Evaluating School Breakfast and Implementing Second Chance Breakfast

Newark Unified School District

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CALIFORNIA FOOD POLICY ADVOCATES

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Introduction

California Food Policy Advocates (CFPA), with grant support from Kaiser Permanente and All Stars Helping Kids, evaluated two breakfast programs operated by Newark Unified School District (NUSD): conventional school breakfast and Second Chance Breakfast (2CB). The evaluation included school site visits, interviews, analyses of school meal participation data, and a review of financial records. From June 2008 through December 2008, CFPA also followed the implementation of a new 2CB program at one NUSD campus, Lincoln Elementary School. Findings from the evaluation and observed implementation are detailed in this report.

Also included in this report are CFPA's policy recommendations to improve school breakfast and best practices for operating a 2CB program. The policy recommendations, supported by CFPA's examination of NUSD breakfast programs, are specific to decision-makers at the federal, state, and local levels. The best practices are drawn largely from CFPA's experience with 2CB throughout NUSD.

Key Findings

Second Chance Breakfast dramatically increased school breakfast participation within Newark Unified School District. Breakfast participation nearly doubled in 2006-07 when 2CB was implemented at nine of ten mainstream schools in the district. That same year, school lunch participation increased to nearly 50% of NUSD students, showing that school districts can successfully operate concurrent 2CB and school lunch programs.

Second Chance Breakfast positively impacted the fiscal status of NUSD's Child Nutrition Services Department (CNS) by increasing revenue through increased school meal participation. In 2007-08, the year following widespread 2CB implementation, revenue for NUSD-CNS increased by more than $260,000. Implementation of 2CB was also fiscally beneficial because it allowed more cost-effective use of NUSD-CNS labor. Second Chance Breakfast is an opportunity to serve an additional meal between conventional pre-bell breakfast and lunch. This timing can allow 2CB to operate with little or no increase in labor costs for school food services/nutrition departments.

Common concerns about operating 2CB include increased maintenance duties, increased child supervision duties, and fiscal feasibility. For NUSD, these anticipated challenges proved much less prohibitive than stakeholders initially expected. With district-wide cooperation and communication, NUSD personnel successfully managed the limited operational and administrative concerns that did result from 2CB.

Policy Recommendations

Federal and State Policy Recommendations

1. Congress should increase school breakfast reimbursement rates contingent upon USDA's swift adaption of school nutrition standards to reflect the 2005 Dietary Guidelines for Americans. USDA should promptly revise the standards upon any updates of the Dietary Guidelines for Americans.

2. USDA should allocate federal commodity entitlements to school districts based on the number of breakfasts each district serves, in addition to the number of lunches served.

3. USDA/California Department of Education (CDE) should aggressively promote alternatives to conventional breakfast, including Second Chance Breakfast, Grab n' Go Breakfast, and Breakfast in the Classroom by expanding training opportunities for school districts that operate innovative breakfast programs and school districts that want to do so.

4. Congress and/or the California State Legislature should re-instate California Fresh Start or adopt a similar program to increase fresh fruit and vegetable consumption through school breakfasts by providing a dedicated reimbursement for serving fresh produce.

5. Congress should restore, and the California State Legislature should increase, the allocation of funds dedicated to start-up grants for school districts that choose to implement new, innovative breakfast programs.

6. Congress and/or the California State Legislature should allocate funds dedicated to upgrade and repair facilities and equipment required by school districts to maintain or expand school breakfast programs.

School District Policy Recommendations

1. All school districts should provide students with opportunities to eat school breakfast before and during the school day as breakfast consumption supports students' health and academic achievement.

2. School districts should offer full, reimbursable meals with very few or no a la carte sales to improve the dietary intake of students at school and to increase revenue from school meal programs.

3. School districts should schedule Second Chance Breakfast and lunch at least two hours apart to ensure that students are well-fed throughout the day and that participation in Second Chance Breakfast does not preclude participation in school lunch.

Best Practices for Operating Second Chance Breakfast

1. A POS[a] system facilitates accurate record keeping of meal counts and students' FRP status[b]. Investment in a POS system decreases administrative burden and frees staff to accomplish other tasks, making such systems important for Second Chance Breakfast and all school meal programs.

2. District-level information technology (IT) support is essential for operating a POS system effectively and efficiently.

3. Use of federal commodities is central to the fiscal feasibility of Second Chance Breakfast and school meal programs as a whole.

4. Use of innovative food services technology, such as a cook-chill system, supports large-scale scratch cooking and longer-term food storage.

5. Serving easy-to-eat foods, such as whole fresh fruit and breakfast burritos, accommodates short meal periods and facilitates clean-up.

6. Treating students as customers and focusing on customer service improves participation in school meal programs. Serving a variety of quality food, providing friendly service, decreasing wait times, maintaining comfortable dining areas, and responding promptly to student complaints are key ingredients of a student-oriented system.

[a] "POS system": point of sale system. These systems use swipe cards with magnetic strips or hand-entered identification numbers to record meals served to students' and students' school meal payments, if applicable.
[b] "FRP status" refers to whether or not a student is enrolled to receive free or reduced price school meals.

The Importance of School Breakfast

Breakfast Trends

Consumption of breakfast among school-age children and adolescents in the United States has decreased over time by 9-20% (varying with age group).[1] The decline in breakfast consumption is largest for high-school age adolescents 15-18 years old.[1] These trends are disconcerting given existing evidence that eating school breakfast improves students' health and academic performance.

Diet Quality and Academic Achievement

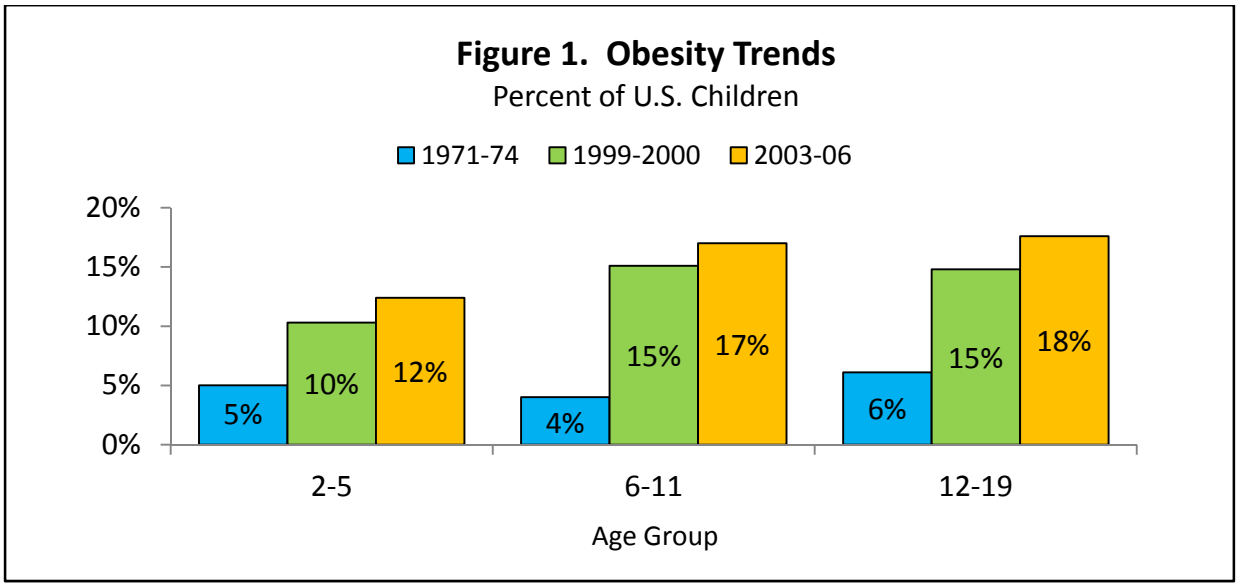
Researchers from the Harvard School of Public Health and the Harvard Medical School, with support from the Sodexo Foundation, recently published a review of more than 100 research articles, all relevant to the federal School Breakfast Program. The review concludes that, "the School Breakfast Program (SBP) is highly effective in terms of providing children with a stronger basis to learn in school, eat more nutritious diets, and lead more healthy lives both emotionally and physically."[2]

Breakfast-eaters have overall healthier diets than non-breakfast-eaters.[2] Children and adolescents who eat breakfast are more likely to have higher micronutrient[c] intakes and are more likely to meet nutrient intake recommendations than those who do not eat breakfast.[3] Eating breakfast can positively affect students' test scores, grades, attendance, and tardiness.[2, 4, 5]

Obesity

Eating breakfast is associated with lower body mass index (BMI).[1,d] Healthy dietary habits, such as eating breakfast, can help curb the alarmingly high rates of childhood overweight and obesity[e] in the United States. Figure 1 shows the increase in childhood obesity from the early 1970s to 2006. During that time period, the prevalence of obesity approximately doubled, tripled, and even quadrupled among different age groups of children in the United States.[6, 7]

[c] Micronutrients are nutrients required in small daily amounts, such as vitamins and minerals.[14]
[d] BMI is a measure of weight relative to height
[e] For children, obesity and overweight status are determined by percentiles of BMI-for-age. Obesity is defined here as BMI $\geq 95^{th}$ percentile.



Source: Centers for Disease Control[6, 7]

Overweight and obesity are risk factors for many serious health problems, including Type II diabetes, high blood pressure (hypertension), high cholesterol, heart disease, and certain types of cancer.[8] Health problems associated with obesity and overweight contribute to four of the top ten leading causes of death in the United States: heart disease, stroke, diabetes, and cancer.[9, 10] While Type II diabetes, high blood pressure, and high cholesterol were once largely considered "adult" conditions, these health problems are now seen increasingly among children.[8, 11] Obesity is also associated with social discrimination and stigmatization of children, which can negatively impact academic performance and social skills. [12, 13]

School breakfast programs are an important strategy to improve the health, well-being, and academic achievement of students.

School Breakfast Programs

There are several school breakfast models in addition to the conventional school breakfast, which is served in a cafeteria before the start of the school day (pre-bell breakfast). One such model, Second Chance Breakfast, is described below. For details about other school breakfast models, such as Breakfast in the Classroom and Grab n' Go Breakfast, please see Appendix A, CFPA's Breakfast First website (www.breakfastfirst.org), and the CFPA video *Everybody Eats* (http://www.youtube.com/watch?v=sKQAYb1gWgw).

Second Chance Breakfast (2CB)

Second Chance Breakfast is an excellent strategy to provide all students with an opportunity to eat breakfast. 2CB is effective for students who may not want to or may not be able to eat first thing in the morning. 2CB is also important for students who, due to family schedules, eat breakfast at home very early in the day and are hungry again before lunch. For the many students who do not arrive at school with enough time to eat conventional pre-bell breakfast, 2CB may be the only opportunity to eat a morning meal.

As the name suggests, Second Chance Breakfast is a breakfast served during morning recess or snack break, usually sometime between 9:00 and 10:30 am. Ideally, 2CB is operated in addition to conventional pre-bell breakfast. The use of tickets or a POS system ensures that students who receive free or reduced-priced school meals[f] are served only one school breakfast per day at the free or reduced-price rate. This breakfast can be served either during conventional breakfast or a Second Chance Breakfast.

Second Chance Breakfast is now popular in schools of all grade levels. For example, by the fall of 2008, Newark Unified School District's high school, junior high school, and seven of the district's eight elementary schools implemented 2CB. As detailed in this report, 2CB has significantly increased breakfast participation in Newark's public schools.

Newark Unified School District (NUSD)

Information in this section of the report incorporates analyses of school meal participation data, reviews of NUSD Child Nutrition Services financial records, observations of meal services, interviews with NUSD-CNS staff, and interviews with school administrators.

Background

The city of Newark (population 48,872) is located 20 miles southeast of Oakland in Alameda County, CA.[g] Newark Unified School District encompasses approximately 8 square miles with one pre-school, eight elementary schools, one junior high school, one

[f] A student is eligible to receive free or reduced-price school meals if their family's income falls within a certain percentage of the Federal Poverty Level. Students must apply for and be enrolled in the free or reduced-price school meal program to receive such benefits.

[g] 2008 population estimate from the California Department of Finance at http://www.dof.ca.gov/research/demographic/reports/estimates/e-1_2006-07/documents/e-1press.pdf

high school, and three alternative schools[h]. K-12 enrollment for the ten mainstream schools is approximately 7,000[i] students with 42 percent of students enrolled in the free or reduced price school meal program.

Child Nutrition Services (CNS)
School meals in Newark Unified School District are coordinated by the district's Child Nutrition Services Department. Dominic Machi became Director of NUSD Child Nutrition Services in December of the 2005-06 school year[j].

Fiscal Challenges - Child Nutrition Services
As a general rule, a school district's child nutrition/food services department is charged with feeding the student population and operating a fiscally-neutral or, preferably, profitable department. These responsibilities can easily and frequently conflict. Understanding this inherent tension is central to the district-wide cooperation and communication required for successful school meal programs. Child Nutrition Services is by nature, a vital student support service and by necessity, a business. As described below, implementing a Second Chance Breakfast program is an opportunity for school districts to improve the quality and fiscal strength of their food services/nutrition departments.

NUSD-Second Chance Breakfast

History
In 2005-06, NUSD began a Second Chance Breakfast pilot program at Musick Elementary School. In 2006-07, Second Chance Breakfast began at eight more of NUSD's ten mainstream schools. With Lincoln Elementary School implementing a Second Chance Breakfast program in the fall of 2007-08, all of NUSD's mainstream schools now offer 2CB programs.

Who Eats 2CB
According to Mr. Machi, Child Nutrition Services employees, and school administrators, students eat Second Chance Breakfast because they have no time to eat breakfast at home, no time to eat conventional pre-bell breakfast, or do eat something at home but are hungry again before lunchtime.

[h] The three alternative NUSD schools were not included in this study.
[i] Enrollment as of 10/10/08 for all NUSD mainstream schools is 6,985.
[j] Throughout this report, dates refer to the academic year, unless otherwise specified.

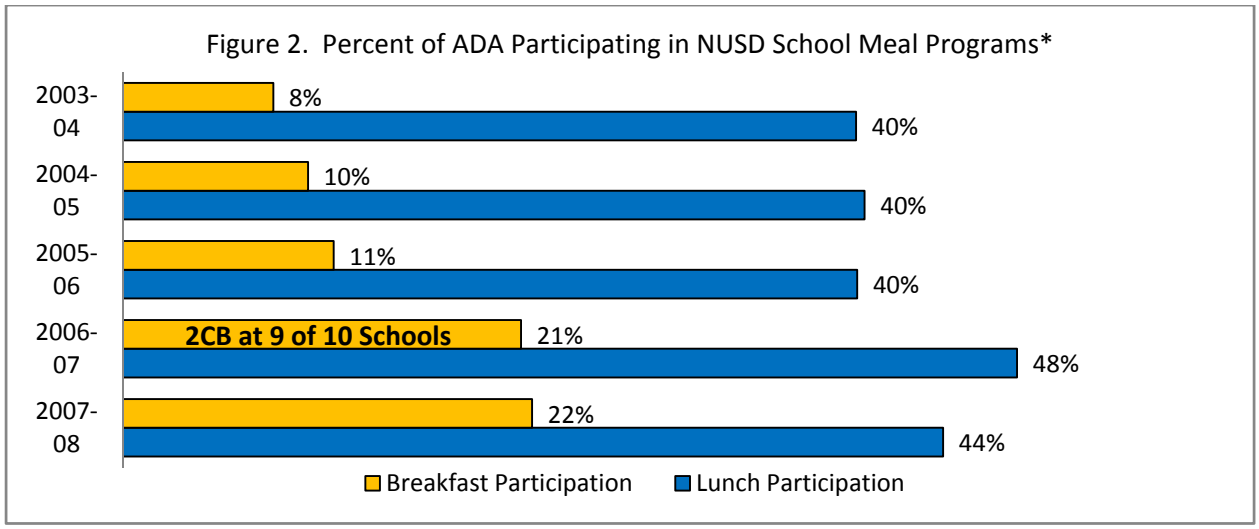
Shirley Armstrong, a NUSD Child Nutrition Services employee, told CFPA, "Lots of kids come to school late" and can't eat breakfast before the bell rings.

Henry London, Child Nutrition Supervisor at Newark Memorial High School reported, "Breakfast is the most important meal of the day and kids don't get it at home or on weekends…You give a student a breakfast burrito in the morning…and they're not hungry again until [the afternoon]".

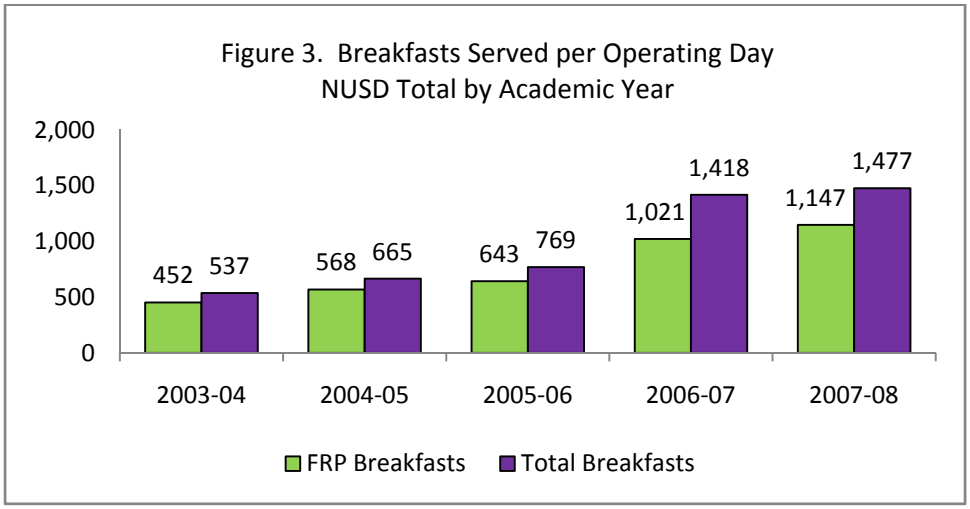
Students appreciate the opportunity to eat Second Chance Breakfast. CFPA staff heard the following conversation between two Newark Memorial High School students in the 2CB service line:
Student 1: "Aren't you going to eat?"
Student 2: "No, why would I eat? It's just breakfast."
Student 1: "You're going to get hungry later!"

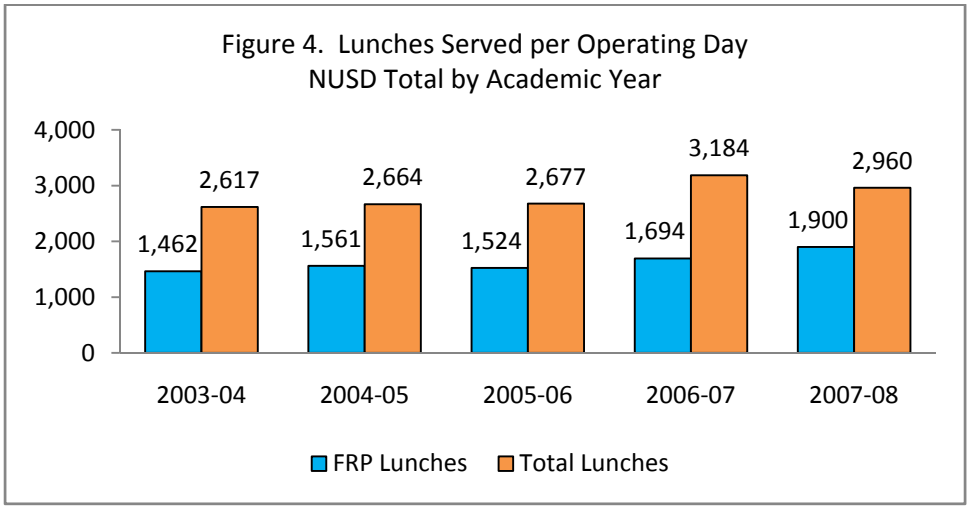
Benefits of 2CB- School Breakfast Participation
From 2005-06 to 2006-07, school breakfast participation in NUSD increased dramatically. Several factors contributed to this increase. Though it is not possible to quantify the impact of each factor individually, available evidence indicates that Second Chance Breakfast likely exerted the greatest positive influence. Other influential factors included improved food quality (appeal) and increased enrollment of students into the free and reduced-price school meal program. For details about these two factors, please see Appendix B.

With Second Chance Breakfast, NUSD is serving a morning meal when students are hungry and have time to eat. From 2003-04 through 2007-08, participation in *all* NUSD school meal programs generally increased among *all* students (FRP-enrolled and non-FRP). As shown in Figures 2-4, implementation of Second Chance Breakfast corresponds to a robust increase in school breakfast participation. Furthermore, school lunch participation generally increased in conjunction with 2CB operation. This shows that school districts can successfully operate concurrent 2CB and school lunch programs.



**Percent of ADA (Average Daily Attendance) Participating in School Meal Programs* is calculated from ADA and the number of meals served per operating day.





Benefits of 2CB-For Students and Staff

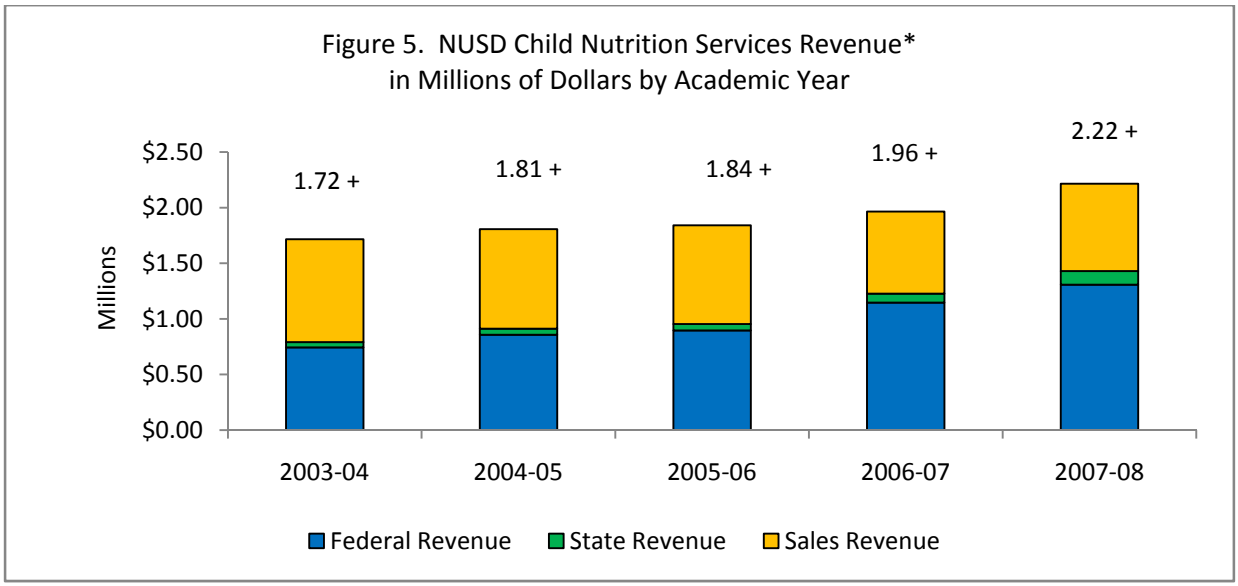
Throughout the evaluation of NUSD's breakfast programs, CFPA staff gathered anecdotal evidence of the benefits associated with school breakfast and more specifically, Second Chance Breakfast. One of the most striking examples of such evidence is described here. Kennedy Elementary school implemented a conventional (pre-bell) breakfast program after the staff became aware of children who were searching campus garbage bins for food in the morning before school. Kennedy Elementary School enthusiastically added 2CB to their meal service in 2006-07.

Kathleen Waffle, principal of Kennedy Elementary School, considers Second Chance Breakfast an opportunity for many students who are chronically time-pressed to eat breakfast at school. Principal Waffle also noted that Second Chance Breakfast is an opportunity for students, particularly older students, to eat the second morning meal they need to stave off hunger before lunch. Since the inception of the conventional and 2CB programs at Kennedy Elementary School, Principal Waffle and her staff no longer see students who are, "sluggish, slow, and inattentive due to hunger." These improvements in student behavior also benefit the school staff. Teachers now have students who are more engaged and less disruptive.

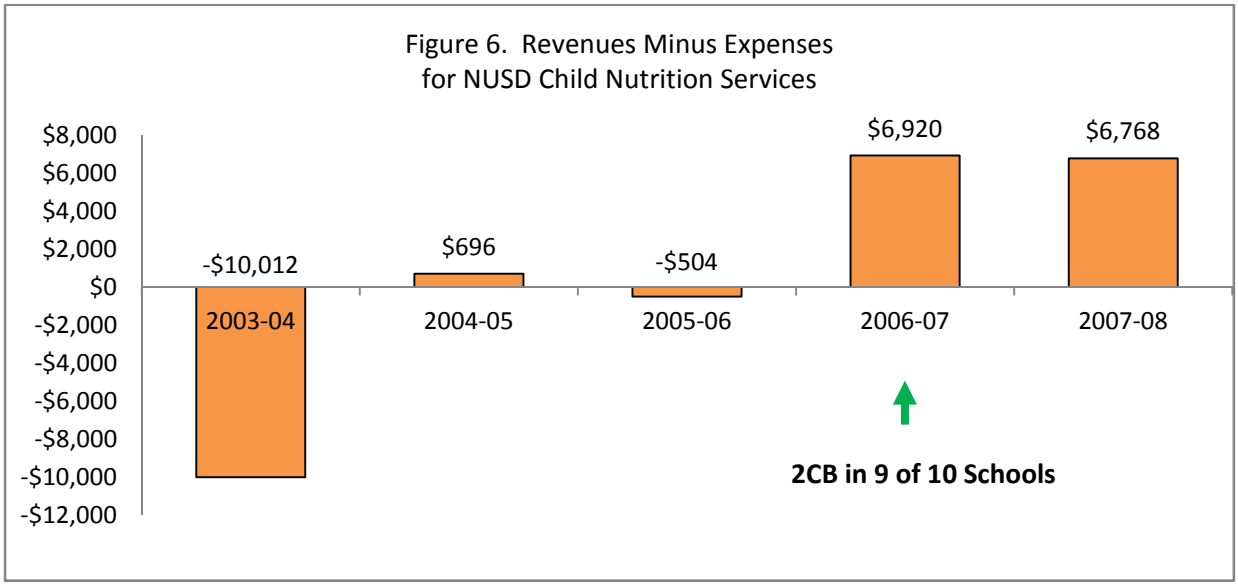
Fiscal Benefits of 2CB

Second Chance Breakfast bolsters the fiscal health of NUSD's Child Nutrition Services department. Figure 5 shows an increase in federal, state, and sales revenues for the department from 2004-05 through 2007-08. Figure 6 shows revenues minus expenses for NUSD Child Nutrition Services from 2003-04 to 2007-08. Revenues and fiscal gain (revenues minus expenses) substantially increased with 2CB implementation in 2006-07.

This financial data and verbal reports from Mr. Machi clearly demonstrate that increased school breakfast participation, resulting from the implementation of Second Chance Breakfast, helped to improve the fiscal strength of NUSD Child Nutrition Services. Other contributing factors included improved increased participation in school lunch, efficient use of federal commodities, and promotion of the free and reduced-price school meal program.



*Selected sources of revenue shown. Total revenue for NUSD CNS has increased annually from 2003-04 to 2007-08.



Fiscal Benefits of 2CB– Labor Costs

The increase in school breakfast participation resulting from Second Chance Breakfast makes 2CB a fiscal "necessity," according to Mr. Machi. That is, given labor and food costs, NUSD-CNS does not always recover the costs of serving conventional school breakfast and school lunch. 2CB helps NUSD-CNS remain fiscally viable through increased revenue and more efficient use of labor. Second Chance Breakfast is cost-effective for NUSD because CNS employees prepare and serve an additional meal during their normal work hours.

Mr. London has observed a high level of CNS staff buy-in for Second Chance Breakfast. This commitment is grounded in an increased sense of job security. NUSD CNS employees understand that increased participation in school meal programs is the key to increased fiscal viability. Increased fiscal viability, in turn, helps prevent lay-offs and labor cutbacks. Serving more meals is hard work, but employees of Child Nutrition Services value job security.

For NUSD-CNS, labor is essentially a "fixed cost." Mr. Machi explained that given existing labor needs and contractual labor obligations, his department already minimizes labor costs. As such, the key to the department's fiscal health is to "always think about increasing participation" (Mr. London).

Fiscal Feasibility of 2CB– Commodities and Food Costs

NUSD consistently uses its total allotment of federal commodities, often incorporating those commodities into scratch-cooked entrees. Use of federal commodities keeps food costs low while also supporting nutritional quality. Mr. Machi reported, "We have a whole product line, a whole list of products that we make here because it allows us to use our commodity, which is a big savior for us. Our food cost holds at 30- 32% and that's by using the commodity."

All of NUSD's elementary schools are served by a central kitchen. Newark Junior High School is partially served by a central kitchen. Newark Memorial High School prepares all school meals on-site. To maximize efficiency, NUSD utilizes a cook – chill system. This system makes longer-term food storage possible, thereby allowing large-scale food production. With federal commodities and the cook-chill system, NUSD is able to produce high-quality, scratch-cooked food while controlling costs.

Communication with Administrators and Staff

Mr. Machi is a member of the NUSD Superintendent's Cabinet. This position enables him to voice concerns, make requests, and highlight successes of Child Nutrition Services to district-level administrators.

Prior to implementing 2CB at nine of the ten mainstream NUSD schools, Child Nutrition Services did not conduct any formal outreach to non-administrative school site personnel, including teachers. Child Nutrition Services previously relied on school administrators to communicate with school personnel. Mr. Machi called this a "missing link" in "direct communication" between Child Nutrition Services and teachers. Closing this gap was one focus of the 2CB implementation at Lincoln Elementary. (See the *Developing a Second Chance Breakfast Program* section on page 22 for details.)

2CB - Common Barriers and Solutions

Child Supervision

A common concern about 2CB is that the meal service will require additional supervision of students, particularly in elementary schools where 2CB is served in a cafeteria while recess takes place outside. All school sites have limited budgets for employing supervisory staff, such as campus monitors. Administrators must be careful to comply with union contracts when assigning teachers to monitor students during breaks. In recognition of these valid concerns, NUSD Child Nutrition Services employees make an effort to monitor students in dining areas.

School administrators also make efforts to adequately staff school meal service with supervisory personnel (teachers, campus monitors, administrators). Principal Waffle of Kennedy Elementary School adjusted her yard duty schedule to include one teacher posted near the cafeteria during Second Chance Breakfast service. Principal Waffle reported no complaints from staff about this arrangement and "minimal disciplinary issues" during 2CB periods. At all meals observed by CFPA staff, students were generally well-behaved. There were no significant disruptions to service or dining due to student behavior.

Maintenance

In addition to concerns about the need for increased student supervision, custodial employees are often concerned about increased maintenance responsibilities associated with Second Chance Breakfast. One strategy to address this issue is serving meals in bags or high-sided trays, which students can use to collect their trash before disposal. Another strategy is to provide custodial staff with relatively inexpensive equipment to increase efficiency, such as a wet/dry vacuum to manage liquid spills and pieces of dropped food.

Physical Activity

Another common concern about Second Chance Breakfast in elementary schools is that students choosing to participate in 2CB will lose time for physical activity. Physical activity is vital, particularly in the face of rising childhood obesity rates. However, children who are well-fed are more prepared to handle all aspects of their school day, including physical activity.

Principal Waffle reported that students have enough time both to eat and play during her school's 2CB recess period. When Second Chance Breakfast was first implemented at Kennedy Elementary School, students would spend much of their recess on the playground and then attempt to rush through breakfast service. This resulted in

repeated tardiness to class. Teachers worked with students to eliminate this problem. Now students at Kennedy Elementary School regularly eat 2CB before going out to play. During elementary school 2CB observations, CFPA staff noted students who spent the entire period eating and socializing inside as well as students who ate quickly and went outside to play.

Each school is unique. As such, the particular barriers and solutions for 2CB may vary by site. Food services staff must be available to address problems as they arise in the field. However, successful 2CB programs also require school and district-wide cooperation. As Mr. Machi stated, "School food service knows how to feed kids. It's the rules and the regulations…that we have to tackle. We know how to feed kids, but we are the most heavily regulated department in the school district. So it makes it challenging."

2007-08 Operation of 2CB in NUSD – Site Observations

Information in this section of the report incorporates observations of breakfast service at multiple NUSD school sites, interviews with Mr. Machi, and interviews with CNS services employees at the observed sites: Milani Elementary School, Newark Junior High School, and Newark Memorial High School.

Schedule

For all NUSD elementary schools, the school day begins at 8:10am. Conventional school breakfast is served from 7:30am until 8:00am. Specific Second Chance Breakfast service times vary by school site, but service schedules differ by no more than 10 minutes between schools. At Milani Elementary School, 2CB is served in two phases with younger students (1st-3rd graders) eating during their recess from 9:45-10:00am and older students (4th-6th graders) eating during their recess from 10:10-10:25am.

The Newark Junior High School (NJHS) day begins at 8:30am. Conventional breakfast is served from 8:00am until 8:25am. NJHS serves 2CB (aka brunch) from approximately 10:20 to 10:30am. Serving times vary throughout the week (with variations in the bell schedule), but the service period is at least 10 minutes long each day.

The regular school day begins at 7:45 for Newark Memorial High School (NMHS) students. Conventional breakfast is served from 7:00am until 7:45am. NMHS Second Chance Breakfast (aka brunch) is approximately 15 minutes long and begins between 9:15 and 9:30am, depending on the daily bell schedule.

Complete bell schedules are included in Appendix C.

Location
Milani Elementary School serves breakfast in a multi-purpose room as do all other NUSD elementary schools.

Service at multiple sites helps ensure that a large student body can be served in a relative short period of time. NJHS serves brunch in two locations: the cafeteria and the snack bar (service windows with no indoor seating). NMHS serves brunch in three different locations (cafeteria and service windows).

Service
At Milani Elementary School CNS staff places identification cards, organized by classroom, in baskets near the cafeteria's food service window. Before being served a meal, each student locates his/her card and places it in a bin or hands it directly to a CNS employee to have the meal recorded. CNS later uses any cards in the bin to record meals on the computer. Students may also pay cash for a meal.

In the Newark Junior High School cafeteria, one line of students leads to three registers. Each register is a service point. There is some "bunching" of students as they make their way to the registers. Despite this crowding, the line moves quickly. According to Penny Edwards, CNS Supervisor for NJHS, serving brunch is a challenge because of the short time period, but the POS system and the speed of CNS employees allow the vast majority of participants to be served promptly.

At Newark Memorial High School, students are served in three speed lines in the cafeteria. Students pay cash, verbally report their student ID number, or present an ID card at the register. The line is long but moves very quickly. Students wait only 3-4 minutes. Mr. London reported that the POS system is essential for the operation of the speed line.

Though NJHS and NMHS successfully use outdoor service windows in addition to cafeteria service for 2CB, indoor service and dining locations are very important, especially in cold or inclement weather.

Table 1. 2CB School Site Observations - Child Nutrition Services Staffing

School	CNS Staff On-Site	Other Personnel Present at 2CB	Observed Tasks	Notes
Milani Elementary School	1^	None	• Food preparation* and presentation • Serve entrees • Operation of register • Monitoring dining area	*Food preparation is minimal due to service from the central kitchen ^1 additional employee is usually present to operate the register
Newark Junior High School	6	1 campus monitor	• Food preparation and presentation˄ • Serves entrees • Operation of three registers	˄Food preparation occurs on site and via a central kitchen
Newark Memorial High School	13	1 campus monitor 1 campus police officer	• Food preparation and presentation⋆ • Operation of multiple registers	⋆Food preparation occurs only on site.

Table 2. 2CB School Site Observations – Food Items Offered

School	Items for Self-Service	Items Served by CNS Staff	Free Water
Milani Elementary School	**Fruit** • Halved, fresh oranges • Whole, fresh apples • Canned peaches in light syrup **Milk** • 1% plain milk • Nonfat chocolate milk **Other** • Graham crackers*	**Entrees** • Pancake on a stick • Cold cereals: crisp rice, Toasty O's, Honey O's • Bagels with cream cheese • Breakfast taco: egg, cheese, turkey sausage, white tortilla	None in cafeteria
Newark Junior High School	**Fruit** • Whole oranges **Milk** • 1% plain milk • Nonfat chocolate milk	**Entrees** • Cinnamon rolls • Breakfast pizza: tomato sauce, sausage, cheese • Bagel with cream cheese	None in the cafeteria
Newark Memorial High School	**None**	**Fruit and Vegetables** • Whole, fresh orange • Whole, fresh apple • Fresh baby carrots **Milk** • 1% plain milk • Nonfat chocolate milk **Entrees** • Cinnamon roll • Bagel and cream cheese • Breakfast Pizza: tomato sauce, sausage, cheese • Breakfast muffin: sausage, egg, cheese • Breakfast Burrito: sausage, egg, cheese	None in the cafeteria

*Graham crackers are often a served by staff to control the number of packets students take.

NUSD Child Nutrition Services – General Operations

The information in this section of the report is drawn from NUSD school meal participation data, interviews with Mr. Machi, and interviews with NUSD Child Nutrition Services staff.

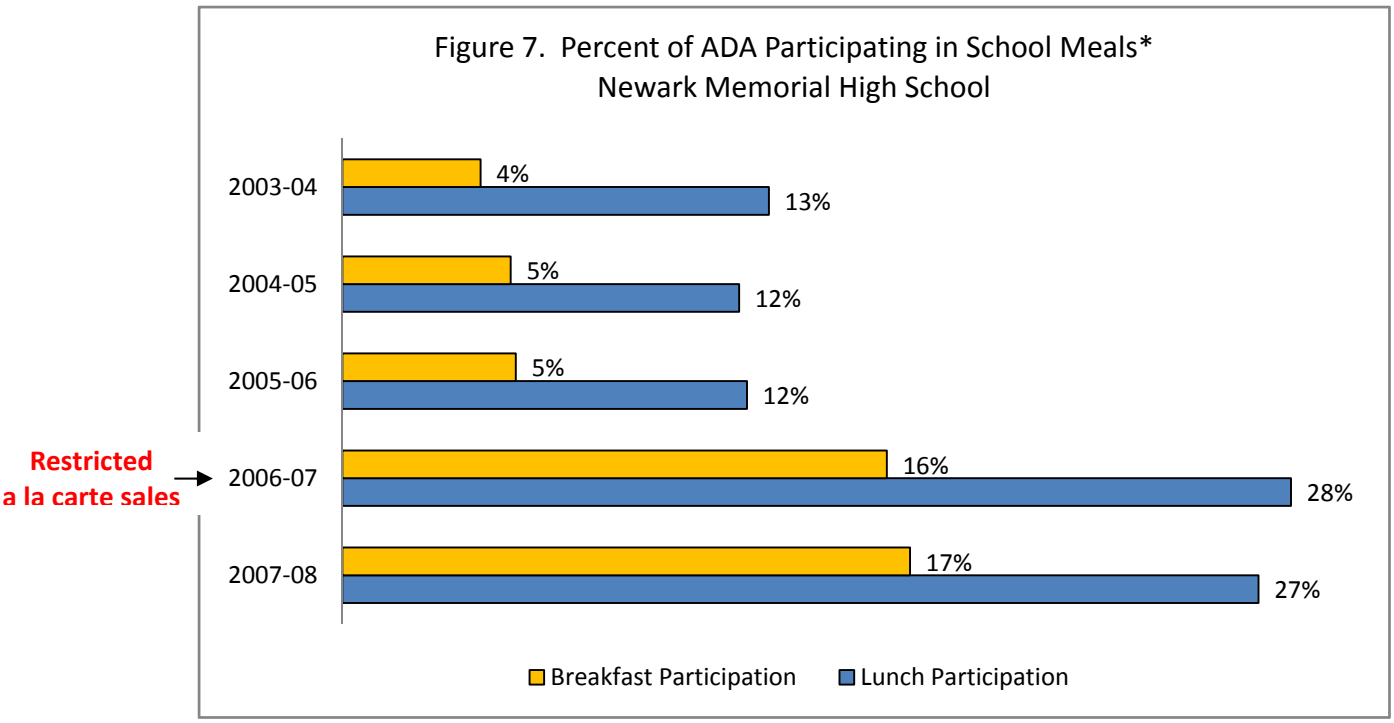
A la Carte Policy

To improve the nutritional quality of food consumed by students (i.e. to encourage consumption of balanced meals versus single food items) and to increase school food revenues, NUSD severely limits the sale of a la carte items.

Since 2006-07, a la carte items at the NUSD elementary schools include only baked chips, bottled water, and low-fat chocolate chip cookies. Mr. Machi reported that the decrease in a la carte items did not have a negative fiscal impact on NUSD Child Nutrition Services. A review of the CNS financial records supports this assertion. Figures 5 and 6 show that revenues and profits increased after restrictions on a la carte sales.

All a la carte items were discontinued at Newark Junior High School beginning in the fall of 2008-09. For 2007-08, a la carte items at NJHS included only baked chips, bottled water, low-fat chocolate chip cookies, Gatorade, Vitamin Water, and fruit snacks made with 100% fruit juice. From 2007-08 school meal participation data, NUSD Child Nutrition Services discovered that more students were buying a la carte items than reimbursable meals. The decision to offer only reimbursable meals to NJHS students was based on an effort to improve students' nutritional health and Child Nutrition Services' fiscal strength.

A la carte items at Newark Memorial High School (NMHS) consist only of Vitamin Water, bottled water, Gatorade, and baked chips. Mr. Machi reported a "dramatic" increase in school meal participation at NMHS after the decrease in a la carte items on the menu for 2006-07. School meal participation data supports this observation (see Figure 7). According to Mr. Machi, current a la carte items do not seem to negatively impact participation in reimbursable meals because students purchase available a la carte items in addition to full meals.



**Percent of ADA Participating in School Meal Programs* is calculated from ADA and the number of meals served per operating day.

Addressing the notion that restricted a la carte sales would be unpopular with student diners, Mr. Machi states, "We've weaned a lot of kids off a la carte because we've offered better fresh fruit. For the most part, if it's good fruit, they'll take the fruit, the entrée, and the milk." Child Nutrition Services also worked to keep some of the most popular a la carte items on the menu as components of reimbursable meals. Some items (e.g. cinnamon rolls) were adjusted to meet California SHAPE nutrition standards. (See the *Meal Pattern* section on page 20 for details about SHAPE nutrition.)

No-Juice Policy

NUSD does not serve fruit juice. Like the restriction of a la carte sales, the "no juice" policy stems from concerns about nutritional quality and fiscal viability. The item cost of fruit juice is typically less than that of fresh fruit. However, fruit juice is delivered from vendors as a frozen product. Distributing the frozen juice from the central NUSD food warehouse to school sites was logistically difficult. Storing and thawing the juice were costly in terms of space and labor. Ultimately, fruit juice was more expensive than fresh fruit. In terms of nutritional quality, fruit juice has some of the same beneficial nutrients as whole fruit, but lacks others, including fiber. Mr. Machi supports fresh fruit consumption by not serving juice. He explained, "If you serve a student juice they will never eat fresh fruit." With respect to serving fruit juice Mr. Machi summarized his CNS experience by saying, "There's no benefit. There's no benefit to [the students' nutritionally. There's no benefit to the [Child Nutrition Services] department [fiscally]."

Meal Pattern
NUSD utilizes the California SHAPE meal pattern. Compliance with SHAPE is assessed by a weekly average of menu items. This method of assessment, according to Mr. Machi, allows for valuable flexibility in preparing scratch-cooked entrees. A detailed description of the meal pattern is appended. This meal pattern includes standards for calories, vitamins A & C, protein, iron, and calcium. SHAPE also includes targets for fats, saturated fats, fiber, sodium, and cholesterol.

Under the California SHAPE meal pattern, a minimum of 3 items must be offered with a minimum of 2 selected for each meal. Offered items must include fluid milk and an entrée.

Food Service Equipment
All NUSD school sites use salad bars to serve produce. Mr. Machi and the CNS staff believe this equipment is essential to offering fresh produce that students will actually select. Like all consumers, students "eat with their eyes first" (Mr. Machi). Produce, therefore, must be attractively presented.

Unfortunately, some of the most basic equipment required by CNS to provide schools meals (e.g. school site freezers, the central kitchen) is in need of repair or upgrade in order to maintain, let alone expand, NUSD's school meal programs. Though Second Chance Breakfast continues to bolster the fiscal strength of NUSD Child Nutrition Services, the department lacks the funds to pay for necessary equipment repairs and upgrades.

Technology- POS and Menu Planning System
NUSD uses the NutriKids Point of Sale System, which increases the efficiency of record keeping. This allows more time for innovation and growth within Child Nutrition Services. NUSD CNS uses the system to track changes in students' FRP status. This capacity for tracking enables CNS to contact students' families about lapses in enrollment (e.g. missing paperwork from one academic year to the next). The POS system also allows accurate counts of all reimbursable meals served, ensuring accurate federal and state reimbursement. Additionally, the system allows for quick service lines and can be used to monitor the popularity of menu items through sales records. Mr. Machi reported that the support of NUSD's Information Technology department is critical for the installation and on-going maintenance of the NutriKids software program.

MyNutriKids is an online payment system that allows parents to electronically add money to their child's school meal account. This payment option is available to NUSD families through the CNS website.

NUSD CNS also uses NutriKids menu planning software. This helps ensure that all school meals are in compliance with the SHAPE meal pattern.

Closed Campuses
All mainstream NUSD schools have closed campuses. Mr. Machi and Mr. London cited this as a very important factor in school meal participation, particularly at the secondary schools.

District Wellness Policy – Celebratory Food
As required by California state law, NUSD has a district wellness policy. In response to the Wellness Policy, Child Nutrition Services produced a pamphlet discouraging the use of unhealthy foods to celebrate special occasions and reward students.

Future Changes to NUSD Child Nutrition Services

Mr. Machi is pursuing the incorporation of nutrition education into meal periods. He envisions breakfast clubs in which for parents and students to dine together while participating in a nutrition education lesson.

DEVELOPING A SECOND CHANCE BREAKFAST PROGRAM
LINCOLN ELEMENTARY SCHOOL

Introduction

From June 2008 through December 2008, CFPA had the opportunity to observe, in real-time, the development of a Second Chance Breakfast program at Lincoln Elementary School, an NUSD campus. Through on-site observations of breakfast services, interviews with Principal Pamela Hughes, discussion with teachers, and interviews with on-site CNS staff, CFPA documented the challenges, solutions, and benefits of implementing Second Chance Breakfast as the implementation occurred. This section of the report describes Lincoln Elementary before and after 2CB began.

Lincoln Elementary School was the last mainstream NUSD campus to adopt Second Chance Breakfast because of a change in the school's administration. Pamela Hughes was a new principal in 2006-07 when other schools transitioned to 2CB. Principal Hughes prudently did not want to proceed with 2CB without first ensuring buy-in from her staff.

Conventional Pre-bell Breakfast at Lincoln Elementary School

Convention breakfast is served in the cafeteria (multi-purpose room) from 7:30am until the first bell at 8:00am. Tables 3 and 4 describe the conventional breakfast service observed by CFPA staff. While conventional breakfast service continued after the implementation of 2CB, these observations took place prior to the implementation.

Table 3. Conventional Breakfast Staffing at Lincoln Elementary School

Meals Served	CNS Staff On-Site	Other Personnel Present at Breakfast
74	1	• 1 campus monitor • Principal (not present for the entire service period) NOTE: Some parents also sit with their children during the meal service

Table 4. Conventional Breakfast Service and Menu at Lincoln Elementary

Items Available for Self-Service	Items Served by CNS Staff	Free Water
Fruit Fresh oranges sections* **Milk** 1% plain milk Nonfat chocolate milk	**Entrees** • Cold Cereal: Crisp Rice, Toasty Os • Pancake on a stick • Bagel with cream cheese **Other** Graham crackers	None in the cafeteria

* On the day of observation, there was not enough fresh fruit (sectioned oranges) to serve all students.

Students who come to the cafeteria for breakfast pick up their identification cards, organized by classroom, from baskets near the service window. A CNS employee (Bertha DeAnda) swipes each card. Students may also pay with cash. On the day of observations, children arrived and were served at a steady pace throughout the meal period.

Ms. DeAnda is bilingual (Spanish and English) and makes an effort to interact with every student that eats breakfast. Ms. DeAnda acknowledged that her interactions with students are short but knows that they can be very significant. She said, "I take that extra step" to make each student feel acknowledged and special. "How you make the student feel when they come in" (Ms. DeAnda) is critical to participation.

Ms. DeAnda reported that the Lincoln Elementary campus monitor and custodian are very strict about behavior and keeping the dining area clean. On the day of observation, the dining area appeared very well maintained and the students were notably well behaved.

2CB at Lincoln Elementary School

Lincoln Elementary School - The Need for 2CB

As with other NUSD schools, 2CB at Lincoln was implemented to serve students who do not have time to eat in the morning before school or students who eat an early breakfast at home and become hungry again before lunchtime. Because students who eat conventional school breakfast are not allowed to leave the cafeteria before the first bell (8:00am), some students skip conventional breakfast in order to visit the playground each morning. 2CB provides these students the opportunity to eat a morning meal.

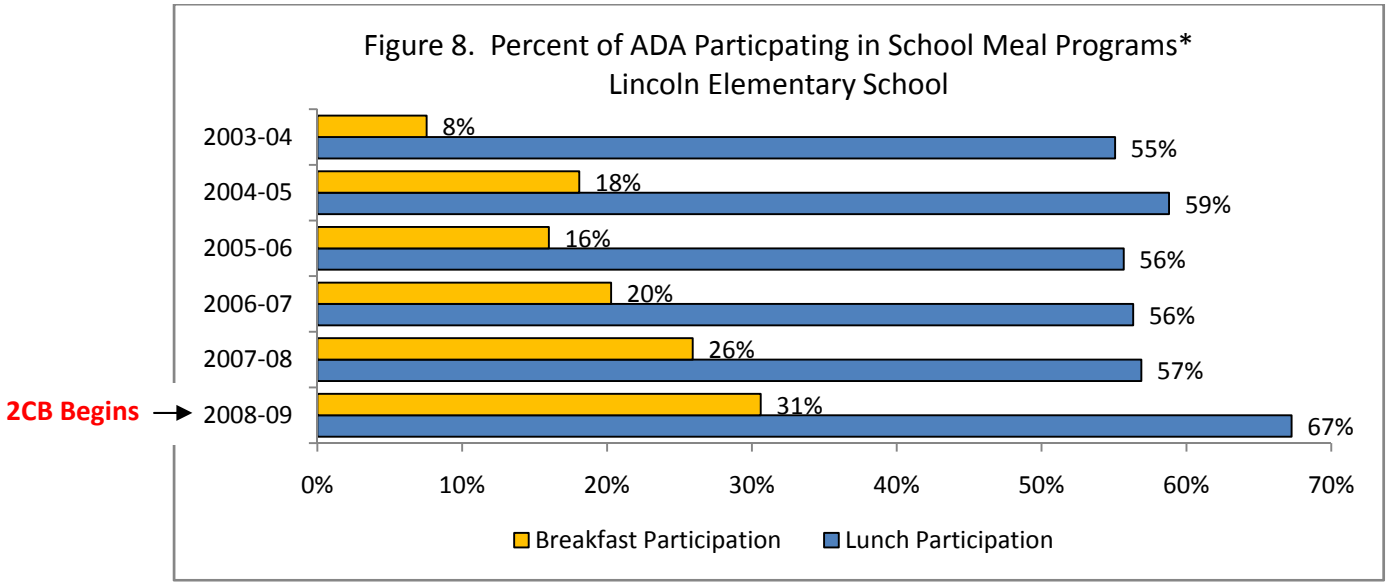
Principal Hughes believed that 2CB would decrease the "time pressure" on students for getting ready at home, arriving at school, and getting to class on time. When only

conventional breakfast service was offered at Lincoln, Ms. DeAnda packaged breakfasts for several chronically late students so they could eat in the classroom or at first recess.

Beyond conventional breakfast at Lincoln, Second Chance Breakfast is another opportunity for students to eat a morning meal and experience the associated improvements in health, academic performance, and behavior. Ms. DeAnda recalled one teacher who complained that a particular student was an extra five minutes late each day because the student stopped by the cafeteria for conventional pre-bell breakfast. Ms. DeAnda suggested to the teacher that the student was likely better able to focus after eating in the morning. The teacher subsequently observed the student and agreed. With Second Chance Breakfast, this student can eat a morning meal without being late to class.

Lincoln Elementary School - Benefits of 2CB

As expected, participation in school breakfast rose following the implementation of Second Chance Breakfast at Lincoln Elementary. Figure 8 shows a general increase in school breakfast participation from 2003-04 to 2008-09.[11] There is no method by which the increase in participation can be attributed to 2CB with absolute certainty. However, absent any other significant changes in breakfast service at Lincoln Elementary, 2CB is very likely the cause of increased school breakfast participation in 2008-09. Note that an increase in school lunch participation occurred in conjunction with 2CB implementation and the increase in school breakfast participation.



**Percent of ADA Participating in School Meal Programs* is calculated from ADA and the number of meals served per operating day.

[11] 2008-09 SY data includes breakfasts served from 9/22/08-12/10/08. Data from the first 3 weeks of the school year did not reflect typical participation and data beyond 12/10/08 were not available at the time this report was written.

Implementing 2CB at Lincoln Elementary

Communication with Lincoln Families

Communication with students, families, and staff was essential to successfully implementing the 2CB program at Lincoln Elementary. To introduce the program, Child Nutrition Services sent letters in English and Spanish to all families over the summer. NUSD Child Nutrition Services also operates a website on which they post announcements, menus, and other school meal-related information. Staff in the Lincoln Elementary school office told families about 2CB during on-site school registration and Back-to-School Night. Both Mr. Machi and Principal Hughes credit this type of personal contact with helping to increase 2CB awareness and participation.

Communication with Lincoln Staff

To discuss the concept of Second Chance Breakfast and to provide a forum for questions, a CFPA staff member, Mr. Machi, the Lincoln Elementary School teachers, and Principal Hughes met during a Staff Development Day prior to the start of the 2008-09 school year.

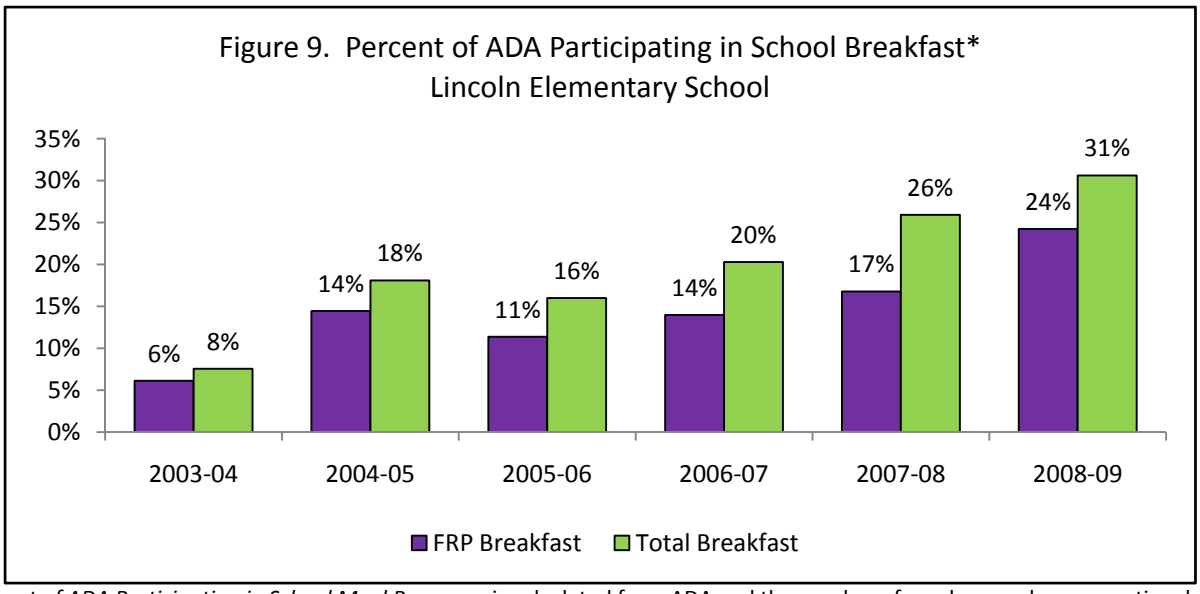
Anticipated Barriers and Outcomes/Solutions

Prior to implementation of 2CB, Lincoln Elementary School staff (teachers, principal, and custodial personnel) expressed concern about participation, supervision, interference with physical activity, scheduling, buy-in, and custodial services. These anticipated barriers and related outcomes are detailed below.

Participation

Concern: Lincoln Elementary School staff expressed concern that students would not participate in 2CB because participation in conventional pre-bell breakfast was relatively high and the school has a relatively low number of FRP-enrolled students. Staff assumed non-FRP students would not participate in 2CB.

Outcome: Largely attributable to implementation of 2CB, the increase in school breakfast participation among FRP-enrolled and full-pay students is shown in Figure 9. Despite early concerns, both FRP-enrolled and full-pay students are participating in 2CB.



**Percent of ADA Participating in School Meal Programs* is calculated from ADA and the number of meals served per operating day.

Supervision

Concern: Adequate supervision of 2CB participants was a concern for the Lincoln Elementary staff. Principal Hughes proposed that students be allowed to take 2CB meals from the cafeteria onto the playground where they could be supervised by the yard monitors present for recess. However, NUSD CNS policy requires food served in the cafeteria to be consumed in the cafeteria.

Outcome: To date, the Child Nutrition Services employee at Lincoln Elementary (Ms. DeAnda) supervises 2CB participants. Principal Hughes periodically visits the 2CB service. Both Ms. DeAnda and Principal Hughes reported that students are generally well-behaved during Second Chance Breakfast. CFPA's observations of 2CB service at Lincoln support the reports of good behavior.

Principal Hughes noted that supervision of 2CB participants by a Child Nutrition Services employee likely works, in part, because Lincoln is a small school and the number of 2CB participants is manageable. Ms. DeAnda prefers to be the sole adult responsible for monitoring students who participate in Second Chance Breakfast. Larger schools and/or schools with very high 2CB participation may need to consider other strategies to ensure adequate supervision.

Physical Activity

Concern: The Lincoln Elementary staff understands that both nutrition and physical activity are essential to student health, academic performance, and behavior. One pre-implementation

concern was whether students participating in 2CB would lose their opportunity to be physically active during recess, which is also the 2CB service period.

Outcome: Almost two months after 2CB implementation, Principal Hughes reported that students who want to eat 2CB and play during recess have adequate time to do so. CFPA observed Ms. DeAnda encouraging students to "go outside and play" after students finished eating 2CB.

Scheduling
Concern: Assemblies and inclement weather may cause scheduling and space conflicts with 2CB. Lower and upper grade levels have separate recesses (2CB services) and Lincoln Elementary has limited indoor space.

Outcome: To date, this issue has not presented itself. However, Principal Hughes asserted that with inclement weather (necessitating indoor recess) or special assemblies, flexibility will be required to accommodate all students' needs and activities. CFPA observed the construction of a Haunted House taking place during 2CB service in the cafeteria (multi-purpose room). Though space was limited, only minor adjustments were required (i.e. the salad/fruit bar was not setup for 2CB).

Buy- In and Cooperation
Concern: As with many school programs, buy-in and cooperation from the entire school community is important for success with 2CB. Prior to implementation, stakeholders acknowledged that support from teachers, students, staff, administrators, district personnel, and all levels of Child Nutrition Services would be required for a Second Chance Breakfast program to thrive at Lincoln Elementary.

Outcome: Mr. Machi and Principal Hughes supported Second Chance Breakfast from the program's inception. Ms. DeAnda was excited about the program from its first introduction. Ms. DeAnda told CFPA, "I would love to see the breakfast program grow." Though they had some concerns, particularly about supervision, teachers were generally supportive of the program when 2CB was introduced at the aforementioned Staff Development Day. In late 2008, Ms. DeAnda and Principal Hughes reported that students, parents, and teachers like the 2CB program.

Custodial Services
Concern: As an additional meal service, 2CB can change the workload and daily routine of custodial staff. Principal Hughes anticipated that the Lincoln Elementary School custodian might have difficulty adjusting to such changes. When he was asked about the anticipated

impact of 2CB on his maintenance duties, the custodian told CFPA that he "does what the principal asks him to do."

Outcome: Principal Hughes reported that the custodian "is adjusting" to 2CB implementation. CFPA observed that the cafeteria was very clean before and after 2CB service. NUSD Child Nutrition Services purchased a wet/dry vacuum for the Lincoln Elementary custodian to help increase the efficiency of cleaning food and beverage spills. The custodian was unavailable for feedback after the 2CB implementation.

Further Study

This evaluation of Newark Unified School District's breakfast programs and the development of a Second Chance Breakfast Program at Lincoln Elementary School was an excellent opportunity to assess the challenges, perceived barriers, solutions, and benefits associated with Second Chance Breakfast. Future assessment of school meal programs, in NUSD and elsewhere, should include direct input from students. School districts should consider formally surveying students for feedback on school meal programs. Student input would enrich any evaluation of school meal programs and help school districts adapt such programs to better meet students' needs.

Implementing Second Chance Breakfast throughout NUSD did not require an extension of the school day. However, this may be a concern at other sites looking to start 2CB programs. Further study of Second Chance Breakfast should capture input from teachers who've transitioned to longer school days in order to support 2CB and teachers who face such transitions.

Finally, while current evidence shows that breakfast positively impacts academic performance and health, future study of specific meal programs, such as Second Chance Breakfast, should examine the effect of these particular programs on test scores and BMI (body mass index).

Appendices

APPENDIX A.

School Breakfast Models

For details beyond the descriptions provided here, please see the California Food Policy Advocates' Breakfast First website (www.breakfastfirst.org) and the CFPA video *Everybody Eats* (http://www.youtube.com/watch?v=sKQAYb1gWgw).

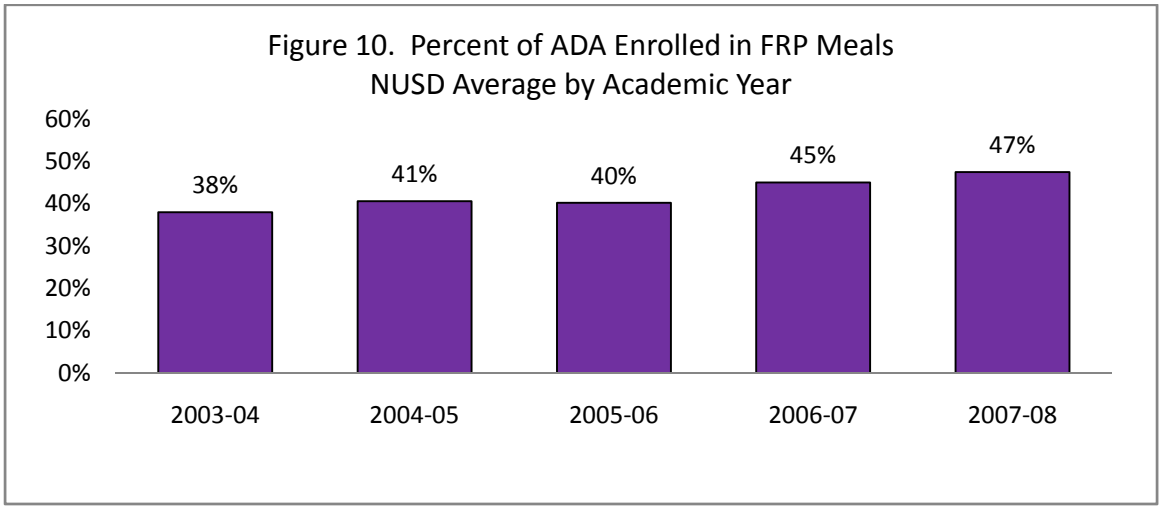
Breakfast in the Classroom
The simplicity of classroom breakfast is the key to its success. With this model, all children are offered breakfast at the start of the school day, usually free of charge. When implemented as a universal breakfast model, Breakfast in the Classroom is most fiscally feasible in schools with high FRP eligibility rates. Students eat at their desks and the entire process from service to clean-up takes approximately 15 minutes. There are numerous ways to enhance those 15 minutes of breakfast so that valuable instructional minutes are not lost. Strategies include using the time to take role and make daily announcements, read a story, or deliver a nutrition education lesson related to the breakfast. Breakfast in the Classroom ensures that all students start the school day well-fed and ready to learn.

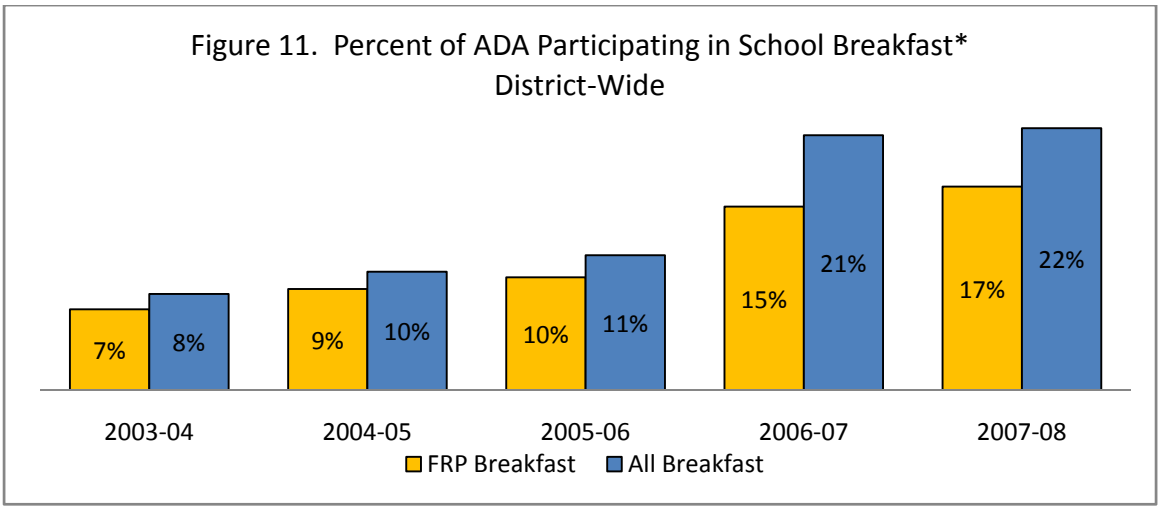
Grab n' Go
Grab n' Go breakfast is a perfect way to serve school breakfasts to busy students, particularly secondary school students who frequently walk from room to room during their academic day. Grab n' Go can be served before the bell and/or as a Second Chance Breakfast. Grab n' Go breakfasts contain easy-to-eat items typically served from portable carts stationed at locations that students rush by on the way to class, such as school entrances. Students obtain Grab n' Go meals quickly with a POS system or tickets. They can eat while walking to class or on a break in between classes. Many teachers permit students to quietly finish Grab n' Go breakfasts at the beginning of class.

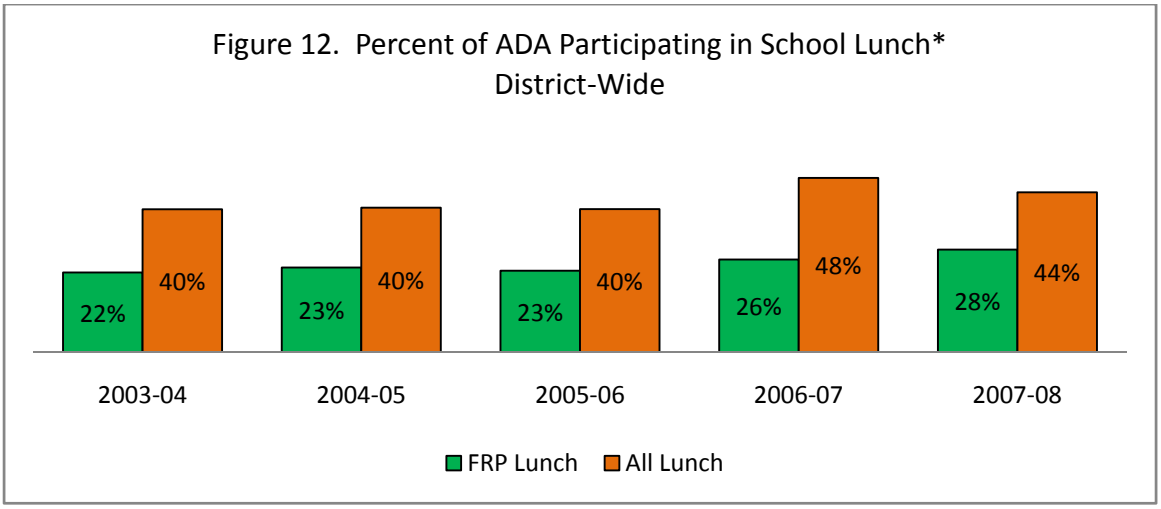
APPENDIX B.

NUSD - Increased FRP Enrollment and Participation

Figure 10 shows the increasing numbers of enrolled FRP students from 2003-04 to 2007-08. Figures 11 and 12 show the general increase in FRP meal participation from 2003-04 to 2007-08. Changing socioeconomic demographics within the NUSD population and generally tough economic times likely contributed to an increase in FRP school meal participation, but these effects are not currently documented. Since 2005-06, NUSD-CNS has increased outreach to students eligible for free and reduced prices lunches. FRP applications are available in parent handbooks and on the NUSD-CNS website, as well as at all school sites. NUSD-CNS also markets the FRP component of meal programs at Back to School Night. NUSD-CNS makes a concerted effort to inform parents that FRP meal applications must be submitted each year. Mr. Machi reported that one key to increasing FRP participation is "building trust with students and parents" because many families hesitate to disclose the information required on FRP applications.







**Percent of ADA Participating in School Meal Programs* is calculated from ADA and the number of meals served per operating day.

NUSD - Improved Meal Quality and Appeal

Mr. Machi, a former executive chef, has increased the proportion of scratch-cooked food served throughout the district. He and his staff work to constantly try new recipes. For NUSD, improved nutritional quality and appeal of meals was followed by an increase in participation among FRP and paying students. Parents and students are more likely to favor school meal programs if meals are nutritionally sound and appetizing. NUSD staff reported to CFPA that school food has a negative reputation for being unappealing and being "junk food." Mr. Machi and CNS employees work to counteract those perceptions. For example, Henry London, Child Nutrition Services Supervisor at Newark Memorial High School, does taste testing with the high school's leadership class to encourage buy-in from students. Bertha DeAnda, CNS employee at Lincoln Elementary School, implemented the use of a visual display near the student drop-off area. The display includes pictures of menu items and a menu to advertise the school breakfast program.

APPENDIX C.

Lincoln Elementary School
Bell Schedule 2008-09

Grades 1-3		*Grades 4-6*	
Monday-Thursday		*Monday-Thursday*	
Conventional Breakfast		**Conventional Breakfast**	
Instructional minutes	8:10 -10:20	Instructional minutes	8:10-9:45
Second Chance Breakfast	10:20 -10:35	***Second Chance Breakfast***	9:45-10:00
Instructional minutes	10:35-12:10	Instructional minutes	10:00-11:30
Lunch	12:10-12:50	**Lunch**	11:30-12:10
Instructional minutes	12:50-2:32	Instructional minutes	12:10-2:32
Friday		*Friday*	
Conventional Breakfast		**Conventional Breakfast**	
Instructional minutes	8:10 -10:20	Instructional minutes	8:10-9:45
Second Chance Breakfast	10:20 -10:35	***Second Chance Breakfast***	9:45-10:00
Instructional minutes	10:35-12:10	Instructional minutes	10:00-11:30
Lunch	12:10-12:50	**Lunch**	11:30-12:10
Instructional minutes	12:50-1:05	Instructional minutes	12:10-1:05

Newark Junior High School
2008-2009 Bell Schedule

Mondays-Wednesdays-Fridays			
8th Grade		*7th Grade*	
Conventional Breakfast		**Conventional Breakfast**	
First Bell	8:25 AM	Bell	8:25 AM
Advisory	8:30-8:48 AM	Advisory	8:30-8:48 AM
P-1	8:48-9:38 AM	P-1	8:48-9:38 AM
P-2	9:42-10:32 AM	P-2	9:42-10:32 AM
Second Chance Breakfast	10:32-10:42 AM	***Second Chance Breakfast***	10:32-10:42 AM
P-3	10:46-11:36 AM	P-3	10:46-11:36 AM
Lunch	11:36-12:06 PM	P-4	11:40-12:30 PM
P-4	12:10-1:00 PM	**Lunch**	12:30-1:00 PM
P-5	1:04-1:54 PM	P-5	1:04-1:54 PM
P-6	1:58-2:48 PM	P-6	1:58-2:48 PM
Tuesdays-Thursdays			
8th Grade		*7th Grade*	
Conventional Breakfast		**Conventional Breakfast**	
Bell	8:25 AM	Bell	8:25 AM
Advisory	8:30-8:45 AM	Advisory	8:30-8:45 AM
P-1	8:45-9:30 AM	P-1	8:45-9:30 AM
P-2	9:34-10:19 AM	P-2	9:34-10:19 AM
Second Chance Breakfast	10:19-10:29 AM	***Second Chance Breakfast***	10:19-10:29 AM
P-3	10:33-11:18 AM	P-3	10:33-11:18 AM
Lunch	11:18-11:48 AM	P-4	11:22-12:07 PM
P-4	11:52-12:37 PM	**Lunch**	12:07-12:37 PM
P-5	12:41-1:26 PM	P-5	12:41-1:26 PM
P-6	1:30-2:15 PM	P-6	1:30-2:15 PM

Newark Memorial High School
Bell Schedules 2008-09

Regular Bell Schedule	
Monday, Tuesday, and Friday	
A Period	7:00-7:40
AM Tutorial	7:14-7:39
Conventional Breakfast	
Period 1	7:45-8:37
Period 2	8:43-9:35
Second Chance Breakfast	9:35-9:49
Pleasure Reading	9:55-10:20
Period 3	10:20-11:12
Period 4	11:18-12:10
Lunch	12:10-12:44
Period 5	12:50-1:42
Period 6	1:48-2:40
Period 7	2:46-3:42
PM Tutorial	2:46-3:11
Wednesday and Thursday	
A Period	7:00-7:39
AM Tutorial	7:14-7:39
Conventional Breakfast	
Period 1/2	7:45-9:17
Second Chance Breakfast	***9:17-9:31***
Pleasure Reading	9:37-10:01
Period 3/4	10:01-11:33
Lunch	**11:33-12:07**
Period 5/6	12:13-1:45
PM Tutorial	1:50-2:15
Period 7	1:51-2:47

Assembly Schedule	
Any Weekday	
A Period	7:00-7:39
Conventional breakfast	
Period 1	7:45-8:26
Period 2	8:32-9:13
Second Chance Breakfast	***9:13-9:27***
Pleasure Reading	9:33-9:57
Period 3	9:57-10:38
Period 4	10:44-11:25
Assembly	11:31-12:31
Lunch	**12:31-1:06**
Period 5	1:12-1:53
Period 6	1:59-2:40
Period 7	2:46-3:42

APPENDIX D.

COMPARISON OF MENU PLANNING APPROACHES USED FOR LUNCH

SHAPE California protocol follows the USDA regulations for NSMP with the following exceptions:

- A 10% tolerance is allowed in the first year of implementation by site, (i.e., must meet 90% of calories and standards/targets or when standard is a maximum, must not exceed 110%). 5% tolerance for subsequent years.
- Fat and saturated fat are monitored as targets. (30% and 10% of calories, respectively).
- Preschool targets for fat and saturated fat are ranges. Fat 30-35%; Saturated fat 10-12%.
- Target levels are set for fiber (6 g), sodium (1100 mg), and cholesterol (100 mg). Note: levels for breakfast are fiber (4 g), sodium (825 mg), and cholesterol (75 mg).
- Menus will be simple averaged by including all menu items or by averaging the top three items in each category. For each method, menu items that account for less than 10% should not be included in the nutrient analysis.
- Must offer a minimum of three menu items, including an entrée and fluid milk and at least two menu items must be taken or served. May decline any food.
- Must analyze breakfast and lunch separately.
- Menu item is defined solely by the way the food is offered.

	USDA Traditional Menu Planning (TRADL)	**USDA Enhanced Food Based Menu Planning (EFBMP)**	**USDA Nutrient Standard Menu Planning (NSMP)**	**SHAPE Revised Meal Pattern (SRMP)**
Meat/Meat Alternate	Grades K-3 (optional): 1 ½ oz. Grades 4-12: 2 oz.	Grades K-3 (optional): 1 ½ oz. Grades K-12: 2 oz.	No requirement for any one type or amount of food.	Grades K-6: 1 ½ oz. Grades 7-12: 2 oz. *All grades must include ¼ cup beans per week to replace 1 oz. meat.*
Fruit/Vegetable	Grades K-3 (optional): ½ cup Grades 4-12: ¾ cup	Grades K-3 (optional): ¾ cup Grades K-6: ¾ cup, *plus ½ cup over a week* Grades 7-12: 1 cup	No requirement for any one type or amount of food.	Grades K-3 (optional):¾ cup Grades 4-12: ¾ cup, *plus ½ cup over a week* *All grades must offer at least 1 cup fresh (raw) per week.*

	USDA Traditional Menu Planning (TRADL)	USDA Enhanced Food Based Menu Planning (EFBMP)	USDA Nutrient Standard Menu Planning (NSMP)	SHAPE Revised Meal Pattern (SRMP)
Grain/Breads	Grades K-12: 8 svgs/wk Minimum: 1 svg/day	Grades K-3 (optional): 10 svgs Grades K-6: 12 svgs/wk Grades 7-12: 15 svgs/wk *Must follow new guidelines for determining bread equivalents.*	No requirement for any one type or amount of food.	Grades K-12: 12 svgs/wk *Must offer 5 (25%) whole grain servings per week. Must follow new guidelines for determining bread equivalents.*
Milk	8 oz. Variety of fat content	8 oz. Variety of fat content	Fluid milk must be offered. Quantity not specified.	8 oz. Variety of fat content
Meal Components	Meat/Meat alternate, fruit/vegetable, grain/breads, and milk. Grain desserts do not count toward the bread requirement.	Same as TRADL except grain desserts count toward the bread requirement up to one serving per day.	All foods including desserts, extras, and condiments count toward the nutrient content except foods of minimal nutritional value.	Same as TRADL except up to two desserts per week can count towards bread requirement. Desserts may include foods other than grain-based with emphasis on low fat.
Offer vs. Serve	All five required food items must be offered to students. Senior high school students and, at the discretion of the sponsor, students below senior high may be permitted to decline one or two of the required five food items. May decline any food.	All five required food items must be offered to students. Senior high school students and, at the discretion of the sponsor, students below senior high may be permitted to decline one or two of the required five food items. May decline any food.	Must offer a minimum of three menu items, including an entrée and fluid milk and at least two menu items must be selected. One must be an entrée. Student may decline no more than two menu items.	Same as EFBMP
Age/Grade	Two required for K-12, more are optional.	Two required for K-12, more are optional.	At least two for K-12. May use custom age group.	May use one size meal for all, more are optional.

	USDA Traditional Menu Planning (TRADL)	USDA Enhanced Food Based Menu Planning (EFBMP)	USDA Nutrient Standard Menu Planning (NSMP)	SHAPE Revised Meal Pattern (SRMP)
Meal Requirements	Meets the requirements if all of the meal components in the correct quantities are offered daily and weekly and the appropriate number of items are served by serving method (offer vs. serve or traditional service) and school level (elementary, middle and high school). Must meet Nutrient Standards and Dietary Guidelines.	Meets the requirements if all of the meal components in the correct quantities are offered daily and weekly and the appropriate number of items are served by serving method (offer vs. serve or traditional service) and school level (elementary, middle and high school). Must meet Nutrient Standards and Dietary Guidelines.	Must offer a minimum of three menu items, including an entrée and fluid milk and at least two menu items need to be served per meal. Weekly average of menu must meet calories and nutrient standards for fat, saturated fat, vitamins A & C, iron, and calcium. Monitor cholesterol, fiber, and sodium (no set levels).	Same as EFBMP *NOTE: There is no breakfast pattern for this option.*

APPENDIX E.

NUTRITION STANDARDS
Averaged over the School Week

For all of the School Meals Initiative Menu Planning Approaches (except the Traditional Menu Planning Approach)

SCHOOL LUNCH PROGRAM **Minimum Requirements for Nutrient and Calorie Levels**				
Category	Minimum Requirements			Optional
Nutrients and Energy Allowances	Preschool	Grades K-6	Grades 7-12	Grades K-3
Energy Allowance (Calories)	517	664	825	633
Total Fat (as a percentage of total calories)	*	*	*	*
Saturated Fat (as a percentage of total calories)	**	**	**	**
Protein (g)	7	10	16	9
Calcium (mg)	267	286	400	267
Iron (mg)	3.3	3.5	4.5	3.3
Vitamin A (RE)	150	224	300	200
Vitamin C (mg)	14	15	18	15

SCHOOL BREAKFAST PROGRAM Minimum Requirements for Nutrient and Calorie Levels			
Category	Minimum Requirements		Optional
Nutrients and Energy Allowances	Preschool	Grades K -12	Grades 7-12
Energy Allowance (Calories)	388	554	618
Total Fat (as a percentage of total calories)	*	*	*
Saturated Fat (as a percentage of total calories)	**	**	**
Protein (g)	5	10	12
Calcium (mg)	200	257	300
Iron (mg)	2.5	3.0	3.4
Vitamin A (RE)	113	197	225
Vitamin C (mg)	11	13	14

* Not to exceed 30 percent over a school week.

** Less than 10 percent over a school week.

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