in temporary housing throughout the NYC school system (including charter schools) who were eligible to apply to high school<sup>5</sup> who, as a result, may not have received the full priorities they were entitled to. We have no assurance that the requirements of the Chancellor's Regulations regarding students in temporary housing are being followed and that these students are receiving the full priorities that NYCPS is required to give to them.

***There is no assurance that NYCPS considered the geographic priorities of 7,000 eighth-grade students in temporary housing throughout the NYC school system during the 2022-23 school year.***

NYCPS officials responded that, if a family escalated a complaint related to this issue, they could resolve it for that family. However, officials also said they could not recall if they have received these types of complaints for the high school admissions process. When asked if they have ever analyzed the population of students who could be impacted by this issue, officials responded that they have not. Officials later asserted that more students in temporary housing received an offer from the match than other students but did not provide details, such as how many more students received offers or the underlying data, to support their conclusion.

## Available Address Data

NYCPS officials stated the algorithm uses Automate the Schools (ATS), the administrative system for collecting and reporting student data, as its main source of address information to determine a student's priority based on location. NYCPS also receives address information for students in temporary housing, such as those in homeless shelters, via daily and weekly files from the NYC Department of Homeless Services (DHS) and NYC Health and Hospitals, respectively.

We learned that, while NYCPS uses ATS data—but not shelter files—to inform student location within the algorithm, NYCPS uses shelter files to facilitate student outreach in the application process. When questioned as to why ATS data isn't also used to identify students in temporary housing for outreach, OSE officials explained that there is "some, but not perfect, overlap" between the shelter files and ATS. Officials said they use the shelter files specifically for shelter outreach as "the shelter files from DHS are the most accurate way to identify students residing in shelter." Given OSE's confidence that the shelter files are accurate for identifying students' current residence, we question why NYCPS does not use this information for matching purposes. In response, NYCPS officials explained that only

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<sup>5</sup> <https://data.nysed.gov/enrollment.php?instid=7889678368&year=2023&grades%5B%5D=08>, visited October 2024, the most recent available data



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the official address is used for the match and updates to the address must follow the Chancellor's Regulations. While these Regulations identify the process and required documents for parents and guardians to update the school address, they also include a requirement that when there is a question of a student's address, the student's school must initiate an address verification within 30 days.

As discussed above, even using the most up-to-date address would not ensure NYCPS follows its Regulations, as both the current location and prior location need to be considered.

## Use of FRL Data as a Proxy for Low-Income

When a program uses admissions priorities, it admits students in groups and prioritizes some groups of students for offers before others. One type of admissions priority, Diversity in Admissions (DIA), prioritizes certain students, such as students who are low-income. For the 2024-25 school year, NYCPS had 925 ninth-grade school programs, of which 55 had a DIA priority. The DIA priority for 54 of the 55 school programs (98.2%) was for low-income applicants specifically.

For the matching process, NYCPS considers an applicant to be low-income if NYCPS has proof the student meets the eligibility requirements for the free or reduced-price lunch (FRL) program, as indicated in ATS based on certain meal codes assigned to students. The meal codes indicate that, pursuant to Regulations, students were deemed eligible for free and reduced-price meals through either a computer match with public assistance/food stamp files (with coordination with the State Education Department), household income provided by the parent or guardian on the School Meals Application, a valid public assistance/food stamp case number provided by the parent or guardian on the School Meals Application, or a valid direct certification letter.

However, many students may meet the eligibility or income requirements to receive FRL, but NYCPS may not be aware of the student's low-income status. Significantly, students aren't required to complete a form, apply, or have a positive data match to actually receive free lunches—NYCPS offers free meals to all students regardless of income. Furthermore, the eligibility criteria and determinations described above are maintained to primarily support NYCPS' ability to obtain funding (e.g., as part of the National School Lunch Program), not specifically for admissions into high school. For the purposes of this report, we will refer to students who met the FRL income eligibility requirements and where NYCPS has made a determination the student is eligible as enrolled in FRL.

The risk that students may not receive admissions priorities that they qualify for is increased by how MySchools describes this priority. MySchools' public directory, used by students and families to research programs, states that the low-income DIA priority is given to applicants who are eligible for FRL. It does not indicate that the student must be enrolled in the FRL program—in other words, whether NYCPS has formally determined a student meets the eligibility criteria. Furthermore, we reviewed the School Meals Application, and it does not indicate that eligibility for free or

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reduced-price meals has any impact on NYCPS admission processes such as high school admissions.

Students who are low-income but are not identified in ATS with a FRL meal code would be overlooked by NYCPS for a DIA priority.

## **Students Likely Eligible But Not Identified for FRL**

As discussed above, NYCPS may not identify all students who are low-income, as students who are low-income can still receive free lunch without NYCPS reviewing eligibility documents such as meal applications. However, based on the limited information available, we tested a subset of the students who could be low-income, but where no determination had been made by NYCPS. The true number of such students may be much greater. For example, we identified 76 students who may not have been identified by NYCPS as low-income even though they lived with another student who was determined to be low-income by NYCPS. NYCPS officials explained that students who lived with each other could have the same lottery number. For school year 2023-24, we selected 19 students out of 1,421 students who shared a lottery number and for school year 2045-25, selected 57 students out of 1,832 students. As eligibility for FRL is generally based on household information (with the exception of foster children), we requested that OSE confirm whether a sample of 39 (19 from 2023-24 and 20 from 2024-25) of 76 of these students lived at the same address as another student who shared a lottery number but had a different FRL status. These 39 students were selected because at least one of the students applied to a school program with a DIA priority. Of the 39 students, NYCPS officials confirmed that 37 who were not enrolled in FRL (i.e., NYCPS has not made a determination on FRL eligibility) lived in the same household as another student who was enrolled in FRL. The remaining two students did not live in the same household.

Of the 39 students, 31 did not receive as high a priority for the DIA school program they applied to as if they had been identified as enrolled in FRL. NYCPS' matching algorithm did not treat these students as low-income, even though they may have been eligible for the FRL program, as they lived in the same house as another student who was documented as low-income. As indicated above, students can receive free lunch without NYCPS determining FRL eligibility, and it is likely more students are eligible for FRL, but a determination has not been made. The true number of students eligible for FRL and where NYCPS has not made a determination may be much greater, as the test above was specific to applicants with the same lottery number.

## **Risks of Using FRL Data as a Proxy for Low-Income**

As reflected above, there are risks with using FRL data as a proxy for low-income, as detailed by the U.S. Department of Education's National Center for Educational Statistics (NCES). According to NCES, FRL determinations are not required for all students, and some students who meet the FRL program's definition of low-income may receive benefits, such as free lunches, without a formal determination. For



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example, there are situations where every student in a school could receive free lunch regardless of an individual's eligibility. Under certain rules of the program, such as the Community Eligibility Provision, a school district can provide free lunches to all children in the school, based on the demographics within the school community. For example, the State Education Department released data indicating that about 500 NYC middle schools have participated in the Community Eligibility Provision, a meal service option to serve breakfast and lunch at no cost to all enrolled students without the burden of collecting household applications. Lastly, NCES stated in 2015 "while the free/reduced lunch percentages can serve as a useful indicator of the relative numbers of poor children, it does not substitute as a measure of the level of child poverty, nor of changes in poverty rates over time. It is also important to keep in mind that neither free/reduced price lunch eligibility nor poverty should be considered measures of socioeconomic status (SES)."<sup>6</sup>

NYCPS' use of FRL data as a proxy for low-income may not be properly identifying and prioritizing students, as it may not be inclusive of all individuals who are low-income. While NYCPS may have selected the FRL enrollment as the best available data for determining if an individual meets the low-income eligibility preference, the broad FRL eligibility rules, the use of the Community Eligibility Provision, and the process for applying to the FRL program, may not capture all students who are eligible.

## Applications With Potentially Missing FRL Information

NYCPS is aware that students' FRL information may be incomplete or not up to date and performs targeted outreach to principals regarding certain students with potentially missing information. NYCPS does not have written business rules for this outreach. Officials explained that emails are sent to principals after the application deadline but before the match is run. We requested outreach emails from a sample of three schools for admissions for the 2023-24 school year. We judgmentally selected these schools, as they had the lowest average number of school programs selected by their students. NYCPS did not send an email to one of the three schools, despite students at that school having potentially missing FRL information. For the remaining two schools, the emails did not include the same number of students who were not enrolled in FRL. For example, one of the emails listed four students, but 23 students were not enrolled in FRL. Furthermore, it is also not clear if parents and guardians are also directly contacted via the email address provided when their MySchools account is established. NYCPS explained that they selected students whose records indicate no FRL determination has been made. However, NYCPS has not provided the specific information for these students that enabled them to make this determination, and we therefore have no assurance if NYCPS' outreach follows their explanation. Furthermore, even if a student did not meet eligibility in the past, it is unclear if NYCPS considered whether a student's situation may change over time. NYCPS should review the logic used to identify students with potentially missing FRL information and ensure parents and guardians are also contacted directly.

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<sup>6</sup> <https://nces.ed.gov/blogs/nces/post/free-or-reduced-price-lunch-a-proxy-for-poverty> (as of September 2024)

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## FRL Consent

NYCPS did not ask for parental or guardian consent for the use of FRL data until fall 2023. NYCPS receives FRL eligibility information to support the free and reduced-price lunch program. In MySchools, a window would pop up that requested consent to allow NYCPS to use eligibility information from public benefit programs (e.g., Supplemental Nutrition Assistance Program, or SNAP) when an applicant applies to a school program that prioritizes students who are low-income. While it does not specifically mention FRL, NYCPS applies the consent provided to how it handles FRL data. It is unclear what prompted NYCPS to require parental consent, as the relevant federal privacy regulations were not changed. We asked NYCPS officials whether consent was considered when NYCPS first decided to use this information. However, NYCPS did not provide that information.

According to data provided by NYCPS, 1,388 high school applicants for the 2024-25 school year did not give their consent for the algorithm to use their FRL information in the admissions process. Nonetheless, the algorithm matched 27 of these applicants within a seat group and priority group that was reserved for FRL students even though these matched students did not give consent to be considered FRL. NYCPS officials responded that consent was not required for students if NYCPS used a completed meal application to determine whether students qualified for free and reduced-price lunch rather than the results of a computer match. NYCPS further explained that the meal application form itself is not used to determine whether students qualify for FRL and therefore is not covered by the National School Lunch Act (which has specific confidentiality requirements).<sup>7</sup> As discussed earlier, we reviewed the School Meals Application, and it does not indicate that eligibility for free or reduced-price meals has any impact on NYCPS admissions processes such as high school admissions. Furthermore, this explanation does not align with NYCPS' regulations and practices; specifically, the Regulations state the student eligibility status for free and reduced-price lunch, as determined by NYCPS, is documented in ATS as a "meal code." As the goal for documenting the meal code is to identify which student is eligible for the free and reduced-price lunch program, NYCPS needs to reassess how it uses consent over FRL information.

## Lottery Numbers Assigned to Multiples

We conducted an analysis of lottery number assignments to multiples (such as siblings and half-siblings) to assess whether NYCPS consistently assigned lottery numbers according to NYCPS officials' description of their business practice. NYCPS officials explained that students identified as multiples will receive the best lottery number available among the multiples.

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<sup>7</sup> NYCPS refers to the online meals application on one of its websites as a family income inquiry form. However, the family income inquiry form link directs to <https://www.myschoolapps.com/Home/PickDistrict> where a user must select the appropriate school district to which they "will be applying for benefits for your children." The webpage features the terminology "application" or "apply" throughout. NYCPS does not require this form to be completed in order to receive free or reduced-price meals.

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For the 2023-24 and 2024-25 school years, we identified 1,421 and 1,832 applicants, respectively, who had the same lottery number as at least one other applicant. We judgmentally selected a sample of 1,526 applicants (435 from the 2023-24 school year and 1,091 from the 2024-25 school year) to verify if they were multiples. We selected these students if they were listed as not being enrolled in the FRL program, based on the file from the final iterations of these two admissions cycles, which includes the applicants' demographics used by the algorithm, and whether they were a multiple (i.e., sharing the same lottery number of another student). Due to privacy considerations, NYCPS was unable to provide certain information needed for our testing for FRL students. In selecting a judgmental sample, we considered whether the pair of students shared similar demographic information such as same borough or school zone.

NYCPS provided the addresses of all 435 applicants from the 2023-24 school year sample but only 492 addresses for the 2024-25 school year sample (totaling 927 applicants). NYCPS officials stated they could not provide the addresses for the remaining 599 applicants because the applicants either were determined to be eligible for FRL or were the sibling of a student who was—determinations that are protected under certain privacy considerations. Nevertheless, these explanations did not reflect the data NYCPS had initially provided.<sup>8</sup>

Of the 927 total applicants, we found seven shared a lottery number with an enrolled student but lived at different addresses. In response, NYCPS officials agreed that these applicants did not have the same address, but explained that, for each pair, the parent or guardian was able to link the two applications within MySchools.

In addition, the Regulations do not specify that a “multiples” priority exists for high school admissions; explicitly a sibling priority is only noted for other admission processes such as elementary schools. NYCPS officials initially explained that, nevertheless, they follow the sibling definition for high school admissions to identify multiples that are not linked by a guardian or parent. NYCPS officials stated that, for the high school match, applicants would need to be living at the same address for NYCPS to consider the students as multiples. However, there is no documented policy that clearly identifies what constitutes a multiple or where the priority originated. NYCPS officials later indicated that they sometimes may consider additional criteria, such as whether students at the same address share similar program choices on their MySchools applications.

NYCPS officials stated that, based on a review of demographic information, OSE will link two or more students when they have the same guardian's name, email, address, date of birth, and current school and share an unspecified number of application choices and order of those choices. This set of criteria is stricter than what is available to parents and guardians who link student applications directly.

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<sup>8</sup> NYCPS initially provided data that indicated these students were not determined to be eligible for FRL. However, officials explained that for applications for the 2024-25 school year, NYCPS asked for consent in using certain eligibility information. Certain guardians or parents did not give consent. As a result, the data would not indicate if a student was determined to be eligible for FRL. However, this practice was not initially disclosed.

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As noted, there is no written policy that describes what criteria NYCPS officials are meant to apply each time, and decisions based on date of birth would likely exclude step-siblings, half-siblings, and foster siblings (which the Regulations consider siblings).

## Management of Seat Targets

OSE maintains seat targets, which are used in the matching algorithm to determine the number of seats that will be available for each school program in the matching process. Programmatic changes, such as the introduction of new programs or the closure of existing ones, can impact seat target calculations. We found, however, that NYCPS made seat changes without supporting documentation explaining why the change was necessary and who requested it.

OSE sends each school's principal an email with proposed seat targets for the upcoming school year. Principals are asked to review these targets and provide feedback, including any necessary changes such as capacity considerations. OSE reviews the feedback and coordinates with NYCPS' Office of District Planning (a unit responsible for school district planning) and may make additional seat target adjustments. In addition to email correspondence, OSE may document reasons for seat target changes.

OSE imports the seat targets into MySchools, where they will be used in the matching process. OSE runs multiple iterations or versions of the match to ensure the matching process is working as expected; each iteration uses a seat file.

We reviewed each seat file used for the 2023-24 high school match. We found that, of the 898 school programs offered for the 2023-24 school year, 49 programs had a change of at least six seats. For three of the 49 school programs (6%), there was no email correspondence between OSE and the school principal to support why a seat target change was necessary and no documented reasons for the seat change in the seat file.

Without any documentation to support the seat target change, including who requested it and for what reason, there is no assurance that it was reasonable or necessary. Seat availability is one of the factors that determines whether a student applying to a program receives an offer, and changes to seats should be documented.

## Outputs – Manual Placements

After the algorithm completes the initial matching process, OSE identifies those students (regardless of whether they're from public school or private school) who did not receive an offer to any of their preferred school programs or are current eighth graders in NYCPS who did not submit any program preferences. These students will need a manual placement into a school program to receive an offer for the upcoming school year. OSE will also manually place students who entered the NYCPS system after the release of the official offers and before the end of the

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school year (that is, students who could not have participated in the match). These late-arrival placements are made to ensure that all active students will receive an offer for the upcoming school year. OSE explained that late-arrival placements are independent of the matching process.

According to NYCPS officials, the manual placement process typically involves two rounds to ensure NYCPS addresses all issues (late arrivals are processed separately from this process). The initial round of manual placements is conducted and is included in OSE's preliminary list of matched students circulated to school officials (i.e., match preview), and OSE makes final adjustments based on school officials' feedback. In the second round, OSE completes a manual review of the students who need a manual placement and makes the necessary adjustments. OSE uploads the final list of manual placement offers into MySchools before generating and releasing the offer letters and opening the waitlists. We tested selected aspects of the manual placement process and found 207 instances (30+3+174) where students should have been manually placed in a school program but were either not manually placed or were not placed appropriately—according to NYCPS' practices and business rules.

## Manual Placements – Business Rules

For students needing manual placement, NYCPS officials run a computer process (outside of MySchools) to match them to programs with available space. The process follows business rules that prioritize certain criteria, such as geographical proximity, program capacity, and school performance. NYCPS officials stated that these business rules cover most scenarios; however, there are exceptions—such as addressing accessibility needs and accommodating multiples (e.g., step-siblings, twins)—and these require consideration on a case-by-case basis. Notably, the rules that NYCPS provided to us did not include any guidance or instructions on how to process these exceptions, such as deciding which school should receive the manual placement, only that these situations warrant a manual placement. Undocumented exception policies increase the risk that certain students are not receiving equal consideration for program placement.

NYCPS officials also subsequently explained that, apart from the accessibility needs exceptions they previously referenced, there are special circumstances for manual placement for two specific school programs for students with either hearing or visual impairments. For these two programs, officials stated that, if a student had selected one of them as their first choice on their application and the algorithm matched them to a less preferred choice, OSE would override the match and manually place the student into that school program even if seats are not available. We note, however, that this special policy for students with hearing or visual impairments is not mentioned in NYCPS' business rules. When asked if it was a written policy, officials simply asserted that it is part of their manual placement business rules. Officials also stated they do not verify whether the applicants require these specific programs' accommodations, but rely on information coming from NYCPS officials at those specific programs.



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For the 2023-24 and 2024-25 school years, OSE manually placed 12 and seven students, respectively, into these programs. However, because OSE relies on the school programs to proactively identify eligible students who do not receive an offer, we question whether other eligible students who applied to these programs who may have these accessibility needs were also identified. We also note that, in the MySchools directory—which students use to learn about and determine their program preferences—there was nothing in the descriptions for the two programs to indicate that they provided specialized support for students with visual or hearing impairments.

## **OSE Placement Actions Not in Compliance With Business Rules**

### **Students Moved From Initial Placement**

OSE provided us with its spreadsheet of manual placements for the 2023-24 school year, which totaled 5,986, and included OSE's notes explaining each placement. From this list, we identified 39 students who were initially placed and subsequently moved to another school, but where OSE's notes were insufficient to support the transition. OSE responded with explanations for all 39 cases. However, for 30 of the cases, the explanations contradicted an OSE business rule: specifically, OSE moved these 30 students from their original manual placement to a different program at a different school in the same borough—but the new school had poorer school performance (such as lower graduation rates and lower post-secondary enrollment percentages, i.e., college enrollment). However, OSE's business rules state that placements should favor schools with stronger school performance. OSE further explained that the placements were at the request of a superintendent, which was not documented.

We also found three students who received a manual placement twice, once in March 2023 as part of the first round for unmatched students, and again in June 2023 as part of the "late-arrival" placements. Based on OSE's notes regarding the initial March placements, one applicant was placed at a different school program at a school they had applied to, one was placed at a school program that was the same as the match preview, and one was placed at a school program that was geographically located in Queens. Then, in June, OSE manually placed these three students into completely different school programs at different schools without any documented explanation as to why the original placement was not sufficient. OSE explained they believe the guardians or parents accidentally deleted the original manual placement offer within MySchools. However, it is not clear why the original placement offer was not honored by OSE, and OSE should have reached out to the families and honored the original placements.

### **Unmatched Students Not Manually Placed**

Of the 89,083 applications submitted to MySchools for the 2023-24 school year, 76,609 were created and submitted on or before March 4, 2023—the date OSE ran

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the last matching iteration for the school year. From these applications, we identified 174 students who were not manually placed, but, according to OSE's business rules, should have been.

According to OSE's business rules, if an application does not result in a match offer and the student did not receive an offer to a specialized high school, OSE will manually place (i.e., create an offer) to an appropriate school. These 174 students were all active students as of March 6, 2023 (the date manual placements were initially made) and should have been manually placed. The table below provides a breakdown based on available student demographic data.

### Unmatched Students Not Manually Placed

Student Demographic	Number of Students Not Manually Placed
Eighth-grade students who submitted applications	
Public school students	65
Private or charter school students	7
Ninth-grade students who submitted applications	
District 75 and 79 students without any offers	1
Private school students without any offers	65
Eighth-grade students without submitted applications	
Public school students without any offers	21
Students where an application was submitted, but demographic information was not available	15
<b>Total</b>	<b>174</b>

Officials provided explanations for 98 of these students, stating they eventually left NYCPS or had already left. However, we reviewed the data as it existed on March 6, 2023—the day OSE manually placed over 5,000 other students. The information available to OSE on that day indicated these 98 students were active and, according to OSE's business rules, should have been identified and placed accordingly. OSE would not have known at that time whether these 98 students would remain active or not. NYCPS officials explained that some of the remaining students' applications were marked as inactive, totaling 68 students. However, NYCPS officials further explained they did not maintain support explaining why the applications were inactive and it is not clear when the applications were marked as inactive. Without this information, we do not have assurance the business rules were followed. There were no additional explanations for the other students who were not manually placed.

## Outputs – Data Discrepancies

Based on our review of application files and data actually used by the matching algorithm for the 2023-24 school year, we identified instances where the matching process treated students in ways that are contrary to OSE's business rules or process. For example, we found:

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- 92 actively enrolled students submitted applications before the final match iteration but were not processed in the match.
    - 82 of these students' applications were manually deactivated by OSE. Officials explained that students' applications are deactivated if OSE becomes aware they will not be attending in the fall (e.g., when a student plans to move out of NYC). However, OSE did not provide any documentation that supported the decision to deactivate these specific applications.
    - 10 of these students had submitted an application, but no school programs had been selected and, as a result, their application could not be processed in the match. We also note that seven of these students met the requirements for manual placements but were not manually placed.
  - 7 students were processed in the match even though they did not submit an application. It is unclear how the students were made available to the matching algorithm without a submitted application. In response, NYCPS explained that all these students had an application, but the application data had been "inadvertently" removed before OSC received the application data files. NYCPS further provided a backup file of the information; however, it is not clear if the backup data represented the data as it existed when the match was performed.
  - 1 student who was labeled as discharged was still processed in the match; only active students should be processed in the match. NYCPS officials identified a data standard issue that allowed this to occur and indicated they will take steps to correct it.

These discrepancies raise doubts as to whether NYCPS appropriately managed these students during the matching process. Although NYCPS officials responded that, with one exception, all the students we identified were handled appropriately, they could not provide sufficient evidence to support their assertion.

## Lack of Policies and Procedures

When we asked NYCPS officials for the policies and procedures they use to guide the matching process, they indicated that they follow the Regulations. However, after reviewing the Regulations, we determined they do not contain any policies or procedures for the high school matching process, stating only that applicants may have a zoned priority or guaranteed admission for their zoned high school, as indicated in the MySchools' school directory, and specifying how high school students returning to the NYC school system are treated.

Upon further inquiry, NYCPS officials acknowledged that there are no written policies and procedures. Officials went on to say that they document policy changes in NYCPS press releases, which function as formal written policies. We requested copies of the press releases pertaining to the admissions process; however, NYCPS officials did not provide them. While press releases may explain new rules to the general public, the matching process is complex and subject to dynamic changes. Especially in light of our findings—where either a stated practice was not followed



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or a practice or business rule was implemented but not documented—documenting the rules, policies, and requirements can help ensure consistent application of those expectations and ensure that all students are treated appropriately and equally.

The absence of definitive, documented policies and procedures can create uncertainty as to protocol, especially during policy changes or staffing changes. While OSE uses a project plan that lists milestones for the admissions process, the project plan does not reference or detail any policy or specific procedures for completing these milestones. For example, when asked when and how they know that the iteration they are currently working on will be the final iteration and offers to applicants would be generated based on that iteration, NYCPS officials stated that it is an iterative process, and at some point, the team decides they are ready and sign off on the iteration as the final. It is an internal team discussion and a collective decision—there is no formal chain of command in the decision. OSE also could not explain what criteria are necessary to finalize the offers for release to families. Without clear roles and responsibilities, which would be detailed in policies and procedures, there is the risk that the matching process could be finalized prematurely and students do not receive the offers they are entitled to—which this report identified, such as students in temporary housing not receiving appropriate consideration for their geographic priorities.

## Quality Assurance

OSE also performs certain quality assurance steps through data analysis in Stata and Excel (i.e., student- and program-level summaries). OSE also checks for certain outcomes such as duplicate offers, offers made to ineligible students, and offers made to students with disabilities. However, based on our review, some of the exceptions identified in this report were not part of those checks: students with the same lottery number but different addresses; students with the same address but different demographics (i.e., FRL, as discussed below); and students in temporary housing not receiving appropriate priority consideration. OSE should add steps to its quality assurance process to identify these exceptions for review and also itemize the reviews that should be performed to better ensure all quality assurance steps are being taken.

## MIT Review

NYCPS engaged Massachusetts Institute of Technology's (MIT) Blueprint Labs to perform ongoing reviews of the matching algorithm's results. When asked for the contracts, scope of work, or agreements between NYCPS and MIT, NYCPS officials explained that no formal agreement existed. However, 2 months after our request, they provided a data sharing agreement, which did not explain what services MIT would provide to NYCPS. Almost 16 months later, NYCPS officials provided a request by MIT for data to be used in MIT research on the matching algorithm, which the data sharing agreement covered. However, the work described in this document was distinct from NYCPS' request for MIT to audit the algorithm's implementation. It

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would be unexpected and unusual for NYCPS to not have documentation regarding the services it requested.

We met with MIT and NYCPS officials separately to gain an understanding of the work NYCPS requested from the MIT researchers. MIT officials explained the scope of the review of the matching process is to confirm if NYCPS implemented the deferred acceptance algorithm as intended—in other words, that the algorithm appropriately processed students' preferences relative to the school program's preferences (i.e., program eligibility priority, seat capacity, and eligibility) based on the data provided.

MIT's testing used NYCPS' input files and MIT's own implementation of the matching algorithm to compare MIT's results against NYCPS' results. However, MIT researchers treat the data as is and do not verify its accuracy. Further, MIT researchers do not evaluate the input variables selected by NYCPS or whether NYCPS' stated practices are being applied properly (outside of the rule sets provided by NYCPS). While MIT's results generally match NYCPS' results, due to the nature of the test, it would be expected that the algorithm would have the same results based on the same inputs.

## Monitoring of Applications by Middle Schools

Ahead of the application deadline, NYCPS identifies and sends reminder emails to middle school principals and district superintendents on the percentage of their students who have submitted an application and a list of the students who have not yet submitted an application. When asked for specifics regarding when these emails are sent, OSE could not provide details, stating simply that emails go out several weeks ahead of the deadline. We reviewed emails sent to the sample of three middle schools—one of which had over 50 students who did not submit their application—and found the emails were dated within 3 business days of the application deadline. Without better evidence that this information is provided earlier in the application process to middle schools, it is not clear if OSE gives schools sufficient time to assist students in completing their applications.

## Challenging Results

According to NYCPS officials, even if students and families feel there was an error in the process, there is no formal appeals process for them to contest the results of the match. Middle school guidance counselors and Family Welcome Center staff we spoke with indicated that if families brought these concerns to their attention, the only recourse option they could provide is to contact the high school admissions team at OSE.

Initially, NYCPS officials informed us they do not have a documented policy or procedure on how to handle complaints, nor do they maintain a log of all complaints received (including those received and resolved by Family Welcome Centers). NYCPS officials explained they have a list of pre-written responses for common complaints. Officials stated that when a complaint must be escalated, they will add it

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to an escalation log for tracking. However, there is no written policy or procedure that outlines when a complaint must be added to the escalation log.

After our closing conference, despite earlier explanations that OSE does not have policies or procedures regarding complaints, NYCPS officials provided a document used to respond to common complaints. It is unclear when this document was created, and officials stated it's an internal working document. In addition, officials stated they do not consider it to be policies or procedures. Upon reviewing the document, there are some procedures for staff to perform before responding, such as validating student information. However, not all complaints have specific procedures. Furthermore, NYCPS officials indicated any emails received are organized into categories for resolution. However, there is no documented monitoring of these emails such as indicating the number of complaints resolved, how long complaints take to be resolved, and the number of complaints by category.

Without documented policies or procedures, there is a risk that similar complaints are handled differently. In addition, as OSE does not document individual complaint resolutions, it is unclear whether OSE even maintains documentation to support how complaints are actually handled. Moreover, as there is no tracking of all complaints, OSE is not able to monitor complaints to ensure they are being handled appropriately, nor are they able to monitor complaints for systematic issues.

## **Compliance With Local Law 72 Reporting Requirements**

NYCPS is required by Local Law to annually report on its website information on applications, offers, and available seats, which are key inputs and outputs of the student-school matching algorithm:

- Report on Applications and Offers: by May 15, for each school and school district, the total number of individuals who applied for admission and received an offer of admission for the upcoming school year
- Report on Enrollment: by March 15, the total number of students who enrolled in each school district and school in the current school year

## **Timeliness**

For the school years 2018-19 to 2023-24, NYCPS issued 12 reports. (We note that all application and offer reports also included the number of available seats for each school and/or district rather than a distinct report.) Seven of the 12 published reports were at least 4 months overdue. NYCPS officials explained that they can only produce these reports after offers have gone out for all admissions processes (e.g., pre-kindergarten, kindergarten, middle school, and high school). However, the reports for the 2020-21 through the 2022-23 school years were published over 1½ months to 7 months after the last admissions process was completed for that year and at least 4 months overdue from the Local Law requirements.

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## Completeness

Furthermore, NYCPS did not ensure that its published reports on applications, offers, and enrollment included all the required information. We found these reports, publicly published on NYCPS' website or NYC OpenData, a website with a variety of data from NYC agencies, did not always include the following information required under LL72, as detailed below.

- The Report on Enrollment for the 2019-20 and 2020-21 school years did not include the number of students who enrolled in pre-kindergarten, kindergarten, and sixth grade, by individual school. These reports included only the number of students enrolled for each community school district.
- The Report on Applications and Offers for the 2020-21 and 2021-22 school years did not include the number of anticipated seats available, applicants, and received offers for pre-kindergarten, kindergarten, and sixth and ninth grades, by individual school.

After we brought this to OSE's attention, NYCPS updated all four reports to include the previously omitted, required information.

NYCPS officials stated that some of the reports were missing data because those reports were posted on NYC OpenData rather than as a direct attachment on their website. Officials explained that NYCPS has had issues with posting information on NYC OpenData. All four reports that were missing data were only posted in one spot: NYC OpenData. We note that other reports posted elsewhere were complete. NYCPS used a combination of posting reports directly on their website and on NYC OpenData.

Timely and complete information is an important resource for families and those involved in the management and oversight of NYC's education system. The goal of the Local Law is to create greater transparency regarding the applications received by NYCPS for school seats, offers made, anticipated number of school seats available and student enrollment. Delays and incomplete information hinder the fulfillment of this goal.

## Scope Limitation

We perform our audits under generally accepted government auditing standards (GAGAS), which require us to obtain sufficient, appropriate evidence to support our audit findings. As part of that, we need to evaluate the reliability of that evidence, including testimonial evidence. GAGAS also requires us to evaluate whether circumstances adversely affect our ability to comply with GAGAS. A scope limitation—such as restrictions on access to records or excessive delays—would be considered a significant constraint that could potentially affect our ability to comply with GAGAS.

NYCPS explained that certain eligibility information used by MySchools—specifically, identifying information of students who are enrolled in the FRL program—is protected

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under federal privacy regulations and cannot be shared by NYCPS. To perform our audit within this constraint, we had to meet with NYCPS officials over several months (in part due to the lack of sufficient documentation) to develop specific and detailed audit procedures to work around NYCPS' confidentiality concerns. Many restrictions were imposed on our testing, such as lack of read-only access and the scrambling of student identifiers. As a result of these restrictions, we were unable to determine the reliability of this data. Significantly, NYCPS did not disclose timely and pertinent information regarding parental consent over certain student information. Despite numerous opportunities to be forthcoming, NYCPS did not disclose to auditors until late into fieldwork that, for the most recent matches, NYCPS had, in fact, received parental or guardian consent to use this data in the school match. Such information could have led to a significantly different testing environment. As a result, we could not fully assess or conclude on NYCPS' internal control activities related to MySchools. However, in our professional judgment, we are able to comply with GAGAS and can answer the audit objective question broadly (but not completely).

## Recommendations

1. Take action to improve management of the student-school matching algorithm to ensure students are appropriately identified to receive the admissions prioritization they are entitled to as noted throughout the report including, but not limited, to:
  - Students in temporary housing
  - Low-income students
  - Students who require manual placements
2. Develop and implement written policies and procedures for the matching process to ensure the consistent and appropriate treatment of students across the matching process in line with the Chancellor's Regulations and other relevant requirements.
3. Develop and implement written policies and procedures to ensure OSE is able to identify and resolve errors, in a consistent manner, as noted throughout the report including, but not limited to, risks related to the use of FRL data, assignment of lottery numbers to multiples, management of seat targets, and manual placements.
4. Develop analyses and procedures to improve the effectiveness of outreach provided to middle schools regarding students who have not yet applied and students who may be eligible for FRL.
5. Develop a formal complaint tracking process and procedures to monitor if complaints are appropriately resolved and systemic issues are identified.
6. Create policies and procedures that ensure complete and timely reports are publicly posted as required by Local Law 72 of 2018.

# Audit Scope, Objective, and Methodology

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The objective of our audit was to determine whether NYCPS adequately managed selected aspects of the admissions process and the student-school matching algorithm used in high school admissions. The audit covered selected high school admissions processes for school years 2018-19 through 2024-25.

To accomplish our objective and assess related internal controls, we reviewed NYC Local Law and NYCPS Chancellor's Regulations. We met with OSE and DIIT officials to obtain an understanding of their rules, policies and procedures, and their oversight of the matching process. Further, we reviewed matching iteration input and output files, seats files, manual placement files, and other relevant documents related to the matching process.

We used a non-statistical sampling approach to provide conclusions on our audit objective and to test internal controls and compliance. We selected judgmental samples. However, because we used a non-statistical sampling approach for our tests, we cannot project the results to the respective populations. Our samples, which are discussed in detail in the body of our report, include:

- A judgmental sample of 1,526 applicants (435 for the 2023-24 school year and 1,091 for the 2024-25 school year) out of 3,253 (1,421 for the 2023-24 school year and 1,832 for the 2024-25 school year) based on being listed as not being enrolled in the FRL program, based on the Student Snapshot output file, and based on whether pairs of students shared similar demographic information such as same borough or school zone to test for if they were multiples.
- A judgmental sample of three middle schools out of 469 NYCPS current middle schools, excluding District 75 middle schools, based on the average number of school programs selected by their students for the 2023-24 school year. We met with their respective guidance counselors and reviewed outreach emails sent to school principals.
- A judgmental sample of 39 students (19 from 2023-24 and 20 from 2024-25) out of 76 (19 for school years 2023-24 and 57 for 2024-25) who lived at the same address as another student that shared a lottery number but who had a different FRL status. These 39 students were selected because at least one of the students applied to a school program with a DIA priority and to confirm if the students who were not identified as FRL lived in the same household as another student who was enrolled in FRL, indicating both students were FRL eligible.
- A judgmental sample of 49 school programs that had seat target change of six or more seats out of 898 total school programs for school year 2023-24 to confirm if the rationale for the seat change was documented. We considered the materiality in seat changes and excluded school programs that had fewer than six seats changed.

We obtained data from MySchools and assessed the reliability of that data by interviewing officials knowledgeable about the system, receiving walkthroughs of system functionality and explanations of NYCPS' quality assurance process. We were unable to determine the reliability of this data and we have discussed the

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limitations of this data within the relevant sections of this report. However, as there was no other appropriate data and this is the data that NYCPS officials rely on, we used this data in conjunction with other audit evidence to support our findings. Certain other data in our report was used to provide background information. Data that we used for this purpose was obtained from the best available sources, which were identified in the report. Generally accepted government auditing standards do not require us to complete a data reliability assessment for data used for this purpose.



# Statutory Requirements

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## Authority

The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article III of the General Municipal Law.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. Even with the significant constraints NYCPS officials placed on our access to MySchools data (as discussed in the body of the report), we believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

As is our practice, we notify agency officials at the outset of each audit that we will be requesting a representation letter in which agency management provides assurances, to the best of their knowledge, concerning the relevance, accuracy, and competence of the evidence provided to the auditors during the course of the audit. The representation letter is intended to confirm oral representations made to the auditors and to reduce the likelihood of misunderstandings. Agency officials normally use the representation letter to assert that, to the best of their knowledge, all relevant financial and programmatic records and related data have been provided to the auditors. They further affirm either that the agency has complied with all laws, rules, and regulations applicable to its operations that would have a significant effect on the operating practices being audited, or that any exceptions have been disclosed to the auditors. However, officials at the New York City Mayor's Office of Operations have informed us that, as a matter of policy, mayoral agency officials do not provide representation letters in connection with our audits. Therefore, we lack assurance that the information provided to us during the course of our audit was reliable, accurate, and complete.

## Reporting Requirements

We provided a draft copy of this report to NYCPS officials for their review and formal comment. Their comments were considered in preparing this final report and are attached in their entirety at the end of the report. NYCPS officials generally agreed with the report's recommendations and indicated actions they have taken or will take to implement them. Our responses to certain NYCPS comments are embedded within NYCPS's response as State Comptroller's Comments.

Within 180 days after final release of this report, we request that the Chancellor of the New York City Public Schools report to the State Comptroller, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.



# Agency Comments and State Comptroller's Comments

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**Daniel Weisberg**  
*First Deputy Chancellor*

June 11, 2025

Thomas P DiNapoli  
State Comptroller  
Office of the New York State Comptroller  
Division of State Government Accountability  
110 State Street, 11<sup>th</sup> floor  
Albany, NY 12236

**Re: Management of the Student-School Matching Algorithm (2022-N-7)**

Dear Mr. DiNapoli,

This letter constitutes the formal response of the New York City Public Schools (NYCPS) to the recommendations made by the Office of the State Comptroller (Comptroller) in its draft audit report on the Management of the Student-School Matching Algorithm (Report). This response comes at the culmination of over two years working closely with the Comptroller's auditors, including many virtual and in-person meetings to explain the intricacies of the matching processes and data.

**State Comptroller's Comment** – On pages 27–28 of our report (under “Scope Limitation”), we describe in detail the circumstances and constraints, including restrictions on access to records and delays, that impacted our ability to completely answer our audit objective.

Though we might disagree with some of the observations and conclusions noted in the draft report, we agree that most of the recommendations are sound and reflect the work that has gone into this audit on both sides.

We are committed to ensuring an accurate implementation of the matching algorithm used in all centralized admissions processes (3K, Pre-K, Kindergarten, Gifted & Talented, Middle School, High School, and Summer Rising) that supports equitable school access for all students, including low-income students and students in temporary housing. This commitment includes ensuring that the process is clear and understandable to families, that students receive the accurate level of priority for all programs on their application, that the match runs consistent with the algorithm that it employs, and that the results are shared with the public to provide better understanding of high-level outcomes.

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1

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The match audit, performed annually by a team affiliated with MIT Blueprint Labs, mentioned in the report, is one way that NYCPS ensures accuracy in the implementation of the match. Among the steps that are followed by MIT to confirm accuracy and completeness in the implementation of the match—which are not discussed in the report—are procedures designed to look for missing data and duplicates, and procedures designed to evaluate NYCPS’ rankings of students applying to selective programs.

**State Comptroller’s Comment** – According to MIT and NYCPS officials, MIT only received anonymized student data rather than identifying data such as student names and dates of birth. As a result, MIT’s testing was more limited than described. For instance, it’s unclear how MIT’s testing could identify if a single student was processed multiple times—a different problem than simply identifying if a student’s ID is processed more than once. Further, we note that NYCPS officials were aware of instances where a student can be processed multiple times, such as when a student has multiple student ID numbers. However, since NYCPS only provided us with anonymized data, we could not test for such instances.

Further, regarding the claim that there is no formal agreement between MIT Blueprint Labs and NYCPS that explains the services provided, the match audit memos that memorialize this annual process explain the agreement and reference the goal of the audit.

**State Comptroller’s Comment** – The match audit memos were prepared after services were already provided and do not fully explain the agreement between MIT Blueprint Labs and NYCPS. For example, not all services, such as feedback during the matching process on implementation of the algorithm, were detailed in the memos provided. Without adequate documentation, it is not clear what testing NYCPS requested MIT to perform. As a result, there is a lack of assurance that the match audit memos contain the entirety of services agreed upon as well as the nature of the agreement.

**Response to Recommendations:**

**Recommendation 1:** *Take action to improve management of the student-school matching algorithm to ensure students are appropriately identified to receive the admissions prioritization they are entitled to as noted throughout the report including, but not limited, to:*

- *students in temporary housing*
- *low-income students*
- *and students who require manual placements*

**Response:** NYCPS agrees with this recommendation in that we already have robust systems in place to ensure students receive the admissions prioritization to which they are entitled, and that students who require manual placements receive them.

- Serving Students in Temporary Housing (STH) is a priority for NYCPS, and many measures are taken to ensure that this population receives appropriate support while

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navigating the admission process. Our efforts have shown to be productive since STH outperforms the broader population in terms of match outcomes. For example, for fall 2024 admissions, 97% of STH received an offer to an application choice compared to 95% overall. We have seen similar trends (at times even more pronounced) since 2018. Additionally, on average, STH match to more preferred choices. For fall 2024 admissions, STH matched to a median application choice number of 1.9, compared to 2.3 for the overall population.

**State Comptroller's Comment** – NYCPS' response misses the substance of the audit finding. Our audit found that students in temporary housing, such as homeless students, are entitled to additional priorities that were not appropriately considered. As noted on page 13 of our report, NYCPS did not provide data regarding outcomes for students in temporary housing to support its conclusion. Regardless, the percentage of offers does not indicate that students in temporary housing are receiving the priorities when they apply to their preferred school programs, as required by NYCPS' Regulations and policies. While NYCPS responded by listing methods to update address information, both the current location and the prior location of the students in temporary housing need to be considered, which requires NYCPS to take additional steps.

Our efforts to support STH include:

- Partnering with shelter-based staff by sharing reports that highlight what step of the admission process each student is at during the application period and compiling written offer letters for these students to minimize the impact of limited internet access.
- Having a dedicated central team that supports this population, as well as making sure our Family Welcome Centers and call center teams are well-versed in the requirements of the McKinney-Vento Act, related state law and Chancellor's Regulations. These resources ensure that STH are supported regardless of how they interact with the admissions process.
- In cases where a student's address in MySchools does not reflect the priority that they should receive, there are processes in place to ensure that STH receive the geographic priorities they are entitled to under the McKinney-Vento Act.

**State Comptroller's Comment** – It is unclear which processes NYCPS deploys to ensure students in temporary housing receive the appropriate geographic priorities. NYCPS explains that its dedicated enrollment team and its partnership with shelters can help update address information. However, as we note on page 13, NYCPS does not use available shelter data for matching purposes. Furthermore, as discussed on pages 13–14, NYCPS' matching process does not consider more than one address for a given student. However, NYCPS' Regulations require consideration of both where a student is currently living and where the student is currently attending school (which may be different areas for students in temporary housing).

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The supports mentioned above (dedicated Central enrollment team, partnerships with shelter-based staff) help families update information that has changed, including their addresses, with the goal of obtaining the most accurate results for our students. NYCPS is thus working closely with support staff and families to ensure students receive the priorities to which they are entitled. When an updated placement is needed, NYCPS coordinates with the relevant teams to ensure that students can attend school in an appropriate location. This happens regularly but is less common for the high school admissions process, which involves fewer geographic priorities. In future years, NYCPS will consider doing a new type of direct outreach to ensure STH know the full extent of their geographic priorities (i.e., NYCPS will provide guidance to shelter and/or school staff advising them to check with STH to confirm the geographic priority is correct).

- Low-income students comprise another group that NYCPS has taken great efforts to prioritize in admissions over the past decade, and this population now receives priority at over 50 high school programs that participate in Diversity in Admissions. This priority is based on the best available data which, for many students, is their response to the Family Income Inquiry Form. Our focus remains on serving as many eligible students as possible with the tools and data currently available.
  - In some cases, students living in the same household have different low-income eligibility determinations. This is typically when students attend different schools, when schools have different home addresses listed, and when students are on the same form, but one student is determined as free through direct certification and the other is not. These nuances exemplify the complexity of some of the data elements that are used to assign students their low-income status.
  - NYCPS has a process to identify inconsistencies in student eligibility when such students appear on the same Family Inquiry Form but have different eligibility. NYCPS conducts outreach to schools and families to review data inconsistencies in the Student Information Systems, ATS and NPSIS, and when appropriate makes the necessary corrections.

**State Comptroller's Comment** – While NYCPS responded that a process exists, our report noted that NYCPS' process did not identify all students with missing or outdated information (see page 16). Critically, that process does not directly notify parents of this deficiency. Furthermore, NYCPS' response mentions a different process based on how students appear on a shared Family Inquiry Form; however, this process was not disclosed during the audit.

- NYCPS ensures that all 8th graders receive an offer to high school each year, assigning manual placements where necessary. In some cases, students transfer into or out of NYCPS

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during their 8th grade year, which can result in offers being given out later in the spring or summer. However, NYCPS continues to check throughout the spring, summer, and early fall to ensure that all active 8th graders have an assigned school for high school.

**Recommendation 2:** *Develop and implement written policies and procedures for the matching process to ensure the consistent and appropriate treatment of students across the matching process in line with the Chancellor's Regulations and other relevant requirements.*

**Response:** NYCPS agrees with this recommendation in that we recognize the value of strengthening internal documentation. While we already maintain thorough and well-documented policies and procedures for many aspects of the high school admissions process, we acknowledge that there are specific areas where internal guidance can be documented in writing to ensure consistent application of the Chancellor's Regulations and other relevant requirements.

**State Comptroller's Comment** – NYCPS' response that thorough and well-documented policies and procedures exist for many aspects of the high school admission process implies that certain aspects are not thorough and well-documented, which is consistent with what the audit found. As noted on pages 23–24 of our report, we found a lack of policies and procedures related to the management of the high school matching process.

We will develop and formalize written procedures for several key components of the matching process, including:

- Multiples identification process
- Criteria and procedures for identifying students for manual placement
- Guidelines for making manual adjustments to placements
- Procedures for updating and adjusting seat targets
- Criteria for determining student priority to Diversity in Admissions programs

Additionally, NYCPS maintains a comprehensive, family-facing website that outlines key policies and procedures. This site is updated regularly to ensure that families and school staff have access to accurate and timely information. Where appropriate, we will adapt and share these newly documented procedures in a family-friendly format to further promote transparency and understanding.

**Recommendation 3:** *Develop and implement written policies and procedures to ensure NYCPS is able to identify and resolve errors, in a consistent manner, as noted throughout the report including, but not limited to, risks related to the use of FRL data, assignment of lottery numbers to multiples, management of seat targets, and manual placements.*

**Response:** NYCPS agrees with this recommendation in that we already have established processes in place to identify and resolve errors in a consistent manner. However, we recognize

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5

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the value of further strengthening our internal documentation to enhance clarity and ensure alignment across all procedures. As noted in our response to Recommendation #2, we are in the process of developing additional written policies and procedures that will formalize and codify existing practices—particularly those related to the use of FRL data, assignment of lottery numbers to multiples, management of seat targets, and manual placements.

**State Comptroller's Comment** – While we acknowledge NYCPS' intent to formalize existing processes, our audit found NYCPS' existing processes were not sufficient to consistently identify and resolve the errors NYCPS lists in its response. NYCPS should take additional steps to create procedures that identify and resolve the types of errors identified in our report.

**Recommendation 4:** *Develop analyses and procedures to improve the effectiveness of outreach provided to middle schools regarding students who have not yet applied and students who may be eligible for FRL.*

**Response:** NYCPS agrees with this recommendation in that we already conduct extensive and effective outreach to middle schools to support students who have not yet applied and those who are missing FRL data. NYCPS sends weekly completion reports to middle school principals beginning approximately one month prior to the high school application deadline. These reports include application submission rates for each school's 8th grade students. In addition, completion reports are shared with superintendents, which inform them of the submission rates for each school within their district. After the application deadline has passed, NYCPS sends a final completion report to each principal, listing students who have not yet submitted an application along with instructions for submitting late applications. Each year, a high percentage of 8th grade students enrolled in NYCPS District 1–32 schools successfully submit a high school application, reflecting the impact of these efforts. For the past 3 years, 98%+ of 8th graders submitted high school applications. During this year's admissions cycle, less than 1% of students across the city did not submit one. Note that this includes all 8th graders in D1-32 schools who were enrolled as of Audited Register (10/31) and still enrolled when we ran the HS match in March.

Additionally, NYCPS emails each principal a list of students who applied to any program that prioritizes students eligible for FRL but are missing income information – specifically, students who have not yet completed the income inquiry form.

**State Comptroller's Comment** – While NYCPS responded that a process exists, our report noted that NYCPS' process did not identify all students with missing or outdated information (see page 16). Critically, that process does not directly notify parents of this deficiency. Furthermore, NYCPS' response mentions a different process based on how students appear on a shared Family Inquiry Form; however, this process was not disclosed during the audit.

This is information that families readily see on their profile when they login to MySchools, and there is information on that webpage that provides guidance to the families on how to update any incorrect information.

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**Recommendation 5:** *Develop a formal complaint tracking process and procedures to monitor if complaints are appropriately resolved and systemic issues are identified.*

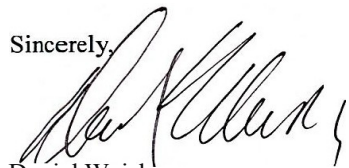
**Response:** NYCPS will take this recommendation under advisement. We currently have internal procedures in place to manage the HS Enrollment inbox and ensure that all emails receive a timely response, and while other key points of contact (Family Welcome Centers and call centers) use a case management system to track all phone calls and in-person visits, we acknowledge the value of further formalizing our complaint tracking processes.

Many of the emails we receive from families and school staff are general questions about the process or requests for assistance or clarification and may not be classified as formal complaints. However, these emails can sometimes contain concerns about outcomes that may warrant further review. We recognize the need for a more systematic approach for flagging and tracking these types of concerns to ensure they receive a timely and appropriate response.

NYCPS is currently exploring ways to introduce a new inbox management system that supports the categorization of emails, assignment to the appropriate staff, and tracking the timeliness and final resolution of our responses.

**Recommendation 6:** *Create policies and procedures that ensure complete and timely reports are publicly posted as required by Local Law 72 of 2018.*

**Response:** As written, we cannot comply with this recommendation. The compliance date specified in Local Law 72 back in 2018 was reasonable given the scope of the report and timelines in place at that point. Since then, the admissions and enrollment processes have changed in ways that make it impossible for NYCPS to comply within the specified requirements. Specifically this is due to the fact that (a) pre-K offers have come out after May 15<sup>th</sup> four times since 2018 (the date on which one of the reports is due), (b) NYCPS added in 3K outcomes to the report, since this processes was introduced after 2018, and 3K offers go out after May 15<sup>th</sup> each year, and (c) final enrollment data, which used to be available around February during a given school year, is now not available until ~July, well after the March 15<sup>th</sup> compliance date for the other report. NYCPS will engage with City Council on adjusting the required compliance timelines.

Sincerely,  


Daniel Weisberg  
First Deputy Chancellor

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7



# Contributors to Report

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## Executive Team

**Andrea C. Miller** - *Executive Deputy Comptroller*

**Tina Kim** - *Deputy Comptroller*

**Stephen C. Lynch** - *Assistant Comptroller*

## Audit Team

**Kenrick Sifontes** - *Audit Director*

**Joseph Gillooly** - *Audit Manager*

**David Schaeffer** - *Audit Manager*

**Daniel Zimmerman** - *Audit Innovation Manager*

**Yanfei Chen** - *Audit Innovation Supervisor*

**Allison Dillon** - *Examiner-in-Charge*

**Erik Dorfler** - *Examiner-in-Charge*

**Jeffery Herrmann** - *Information Systems Auditor*

**Jonathan Julca** - *Information Systems Auditor*

**Taofeek Raheem** - *Information Systems Auditor*

**Ariadna Onibokun** - *Graphics Editor*

**Mary McCoy** - *Supervising Editor*

## Contact Information

(518) 474-3271

[StateGovernmentAccountability@osc.ny.gov](mailto:StateGovernmentAccountability@osc.ny.gov)

Office of the New York State Comptroller

Division of State Government Accountability

110 State Street, 11th Floor

Albany, NY 12236



For more audits or information, please visit: [www.osc.state.ny.us/state-agencies/audits](http://www.osc.state.ny.us/state-agencies/audits)