

Milwaukee Public Schools

# An Assessment of Substitute Teachers

District-Wide Assessment of Substitute Teachers per the Action of the  
Milwaukee Board of School Directors

Office of Accountability and Efficiency  
2-20-2018

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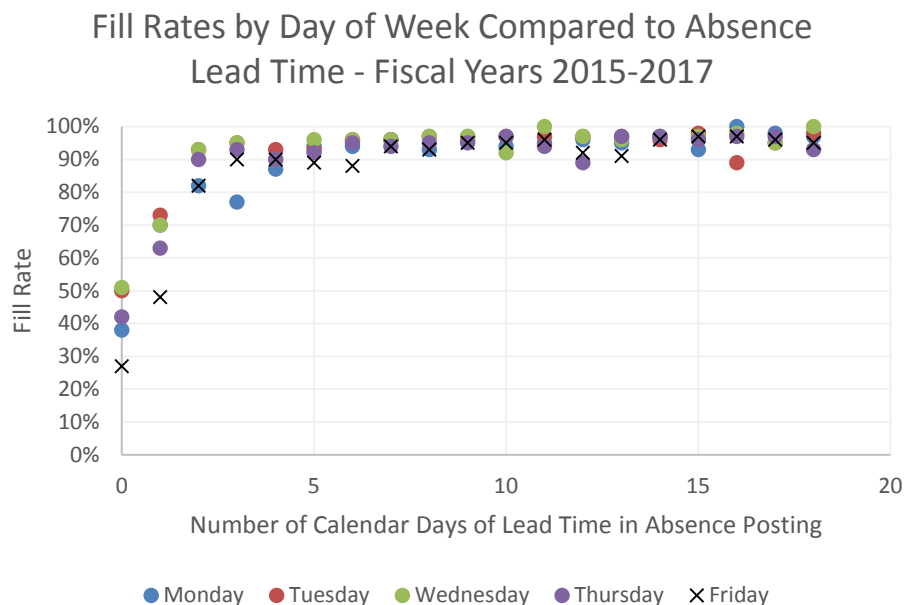
## Executive Summary

At its November 2017 meeting, the Milwaukee Board of School Directors adopted Resolution 1718R-007 by Director Bonds Regarding a District-Wide Assessment of Substitute Teachers. The Board directed the Office of Accountability and Efficiency to examine trends, utilization, and practices.

This analysis sought to satisfy the resolution in its details and its intent. Specifically, the analysis reviewed practices, available absence and substitute teacher data as they relate to absenteeism and substitute fill rates, and a review of scholarly work on the topic.

Findings from the analysis revealed trends that show increasing teacher absenteeism and an associated increase in the hours paid to substitute teachers. There is also evidence of decreasing fill rates over the same period. A key factor in the need and use of substitute teachers is the fact that absences coded as teacher position vacancies make up nearly 40% of the transactions for substitute teachers. While the District makes use of a substitute employee management system (SEMS), a best practice, the match rates between the recorded teacher absences and those that appear in the SEMS are 60%.

However, the data bears out what is suggested in the literature. **The largest determinant of an absence being filled by a substitute teacher may be the lead time with which the opportunity to substitute is communicated to substitutes in the available pool.** The association to lead time is so strong that even Friday absences are filled at rates above 80% with 3 days of lead time and a rate of nearly 90% with 4 days of notice.



While many alternatives are being explored to improve teacher absence fill rates, the strength of this association and its implications for potential solutions should not be overlooked.

## Introduction

If we define absence as “the lack of physical presence at a behavior setting when and where one is expected to be” (Harrison & Price, 2003) we can begin to examine the fundamental basis for the use of substitute teachers, namely, a teacher absence. Regular teachers typically take an absence approximately ten times per school year, which is higher than comparable professionals who take only three sick days during an equivalent period (Roza, 2007). There has been some research that suggests a number of the absences taken by teachers are discretionary in nature (Ehrenberg, Ehrenberg, Rees, & Ehrenberg, 1991).

Unfortunately, definitive causal relationships that explain teacher absences are sparse in the literature. According to Shapira-Lishchinsky (2009):

While absenteeism has received considerable attention in private sector organizations, teacher absence has been studied relatively little. The dearth of research on its causes is unfortunate because of the possible effects of teacher absence (Shapira-Lishchinsky & Rosenblatt, 2009).

Causality notwithstanding, teacher characteristics correlated with absences and their potential to be predictive measures of absences have been studied and include prior absenteeism, age, education, and supervisory position (Rosenblatt & Shirom, 2005). Absenteeism of individual teachers can even be associated with the attendance of that teacher’s peers (Bradley, Green, & Leeves, 2007). Further, the quality of the geographical location of a school is strongly associated with teacher absenteeism and the requisite need for substitute teachers (Bruno, 2002). Several studies also suggest the role of stress, burnout, and depressive symptoms in teacher absenteeism cannot be overlooked (Beer & Beer, 1992; Mearns & Cain, 2003; Steinhardt, Smith Jaggars, Faulk, & Gloria, 2011).

Policy and institutional factors have also been shown to be associated with teacher absences whether they be allowances under the Family and Medical Leave Act (Wyld, 1995), opportunities for professional development and training (Calkins, 1989), or simply the availability of a bank of sick-leave and personal-time from which to draw while absent (Platt, 1987). Higher usage of sick leave has been associated with the presence of large banks of sick leave and a high annual allotment of sick time (Ehrenberg, Ehrenberg, Rees, & Ehrenberg, 1991).

However, work to categorize absences in the workplace yields an approach that helps to break the problem into more manageable and quantifiable dimensions. One can examine teacher absences as those that are under the teacher’s control (voluntary) and those that are not under the teacher’s control (involuntary) (Chadwick-Jones, Brown, Nicholson, & Sheppard, 1971; Steel, 2003).

While definitive causality of teacher absences is less known, the body of work on the impact of teacher absences is more developed. The effects range from reductions in student motivation and possible increased student absenteeism (Ehrenberg, Ehrenberg, Rees, & Ehrenberg, 1991; Imants & Zoelen, 1995), to lower student achievement via interruptions in students’ instruction (Woods & Montagno, 1997). Lastly, absences contribute to additional direct (Dalton & Mesch, 1991) and indirect costs (Dansereau, Alutto, & Markham, 1978) to an organization.

Having reviewed the substitute teacher equation from the demand-side of teacher absences, we examine the factors associated with substitute teacher labor supply. It is helpful to decompose the supply side into two parts: the total availability of substitute teachers, and the decisions of substitute teachers to accept opportunities.

Considering then the total availability of substitute teachers, school districts across the United States have been experiencing a shortage of substitute teachers since as early as 1999 (Candisky, 1999; Mueller, 1999; Sahagun, 1999). The reasons to pursue employment as a substitute teacher are diverse and even once one is added to an available substitute pool, a large percentage of substitute teachers move on to other jobs requiring administrators to engage in constant replenishment efforts (Wyld, 1995). Strategies to address increasing the substitute teacher pool size have included increasing pay, offering benefits or bonuses, and hiring “permanent” substitutes despite little peer reviewed analysis of their efficacies (Rogers, 2001).

We now examine the decision-making process of substitute teachers once they have entered an available substitute pool. Knowing the preferences of substitute teachers is important if one is to attempt to satisfy the demand caused by teacher absences and the impact unfilled absences have on a local school (Gershenson, 2012). Importantly, preferences must be examined in the context of two central questions: How are opportunities to obtain assignments communicated to substitute teachers, and is the decision to select or not select one of consequence to the substitute teacher (Coverdill & Oulevey, 2007).

Some determinants of this decision-making process include the amount of time between notification of an opportunity and its actual date (lead time), the time to commute to the location, day of the week, classroom type, the type of school, and school quality (Gershenson, 2012). Where automated substitute teacher management systems are used, Coverdill finds three emergent patterns:

- (1) substitutes shape the timing and content of assignments through strategic use of relationships with teachers and the automated system;
- (2) the automated system curbs ascription by providing assignments independent of relationships; and
- (3) substitutes view assignments secured through relationships as better and more satisfying (Coverdill & Oulevey, 2007).

We believe it important to consider organizational and local school support of substitute teachers in this analysis as “[t]he responsibility for improving substitute teaching should be shared between the teacher-training institution and the school system” (Parson & Dillon, 1980-81). Literature suggests that outcomes and job satisfaction of substitute teachers can be improved with training (Peterson, 1991). Additionally, standardization in the form of resources offered to each substitute from each school is helpful, including school specific information from the office and classroom specific items from the teacher (Augustin, 1987).

## Methods

### Data

Data was gathered from the following District organizational assets.

- Human Resources/Payroll System (Peoplesoft)
- Substitute Employee Management System (AESOP)
- Data Warehouse (DW)

### Sample

#### Peoplesoft

The sample included teacher recorded absences and substitute teacher pay in Peoplesoft. The sampling includes fiscal year 2015 through fiscal year 2017 which reflects the migration date from a legacy reporting system to the current Peoplesoft Time and Labor module. While teacher recorded absences exist in Peoplesoft prior to this date, changes in coding and in recording practice make comparisons before and after this date slightly dubious.

Include:

- Teacher union codes
- Teacher, Teacher-in-Charge, and Intern teacher job family codes
- Traditional schools and Instrumentality charters

Exclude:

- Absences recorded as "Vacation Payout"
- Summer school
- Hourly staff
- Absence records recorded as "HIST" reflecting corrected absence entries whose inclusion would otherwise overstate activity.

#### AESOP

The sample included absence event activity recorded in AESOP. The sampling includes fiscal year 2015 through fiscal year 2017 which reflects the begin date of that system.

Include:

- Teacher worker types
- Traditional schools and Instrumentality charters

## Data Warehouse

The sample included school location information recorded the Data Warehouse.

Include:

- District reporting locations

Exclude:

- Non-instrumentality and partnership schools

## Measures

### *Teacher Absence Rate*

Teacher absences are recorded as absence transactions in Peoplesoft. The teacher absence rate is the total hours recorded as absent divided by the total hours scheduled to work based on the effective entry date of the job and the position's pay calendar.

### *Teacher Absence Fill Rates*

Absence events are recorded in AESOP and can be coded as one of two types: (1) Fill Needed, or (2) Fill Not Needed. The absence event can then be coded as having been: (1) Filled, or (2) Not filled. The teacher absence fill rate is the total teacher absence events that are coded Filled Needed and Filled divided by the total teacher absence events that are coded Fill Needed.

### *AESOP Absence Event Lead Time*

Absence events are recorded in AESOP with an entry date of the transaction into the system and can be entered in advance of the actual absence date. The number of calendar days between the entry date (also, the earliest visibility to substitute teacher for selection) and the absence date is the lead time of the absent event.

### *Teacher Position Vacancy and Teacher Position Vacancy Rate*

Teacher absence events are recorded in AESOP and can be coded as of type Vacancy Position. This is unique from other types in that it indicates an event for which a budgeted position has not been assigned a teacher rather than an event for which a teacher is assigned but merely absent. The corresponding rate is the percentage of all AESOP teacher absence events coded as Fill Needed and marked as Vacancy Position.

#### *Teacher Absence to AESOP Event Match Rate*

Teacher absence records are recorded in Peoplesoft and are related to the teacher absence events recorded in AESOP. Accordingly, testing for the presence of an AESOP absence event for each recorded teacher absence in Peoplesoft can be a measure of procedural fidelity and reveal hidden control weaknesses. The match rate is simply the percentage of Peoplesoft Absence records that have a matching AESOP absence event record.

#### *AESOP Event to Teacher Absence Match Rate*

Conversely, this match rate tests the percentage of the AESOP absence event records that have a matching Peoplesoft Absence record.



## Analyses and Results

### *Teacher Absence Rate*

The rates at which teachers are absent has increased each fiscal year moving from 6.2% in fiscal year 2015 to 6.7% in fiscal year 2017. Total absence hours have increased despite consistent numbers of teachers (see Table 1). All school groups saw an increase in absence rate with Middle Schools seeing the largest increase (6.4% to 7.5%, see Table 2).

*Table 1*

*Summary of Teacher Absences for Fiscal Years 2015-2017*

Measure	2015	2016	2017
Count of Teachers	4,698	4,737	4,696
Total Hours Teachers Absent	420,954	435,227	450,930
Teacher Absence Rate	6.2%	6.4%	6.7%

*Table 2*

*Summary of Teacher Absences by Group for Fiscal Years 2015-2017*

Group	2015	2016	2017
Elementary School	5.9%	6.2%	6.4%
Elementary/Secondary Combined	6.8%	6.3%	7.3%
High School	6.9%	7.1%	7.0%
Middle School	6.4%	6.6%	7.5%
District Wide	6.2%	6.4%	6.7%

An increase in absence rate was observed across nearly all demographic groups from fiscal year 2015 to fiscal year 2017 (see Table 3).

*Table 3*

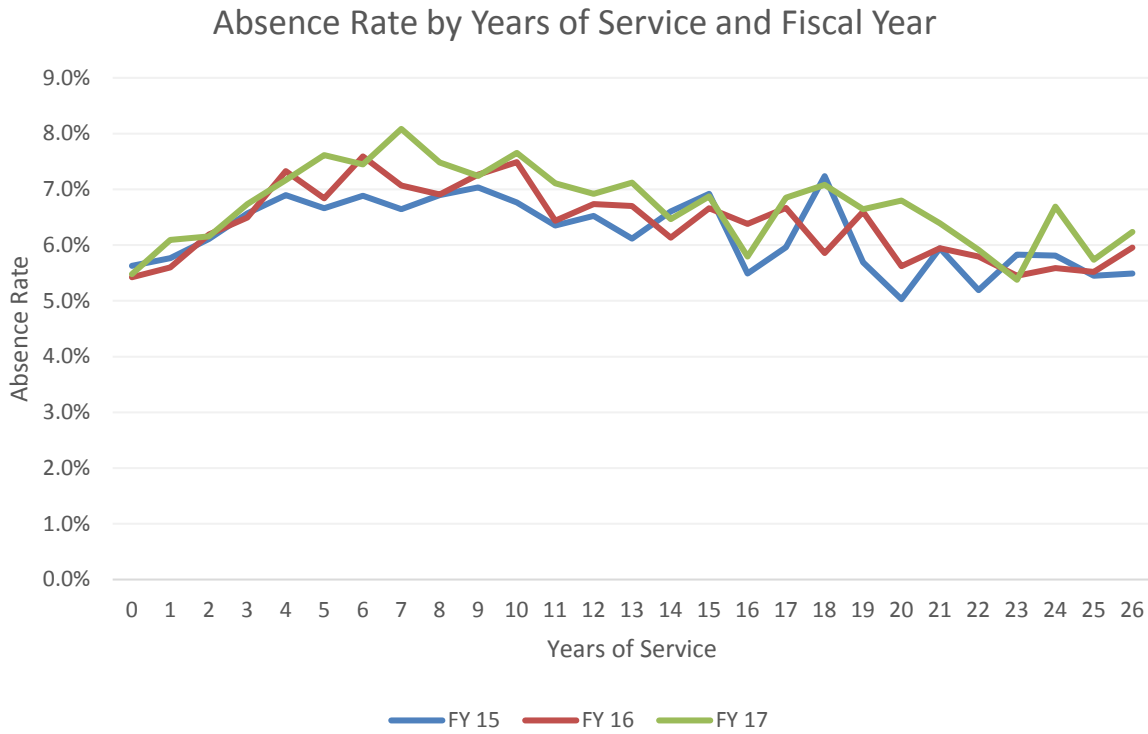
*Summary of Teacher Absences by Demographic for Fiscal Years 2015-2017*

Demographic	2015		2016		2017	
	# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
White	3262	6.0%	3289	6.1%	3243	6.5%
African American	812	7.2%	795	7.4%	789	7.6%
Hispanic	419	6.1%	433	6.5%	428	6.5%
Asian	99	6.1%	102	6.3%	109	6.0%
Not Specified	63	5.6%	67	5.9%	67	6.3%
Native American	25	5.9%	25	7.8%	22	7.6%
Multiple	16	4.8%	25	7.3%	36	7.1%
Pacific Islander	2	22.9%	1	4.6%	2	4.6%
Total	4698	6.2%	4737	6.4%	4696	6.7%

The absence rate of teachers rises with years of service before plateauing and decreasing thereafter. With few exceptions, the absence rate across all years of service was highest in fiscal year 2017 (see Figure 1).

Figure 1

Summary of Teacher Absences by Years of Service for Fiscal Years 2015-2017



### Teacher Absence Fill Rates

Teacher absence fill rates have decreased every year moving from a district-wide fill rate of 85% in fiscal year 2015 to 82% in fiscal year 2017. Elementary and Middle schools all saw decreases over this period with Middle Schools experiencing the largest decrease (84% to 77%). High school and Elementary/Secondary Combined fill rates have remained relatively constant in the same period (see Table 4).

Table 4

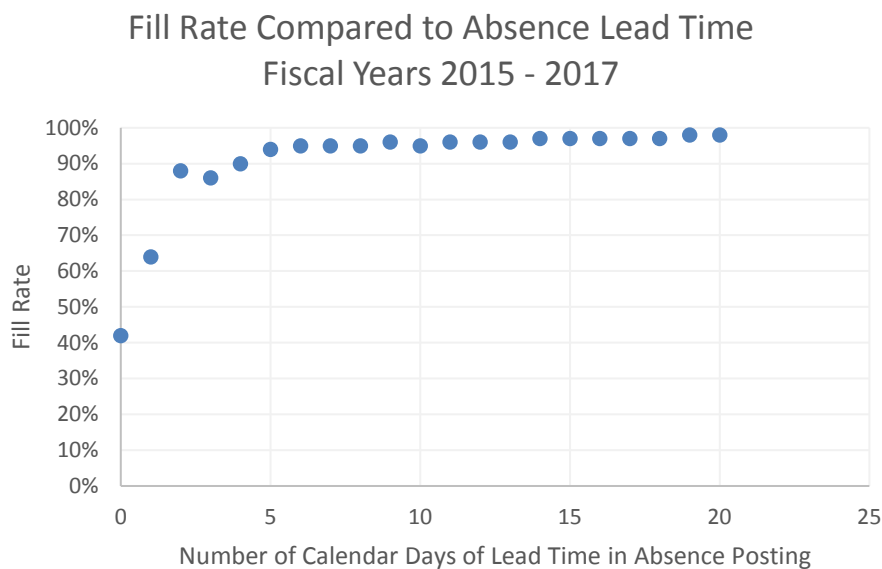
Teacher Absence Fill Rates by Group for Fiscal Years 2015-2017

Group	2015	2016	2017
Elementary School	82%	79%	78%
Elementary/Secondary Combined	89%	89%	88%
High School	92%	92%	91%
Middle School	84%	78%	77%
District Wide	85%	83%	82%

When comparing the lead time in calendar days with which an absence is known and posted in AESOP we see the fill rates near 40% when the absence is posted the same day. The fill rate approaches 90% when the lead time is 4 days and asymptotically approaches 100% thereafter (see Figure 2).

Figure 2

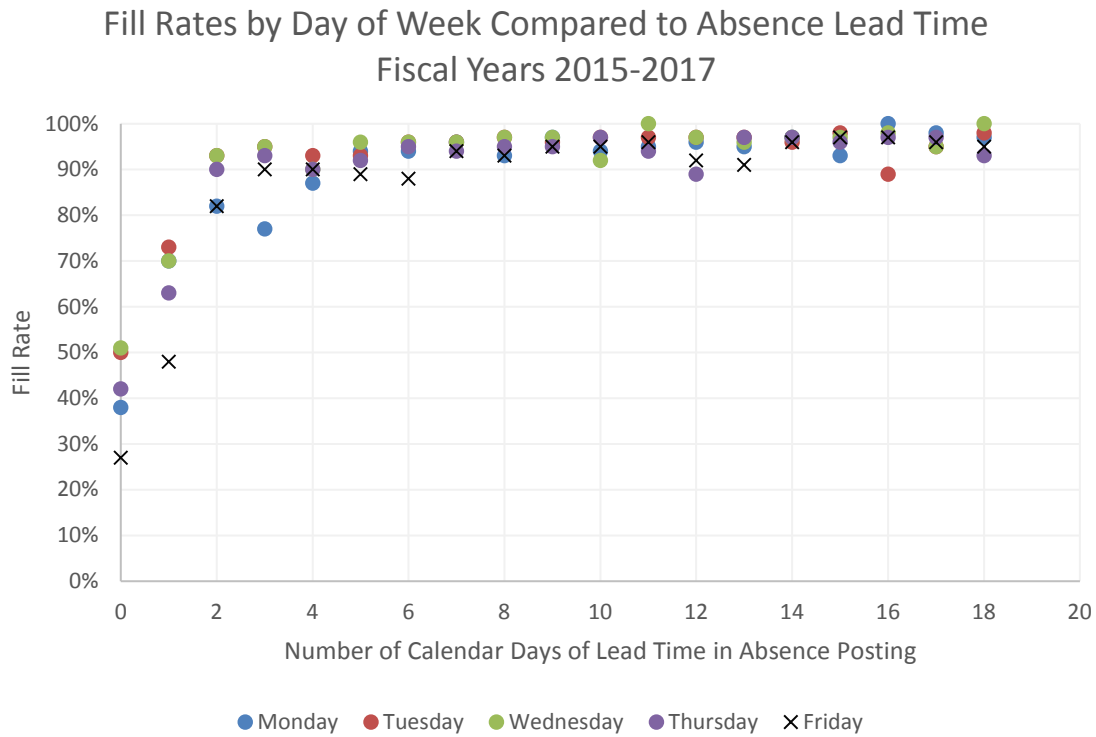
Comparing the Fill Rate of an Absence to its Posting Lead Time



Disaggregating the association of fill rate to lead time in calendar days by day of the week reveals fill rates that range from 30% to 54% with no lead time, depending on the day of the week. These differences in fill rates between days of the week shrink as the days of lead time increase and the fill rate of each approximates each other within 4 days of lead time (see Figure 3)

Figure 3

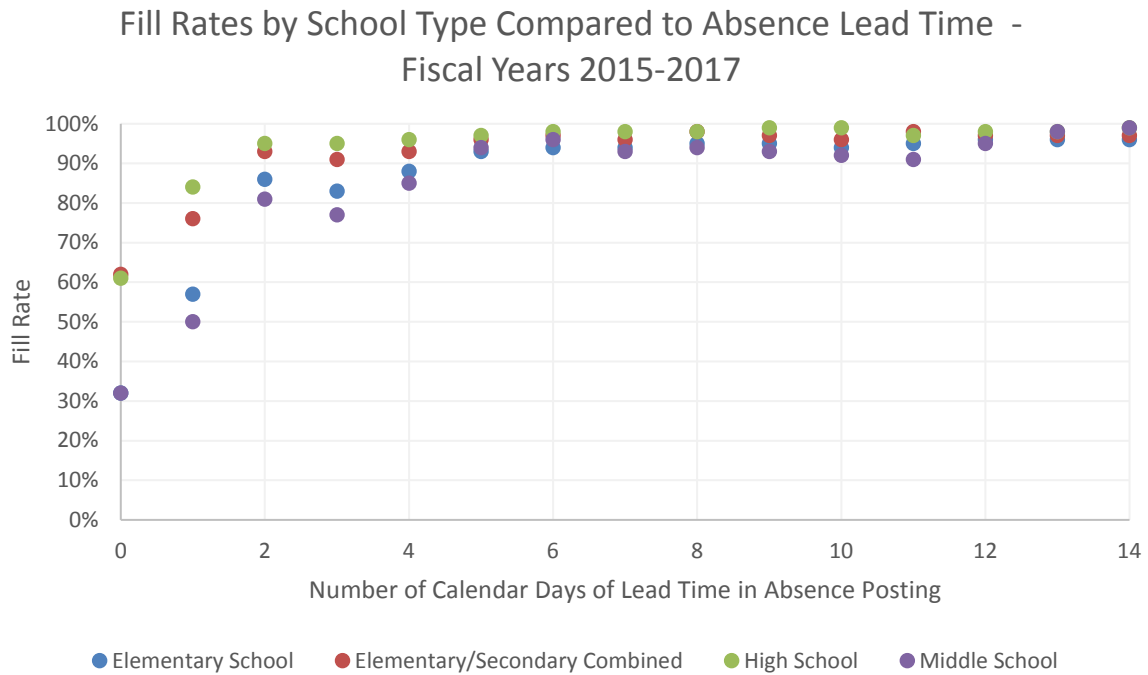
Comparing the Fill Rate of an Absence by Day of Week to its Posting Lead Time



Disaggregating the association of fill rate to lead time in calendar days by school type reveals fill rates that range from 32% to 62% with no lead time, depending on the school type. These differences in fill rates between school types shrink as the days of lead time increase and the fill rate of each approximates each other within 5 days of lead time (see Figure 4)

Figure 4

Comparing the Fill Rate of an Absence by School Type to its Posting Lead Time



### Teacher Position Vacancy and Teacher Position Vacancy Rate

The rates at which AESOP absence events are labeled as position vacancies has increased since fiscal year 2015 with a district-wide rate of 28% in fiscal year 2015 and a rate of 39% in fiscal year 2017. All groups saw an increase with Middle Schools seeing the largest increase (31% to 44%) over the same period (see Table 5).

Table 5

Teacher Position Vacancy Rates by Group for Fiscal Years 2015-2017

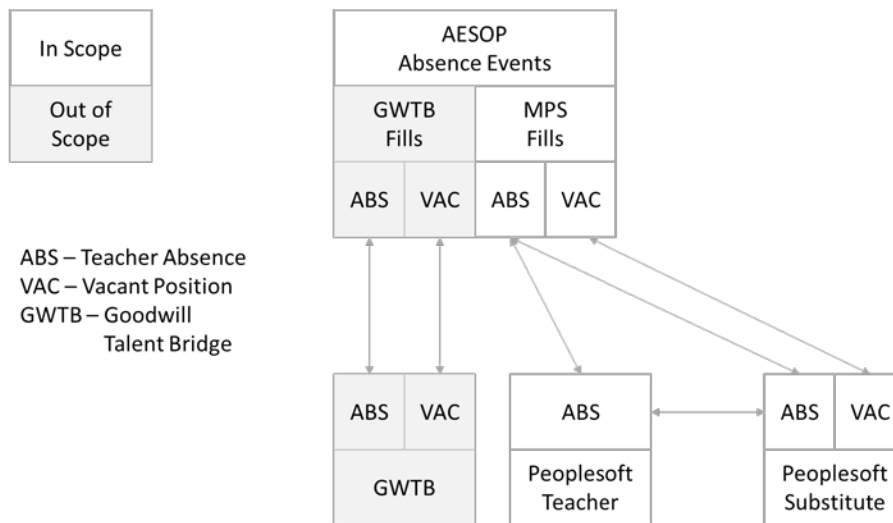
Group	2015	2016	2017
Elementary School	24%	31%	36%
Elementary/Secondary Combined	20%	38%	37%
High School	42%	43%	49%
Middle School	31%	41%	44%
District Wide	28%	35%	39%

### Transaction Match Rates

Reconciling the transactional activity between each of the systematic parts in the process provides measures of procedural fidelity and possibly hidden control weaknesses. Not unlike the three-way match that one tests in accounts payable, (purchase order, invoice, payment), the substitute system should reconcile a teacher absence, absence event, and payment to substitute. Figure 5 presents a system diagram and paths of reconciliation.

Figure 5

Paths of System Reconciliation in the Absence Process



*AESOP Event to Teacher Absence Match Rate (AESOP Match Rate)*

The rates at which AESOP absence events match corresponding Peoplesoft absence records has remained above 90% since the inception of the AESOP system (see Table 6).

*Table 6*

*AESOP Event to Teacher Absence Match Rates in fiscal years 2015-2017*

Measure	2015	2016	2017
Total Teacher AESOP Events	30,001	37,291	44,983
AESOP Match Rate	92%	96%	94%

*Teacher Absence to AESOP Event Match Rate (Teacher Absence Match Rate)*

The rates at which Peoplesoft absence records match corresponding AESOP absence events has increased every year but has not exceeded 60% since the inception of the AESOP system (see Table 7).

*Table 7*

*Teacher Absence to AESOP Event Match Rates in fiscal years 2015-2017*

Measure	2015	2016	2017
Total Teacher Absences	79,078	83,885	86,323
Teacher Absence Match Rate	56%	58%	60%



## Discussion

There are key findings:

- The strength of the association between absence lead time and fill rates needs to be further explored. Disaggregation by school level, individual school, fiscal year, etc. will reveal if this factor by itself explains most of the fill rate variation seen across the district. With four calendar days of lead time, fill rates exceed 90% district-wide in aggregation.
- 40% of the teacher absences recorded in Peoplesoft do not have a corresponding transaction in AESOP. This low match rate should be investigated further to determine if procedures are not being followed, controls should be added, or if a separate unknown process is occurring.

The analysis contains the following limitations:

- All absence types were included. While this allows for disaggregation later, the inclusion of absences for professional development and other district mandated events, to the extent they exist, is reflected in the teacher absence rate.

10 month teachers can accrue up to a maximum of 100 hours of sick leave per year and 1100 hours over their career. Prior to July 1, 2013, these accruals were accompanied with the incentive of a subsidized retiree health benefit, if 990 hours were banked at the time of eligible retirement. For new hires after July 1, 2013, this incentive no longer exists and these sick leave accrual amounts are likely anachronistic and due for reconsideration.

Further, teachers may take up to 32 hours of this sick leave as miscellaneous leave for any reason, with prior written approval. Considering the usage of sick leave by teachers as personal leave as suggested by the literature, an analysis should be conducted of the usage of a teacher's miscellaneous time. If any portion of sick leave used as personal leave could be converted to this miscellaneous leave, it would likely increase the lead time of the absence, allowing an exploitation of its relationship to improved fill rates.

The number of AESOP absence events coded as vacant position is approaching 40%. It is not known if this is the result of better reporting and recording or an actual uptick in the number of vacant positions, or both. It is not known if other districts record vacant positions in their substitute management system to allow a comparison. It should be noted that this is only a proxy measure of teacher vacancies in the district.

A reconciliation of substitute teacher payments matched to AESOP recorded absence event was not included, though conducting such a reconciliation is advisable for the same reasons stated above.

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## Appendix 1

### Summary of Teacher Absences by School for Fiscal Years 2015-2017

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
Elementary	Acad Of Accelerated Learning	36	4.7%	37	5.1%	38	4.8%
	Alba	27	6.4%	30	7.3%	34	6.0%
	Alcott School	21	5.6%	22	5.1%	22	5.5%
	Allen-Field School	61	6.0%	65	5.9%	53	5.5%
	Auer Avenue School	27	4.1%	23	6.1%	21	5.5%
	Barbee Montessori School	19	5.3%	19	5.5%	19	7.0%
	Barton School	35	7.2%	32	4.7%	27	8.6%
	Bethune Academy	35	5.5%	37	6.2%	40	5.5%
	Brown Street Academy			27	4.9%	27	5.7%
	Brown Street School	27	3.7%				
	Browning School	31	6.9%	29	6.4%	27	8.6%
	Bruce School	27	6.2%	21	4.2%	17	8.9%
	Bryant School	20	6.1%	20	5.2%	19	4.9%
	Burbank School	47	4.7%	45	6.5%	45	5.5%
	Burdick School	33	3.8%	34	4.2%	34	5.1%
	Carson Academy	35	3.7%	38	7.2%	35	5.6%
	Carver Academy	33	5.2%	30	5.8%	30	6.6%
	Cass Street School	29	8.9%	26	7.9%	27	8.8%
	Clarke Street School	25	6.1%	28	6.2%	27	7.2%
	Clemens School	25	5.3%	24	5.4%	22	7.7%
	Clement Avenue School	26	4.4%	26	4.4%	27	4.1%
	Congress School	58	6.5%	57	5.8%	52	7.7%
	Cooper School	29	4.9%	28	4.4%	30	5.4%
	Craig Montessori School	25	7.4%	26	5.8%	26	5.5%
	Curtin Leadership Academy	19	6.4%	18	7.4%	17	10.5%
	Doerfler School	58	5.7%	60	6.5%	54	6.2%
	Eighty-First Street School	33	5.0%	31	4.7%	29	10.0%
	Elm Creative Arts School	36	6.3%	36	5.5%	34	4.2%
	Emerson School	24	4.8%	22	5.5%	20	7.9%
	Engleburg School	38	9.9%	31	7.3%	27	7.4%
	Fairview School	43	7.4%	42	5.8%	42	5.2%
	Fernwood Montessori School	34	5.3%	35	5.0%	34	5.1%
	Fifty-Third Street School	35	7.0%	35	7.6%	36	7.7%
	Forest Home Avenue School	74	5.4%	71	6.0%	64	7.0%
Franklin School	31	8.2%	35	6.8%	33	7.7%	
Fratney School	35	6.5%	33	5.9%	31	5.3%	

Appendix 1 continued

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
Elementary	Gaenslen School	62	7.6%	65	9.7%	70	9.8%
	Garland School	30	5.1%	36	6.1%	35	6.2%
	Goodrich School	20	5.9%	21	7.2%	22	5.9%
	Grant School	47	4.9%	48	4.4%	45	3.8%
	Grantosa Drive School	47	6.2%	49	7.6%	48	7.2%
	Green Bay					28	1.3%
	Greenfield School	45	6.2%	46	7.4%	44	6.4%
	Hampton School	25	4.4%	22	5.7%	23	6.5%
	Hartford University School	35	6.4%	36	5.3%	35	5.0%
	Hawley Environmental School	21	5.8%	21	4.2%	21	5.2%
	Hawthorne School	22	4.3%	22	8.6%	22	5.0%
	Hayes Bilingual School	46	4.7%	41	5.9%	42	6.1%
	Hi-Mount School	29	6.3%	24	5.3%	19	7.1%
	Holmes School	26	3.2%	25	3.7%	23	5.1%
	Honey Creek School	23	2.8%	23	5.0%	22	5.4%
	Hopkins Lloyd School			30	9.2%	23	9.3%
	Hopkins-Lloyd School	33	5.3%				
	Howard Montessori School	8	7.1%	9	4.0%	10	4.0%
	Humboldt Park School	33	6.4%	32	6.7%	34	6.3%
	I.D.E.A.L.	15	5.0%	15	4.9%	19	5.6%
	Jackson School	30	5.2%	31	5.1%	30	6.5%
	Kagel School	26	5.8%	25	3.9%	23	4.3%
	Keefe Avenue School	27	6.9%	26	11.6%	23	5.8%
	Kilbourn School	18	4.7%	17	4.4%	18	4.5%
	King Es	39	6.6%	29	4.7%	30	7.4%
	Kluge School	32	4.9%	28	6.2%	28	3.7%
	Lafollette School	22	7.2%	23	7.8%	21	8.1%
	Lancaster School	28	9.6%	27	9.3%	22	7.2%
	Lincoln Avenue School	48	5.7%	50	5.4%	41	7.2%
	Longfellow School	66	5.9%	66	6.3%	61	6.7%
	Lowell School	18	5.3%	19	8.5%	19	7.1%
	Manitoba School	36	6.6%	36	7.2%	36	7.1%
	Maple Tree School	24	4.4%	24	7.4%	21	5.9%
	Maryland Av Montessori	22	5.9%	21	4.4%	22	4.0%
Meir School	38	5.1%	51	5.1%	56	6.1%	
Metcalfe School	29	7.3%	26	6.7%	22	7.0%	

Appendix 1 continued

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
Elementary	Milw Acad Of Chinese Lang	27	5.0%	30	5.1%	38	6.1%
	Milw French Immersion School	24	6.2%	26	6.5%	27	4.7%
	Milw German Immersion School	32	5.5%	32	6.3%	32	5.3%
	Milw Parkside School	50	7.2%	48	6.4%	55	6.3%
	Milw Sign Language School	50	5.6%	48	5.4%	45	7.9%
	Milw Spanish Immersion School	32	6.0%	31	6.6%	35	7.1%
	Mitchell School	52	6.0%	51	5.0%	47	5.7%
	Morgandale School	37	6.0%	39	8.2%	34	4.9%
	Neeskara School	39	5.6%	38	7.1%	34	7.8%
	Ninety-Fifth Street School	20	5.6%	21	6.1%	21	5.6%
	Parkview School	32	6.4%	31	6.6%	29	7.6%
	Pierce School	28	5.4%	27	7.6%	26	6.3%
	Riley School	34	7.4%	34	7.0%	33	7.3%
	River Trail School	37	8.5%	34	7.5%	31	9.3%
	Rogers Street Academy	48	7.8%	51	7.4%	46	7.3%
	Sherman School	37	5.1%	32	4.5%	29	5.2%
	Siefert School	25	4.4%	25	6.8%	24	7.9%
	Silver Spring School	25	6.7%	23	8.3%	21	6.2%
	Starms Discovery School	37	6.4%	37	7.7%	33	8.7%
	Starms Early Childhood	18	7.9%	18	5.3%	18	7.5%
	Story School	29	5.0%	32	4.4%	31	4.9%
	Stuart School	27	4.6%	28	4.6%	27	6.7%
	Thoreau School	32	4.2%	37	7.6%	32	6.3%
	Thurston Woods School	37	4.1%	35	3.1%	31	4.3%
	Townsend Street School	23	9.7%	24	8.9%	23	8.4%
	Trowbridge School	19	5.8%	19	7.1%	19	5.8%
	Victory School	39	4.7%	39	6.8%	36	7.1%
	Vieau School	45	6.6%	45	6.5%	48	7.3%
	Westside Academy	39	8.3%	33	6.1%	26	5.8%
	Whitman School	21	3.6%	26	3.3%	27	5.1%
	Whittier School	9	2.4%	10	4.5%	10	3.6%
	Zablocki School	39	6.2%	40	6.0%	37	10.3%
Elementary Total		3,234	5.9%	3,228	6.2%	3,140	6.4%

Appendix 1 continued

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
Elementary/Secondary	Alliance School	15	3.7%	18	3.5%	16	6.7%
	Groppi Hs			21	4.7%	21	5.6%
	King Ib Hs			90	6.8%	91	8.3%
	Macdowell Montessori School	45	5.9%	45	4.8%	48	5.4%
	Milw School Of Languages	73	5.6%	76	5.7%	76	7.5%
	Morse - Marshall Ms & Hs	87	9.5%				
	Morse Marshall Ms & Hs			88	6.9%		
	North Hs	38	7.4%	38	7.8%	36	9.2%
	Obama Scte					53	6.4%
	Rufus King Hs	90	6.2%				
	Wis Conservatory Lifelong Lrng	61	6.6%	55	7.7%	51	7.2%
	Elementary/Secondary Total		408	6.8%	431	6.3%	391

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
High School	Audubon Hs	28	6.8%	24	6.2%	26	7.6%
	Bay View Hs					62	6.7%
	Bay View Ms & Hs	62	8.5%	65	6.4%		
	Bradley Technology And Trade	68	7.7%	67	10.0%	66	9.8%
	Community Hs	19	7.9%	21	8.8%	21	7.8%
	Hamilton Hs	108	5.4%	107	6.1%	110	5.3%
	Madison Academic Hs	64	8.1%	57	8.4%	54	9.1%
	Marshall Campus					69	6.9%
	Milw Hs - Arts	61	6.4%	58	5.1%	61	5.4%
	New Sch For Community Service	10	2.5%	12	4.4%	13	5.4%
	Project Stay Hs			15	6.4%	14	6.6%
	Pulaski Hs	81	7.1%	79	7.1%	70	6.4%
	Reagan Hs	66	4.3%	71	5.1%	72	5.4%
	Riverside University Hs	90	7.6%	90	7.9%	91	8.8%
	South Division Hs	91	6.5%	93	7.1%	92	7.7%
	Transition Hs			13	6.6%	15	4.9%
	Vincent Hs	83	7.7%	84	7.4%	74	5.0%
	Whs Of Information Technology	53	8.0%	56	8.5%	56	9.0%
High School Total		881	6.9%	905	7.1%	957	7.0%



*Appendix 1 continued*

Group	School Name	2015		2016		2017	
		# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
Middle School	Audubon Tech & Comm Ctr Ms	45	6.4%	39	6.3%	43	6.8%
	King Ib Ms	27	9.2%	28	8.9%	27	8.7%
	Lincoln Center Of The Arts	51	4.3%	48	3.7%	54	6.4%
	Morse Marshall Ms & Hs					26	9.6%
	Roosevelt Ms	42	8.4%	40	9.8%	30	8.6%
	Wedgewood Park School	55	5.6%	57	6.2%	55	6.9%
Middle School Total		219	6.4%	211	6.6%	235	7.5%
Grand Total		4,698	6.2%	4,737	6.4%	4,696	6.7%

## Appendix 2

### Summary of Teacher Absences by Years of Service for Fiscal Years 2015-2017

Years of Service	2015		2016		2017	
	# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
0	614	5.6%	558	5.4%	535	5.5%
1	1,054	5.8%	883	5.6%	826	6.1%
2	766	6.1%	858	6.2%	714	6.2%
3	312	6.6%	636	6.5%	710	6.7%
4	193	6.9%	274	7.3%	550	7.2%
5	270	6.7%	184	6.8%	242	7.6%
6	373	6.9%	240	7.6%	154	7.4%
7	361	6.6%	339	7.1%	212	8.1%
8	255	6.9%	343	6.9%	307	7.5%
9	238	7.0%	245	7.3%	307	7.2%
10	233	6.8%	224	7.5%	223	7.7%
11	284	6.4%	211	6.4%	204	7.1%
12	380	6.5%	263	6.7%	195	6.9%
13	442	6.1%	356	6.7%	244	7.1%
14	429	6.6%	413	6.1%	338	6.5%
15	366	6.9%	396	6.7%	393	6.9%
16	362	5.5%	337	6.4%	364	5.8%
17	326	6.0%	349	6.7%	311	6.9%
18	261	7.2%	318	5.9%	330	7.1%
19	212	5.7%	254	6.6%	300	6.6%
20	156	5.0%	205	5.6%	241	6.8%
21	147	5.9%	150	5.9%	195	6.4%
22	159	5.2%	136	5.8%	140	5.9%
23	151	5.8%	151	5.4%	127	5.4%
24	183	5.8%	146	5.6%	146	6.7%
25	167	5.5%	173	5.5%	140	5.7%
26	107	5.5%	162	6.0%	162	6.2%
27	100	7.1%	107	6.8%	155	6.9%
28	98	5.9%	98	6.5%	105	7.6%
29	86	4.6%	93	6.9%	93	5.4%
30	64	5.7%	73	6.9%	91	8.2%
31	33	5.3%	42	8.8%	69	6.3%
32	9	2.2%	18	10.1%	38	7.3%
33	6	2.8%	3	2.5%	15	6.0%
34	3	3.1%	2	3.7%	3	1.1%
35	2	5.8%	1	1.1%	2	5.3%

*Appendix 2 continued*

Years of Service	2015		2016		2017	
	# of Teachers	Absence Rate	# of Teachers	Absence Rate	# of Teachers	Absence Rate
36	3	8.5%			1	3.7%
37	3	1.8%	1	2.9%		
38	2	7.8%	2	2.3%	1	4.1%
39	3	9.7%	2	3.7%	2	4.5%
40	2	12.9%	3	6.2%	2	4.9%
41	2	31.8%	2	3.9%	3	12.9%
42	1	3.1%	1	6.3%	2	3.7%
43			1	6.4%	1	9.6%
44					1	8.4%
<b>Grand Total</b>	<b>4,698</b>	<b>6.2%</b>	<b>4,737</b>	<b>6.4%</b>	<b>4,696</b>	<b>6.7%</b>

## Appendix 3

### Summary of Fill Rates by School for Fiscal Years 2015-2017

Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
Elementary School	Acad Of Accelerated Learning	297	97%	370	92%	264	87%
	Alba	155	63%	398	83%	356	75%
	Alcott School	219	80%	196	79%	221	81%
	Allen-Field School	994	86%	702	77%	515	55%
	Auer Avenue School	197	57%	566	83%	1,022	92%
	Barbee Montessori School	336	87%	245	76%	299	79%
	Barton School	563	91%	315	75%	311	78%
	Bethune Academy	206	79%	293	64%	545	79%
	Brown Street Academy	71	66%	331	79%	211	54%
	Browning School	331	81%	275	80%	452	82%
	Bruce School	375	85%	212	78%	545	82%
	Bryant School	250	90%	213	82%	246	88%
	Burbank School	444	82%	713	77%	371	74%
	Burdick School	175	90%	206	94%	222	89%
	Carson Academy	172	55%	424	47%	420	62%
	Carver Academy	506	75%	319	53%	720	71%
	Cass Street School	557	79%	490	79%	1,086	94%
	Clarke Street School	158	77%	396	85%	517	80%
	Clemens School	307	79%	341	82%	287	79%
	Clement Avenue School	140	88%	210	82%	153	84%
	Congress School	613	85%	856	86%	1,113	82%
	Cooper School	186	90%	155	89%	187	88%
	Craig Montessori School	580	80%	406	77%	344	74%
	Curtin Leadership Academy	248	90%	195	93%	263	90%
	Doerfler School	521	70%	507	52%	594	67%
	Eighty-First Street School	278	79%	235	77%	943	84%
	Elm Creative Arts School	485	74%	607	77%	439	63%
	Emerson School	261	92%	315	86%	446	93%
	Engleburg School	569	84%	520	84%	382	81%
	Fairview School	516	91%	335	87%	354	88%
	Fernwood Montessori School	105	83%	31	87%	74	79%
	Fifty-Third Street School	682	83%	525	84%	777	85%
	Forest Home Avenue School	695	67%	655	64%	704	72%
	Franklin School	353	67%	537	63%	580	84%
Fratney School	618	91%	509	91%	499	86%	
Gaenslen School	858	88%	1,274	84%	1,512	79%	

Appendix 3 continued

Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
Elementary School	Garland School	300	90%	389	91%	348	87%
	Goodrich School	492	86%	284	84%	682	93%
	Grant School	399	74%	351	72%	267	69%
	Grantosa Drive School	895	78%	862	66%	1,108	81%
	Green Bay					329	69%
	Greenfield School	350	75%	433	72%	351	78%
	Hampton School	192	86%	290	87%	357	89%
	Hartford University School	253	79%	170	66%	247	70%
	Hawley Environmental School	178	82%	166	86%	283	86%
	Hawthorne School	204	82%	292	82%	310	81%
	Hayes Bilingual School	474	75%	996	89%	803	78%
	Hi-Mount School	319	72%	302	65%	369	75%
	Holmes School	172	75%	134	71%	156	78%
	Honey Creek School	160	86%	145	86%	146	91%
	Hopkins Lloyd School	203	62%	591	78%	838	64%
	Howard Montessori School	71	85%	193	92%	101	92%
	Humboldt Park School	204	87%	311	90%	197	83%
	I.D.E.A.L.	52	78%	47	80%	40	60%
	Jackson School	247	87%	276	83%	259	79%
	Kagel School	223	79%	243	82%	141	80%
	Keefe Avenue School	374	87%	681	85%	656	71%
	Kilbourn School	156	81%	358	86%	342	84%
	King Es	649	74%	724	85%	544	61%
	Kluge School	167	94%	326	93%	227	91%
	Lafollette School	406	71%	549	71%	517	63%
	Lancaster School	578	70%	1,077	74%	490	73%
	Lincoln Avenue School	464	69%	420	69%	425	58%
	Longfellow School	841	77%	720	59%	810	71%
	Lowell School	199	92%	202	75%	145	76%
	Manitoba School	302	84%	471	84%	362	59%
	Maple Tree School	274	73%	520	70%	537	89%
	Marvin Pratt					282	82%
	Maryland Av Montessori	130	75%	156	82%	73	67%
Meir School	342	86%	508	89%	668	87%	
Metcalfe School	478	78%	509	78%	424	85%	
Milw Acad Of Chinese Lang	297	83%	374	71%	351	65%	

Appendix 3 continued

Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
Elementary School	Milw French Immersion School	367	89%	396	81%	444	87%
	Milw German Immersion School	380	91%	290	93%	277	91%
	Milw Parkside School	612	88%	496	88%	371	78%
	Milw Sign Language School	836	86%	435	72%	474	77%
	Milw Spanish Immersion School	359	89%	407	86%	646	79%
	Mitchell School	571	76%	430	64%	927	84%
	Morgandale School	301	88%	383	81%	281	69%
	Neeskara School	369	89%	395	85%	410	82%
	Ninety-Fifth Street School	220	85%	254	90%	223	85%
	Parkview School	303	85%	365	81%	467	81%
	Pierce School	261	76%	342	79%	460	82%
	Riley School	894	87%	385	74%	399	85%
	River Trail School	450	77%	580	80%	547	78%
	Rogers Street Academy	640	76%	707	72%	382	41%
	Sherman School	539	84%	649	80%	788	85%
	Siefert School	111	69%	492	92%	277	91%
	Silver Spring School	312	87%	479	90%		
	Starms Discovery School	278	69%	865	78%	788	68%
	Starms Early Childhood	147	83%	186	87%	224	85%
	Story School	315	88%	169	78%	321	75%
	Stuart School	217	87%	352	79%	554	92%
	Thoreau School	371	84%	714	78%	381	66%
	Thurston Woods School	183	91%	302	95%	297	73%
	Townsend Street School	537	82%	490	78%	312	61%
	Trowbridge School	156	85%	156	85%	205	82%
	Victory School	516	93%	429	86%	531	87%
	Vieau School	388	75%	307	74%	413	79%
	Westside Academy	649	87%	1,119	88%	627	70%
	Whitman School	223	91%	234	88%	306	87%
	Whittier School	30	90%	80	100%	22	100%
Zablocki School	317	88%	384	84%	648	73%	
Elementary School Total		36,918	82%	42,219	79%	45,161	78%

Appendix 3 continued

Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
Elementary/Secondary Combined	Alliance School	60	71%	125	82%	205	89%
	Groppi Hs			70	95%	148	85%
	King Ib Hs	753	97%	1,008	99%	1,250	97%
	Macdowell Montessori School	500	85%	467	79%	796	83%
	Milw School Of Languages	680	91%	897	88%	1,231	84%
	Morse Marshall Ms & Hs	1,883	89%	1,861	88%		
	North Hs	628	94%	771	98%	1,068	97%
	Obama Scte					1,211	84%
	Wis Conservatory Lifelong Lrng	558	79%	1,540	85%	889	79%
Elementary/Secondary Combined Total		5,062	89%	6,739	89%	6,798	88%
Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
High School	Audubon Hs	183	93%	90	86%	281	93%
	Bay View Hs			1,060	94%	907	91%
	Bay View Ms & Hs	1,005	91%				
	Bradley Technology And Trade	726	98%	1,012	99%	924	82%
	Community Hs	424	95%	404	86%	535	92%
	Hamilton Hs	3,097	95%	3,881	96%	4,128	94%
	Madison Academic Hs	1,348	92%	1,551	94%	1,169	88%
	Marshall High School					1,483	90%
	Milw Hs - Arts	760	93%	794	93%	826	92%
	New Sch For Community Service	55	92%	52	55%	347	79%
	Project Stay Hs			176	92%	186	95%
	Pulaski Hs	1,101	89%	742	85%	971	93%
	Reagan Hs	742	97%	802	97%	990	97%
	Riverside University Hs	905	93%	1,033	93%	1,144	95%
	South Division Hs	1,294	89%	1,170	85%	1,264	85%
	Transition Hs			1			
	Vincent Hs	2,095	89%	1,812	85%	1,835	91%
	Washington Hs Of Info Tech			1,302	89%	1,544	93%
	Whs Of Information Technology	1,130	91%				
	High School Total		14,865	92%	15,882	92%	18,534

*Appendix 3 continued*

Group	School Name	2015		2016		2017	
		Fill Needed	Fill Rate	Fill Needed	Fill Rate	Fill Needed	Fill Rate
Middle School	Audubon Tech & Comm Ctr Ms	672	91%	563	83%	803	89%
	King Ib Ms	555	76%	693	77%	568	62%
	Lincoln Center Of The Arts	608	83%	583	70%	950	71%
	Morse Middle School					326	57%
	Roosevelt Ms	1,007	81%	859	77%	1,035	87%
	Wedgewood Park School	398	92%	585	84%	375	81%
Middle School Total		3,240	84%	3,283	78%	4,057	77%
Grand Total		60,085	85%	68,123	83%	74,550	82%