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7 CFR Parts 210 and 220
Nutrition Standards in the National School Lunch and School Breakfast Programs; Final Rule

DEPARTMENT OF AGRICULTURE

Food and Nutrition Service

7 CFR Parts 210 and 220

[FNS–2007–0038]

RIN 0584–AD59

Nutrition Standards in the National School Lunch and School Breakfast Programs

AGENCY: Food and Nutrition Service (FNS), USDA.

ACTION: Final rule.

SUMMARY: This final rule updates the meal patterns and nutrition standards for the National School Lunch and School Breakfast Programs to align them with the Dietary Guidelines for Americans. This rule requires most schools to increase the availability of fruits, vegetables, whole grains, and fat-free and low-fat fluid milk in school meals; reduce the levels of sodium, saturated fat and *trans* fat in meals; and meet the nutrition needs of school children within their calorie requirements. These improvements to the school meal programs, largely based on recommendations made by the Institute of Medicine of the National Academies, are expected to enhance the diet and health of school children, and help mitigate the childhood obesity trend.

DATES: *Effective date:* This rule is effective March 26, 2012.

Compliance date: Compliance with the provisions of this rule must begin July 1, 2012, except as otherwise noted on the implementation table provided in the preamble under **SUPPLEMENTARY INFORMATION**.

FOR FURTHER INFORMATION CONTACT: William Wagoner or Marisol Aldahondo-Aponte, Policy and Program Development Branch, Child Nutrition Division, Food and Nutrition Service at (703) 305–2590.

SUPPLEMENTARY INFORMATION:

Executive Summary

This final rule modifies several key proposed requirements to respond to commenter concerns and facilitate successful implementation of the requirements at the State and local levels. The rule phases in many of the changes to help ensure that all stakeholders—the children, the schools, and their supply chains—have time to adapt. Most notably, this final rule provides additional time for implementation of the breakfast requirements and modifies those requirements in a manner that reduces the estimated costs of breakfast changes, as compared to the proposed rule. As a result, the final rule is estimated to add $3.2 billion to school meal costs over 5 years, considerably less than the estimated cost of the proposed rule.

When considered in the context of other related provisions of the Healthy Hunger-Free Kids Act (HHFKA) of 2010, sufficient resources are expected to be available to school food authorities to cover the additional costs of updated meal offerings to meet the new standards.

Specifically, in addition to improving nutritional quality, the HHFKA mandated that beginning July 1, 2011, revenue streams for a la carte foods relative to their costs be at least as high as the revenue streams for Program meals compared to their costs. Consequently schools should receive over $1 billion a year in new food revenues beginning in School Year 2011–2012. That will help schools work toward implementing the new standards effective the following year, *i.e.,* July 1, 2012. In addition, USDA estimates that the ''School Food Authorities revenues'' rule will increase participation in school meal programs by 800,000 children.

In addition, the six-cent per lunch performance-based reimbursement increase included in the HHFKA will provide additional revenue beginning October 1, 2012. The Congressional Budget Office estimated about $1.5 billion over 5 years will be provided in performance-based funding.

I. Background

The Richard B. Russell National School Lunch Act (NSLA) in Section 9(a)(4), 42 U.S.C. 1758(a)(4), requires that school meals reflect the latest ''Dietary Guidelines for Americans'' (Dietary Guidelines). In addition, section 201 of the Healthy, Hunger-Free Kids Act of 2010 (Pub. L. 111–296, HHFKA) amended Section 4(b) of the NSLA, 42 U.S.C. 1753(b), to require the Department of Agriculture (USDA) to issue regulations to update the meal patterns and nutrition standards for school lunches and breakfasts based on the recommendations issued by the Food and Nutrition Board of the National Research Council of the National Academies of Science, part of the Institute of Medicine (IOM). On January 13, 2011, USDA published a proposed rule in the **Federal Register** (76 FR 2494) to update the meal patterns and nutrition standards for the National School Lunch Program (NSLP) and the School Breakfast Program (SBP) to align them with the 2005 Dietary Guidelines.

The proposed rule sought to increase the availability of fruits, vegetables, whole grains, and fat-free and low-fat fluid milk in the school menu; reduce the levels of sodium, saturated fat and *trans* fat in school meals; and meet the nutrition needs of school children within their calorie requirements. The intent of the proposed rule was to provide nutrient-dense meals (high in nutrients and low in calories) that better meet the dietary needs of school children and protect their health. The proposed changes, designed for meals offered to school children in grades Kindergarten (K) to 12, were largely based on the IOM recommendations set forth in the report ''School Meals: Building Blocks for Healthy Children'' (October 2009).

In summary, the January 2011 proposed rule sought to improve lunches and breakfasts by requiring schools to:

- Offer fruits and vegetables as two separate meal components;
- Offer fruit daily at breakfast and lunch;
- Offer vegetables daily at lunch, including specific vegetable subgroups weekly (dark green, orange, legumes, and other as defined in the 2005 Dietary Guidelines) and a limited quantity of starchy vegetables throughout the week;
- Offer whole grains: half of the grains would be whole grain-rich upon implementation of the rule and all grains would be whole-grain rich two years post implementation;
- Offer a daily meat/meat alternate at breakfast;
- Offer fluid milk that is fat-free (unflavored and flavored) and low-fat (unflavored only);
- Offer meals that meet specific calorie ranges for each age/grade group;
- Reduce the sodium content of meals gradually over a 10-year period through two intermediate sodium targets at two and four years post implementation;
- Prepare meals using food products or ingredients that contain zero grams of *trans* fat per serving;
- Require students to select a fruit or a vegetable as part of the reimbursable meal;
- Use a single food-based menu planning approach; and
- Use narrower age/grade groups for menu planning.

In addition, the proposed rule sought to improve school meals by requiring State agencies (SAs) to:

- Conduct a nutritional review of school lunches and breakfasts as part of the administrative review process;
- Determine compliance with the meal patterns and dietary specifications based on a review of menu and

production records for a two-week period; and

- Review school lunches and breakfasts every 3 years, consistent with the HHFKA.

The 2010 Dietary Guidelines were released on January 31, 2011, after USDA published the proposed rule. On March 21, 2011 USDA issued a Notice in the **Federal Register** (76 FR 15225) seeking public comment on the need to modify the proposed rule to reflect the 2010 Dietary Guidelines recommendations to consume red-orange vegetables and protein subgroups: (1) Seafood; (2) meat, poultry and eggs, and (3) nuts, seeds, and soy products. The public comments to the Notice (76 FR 15225) were added to the proposed rule docket and all comments associated with the proposed rule were considered in preparing this final rule.

USDA received a total of 133,268 public comments during the comment period January 13–April 13, 2011. This total included several single submissions with thousands of comments. The types of comments received included 7,107 unique letters, 122,715 form letters from 159 mass mail campaigns, 3,353 non-germane letters, and 93 duplicates. Comments were analyzed using computer software that facilitated the identification of the key issues addressed by the commenters, as well as by USDA policy officials.

Although USDA considered all comments, the description and analysis in this final rule preamble focuses on the most frequent comments and those that influenced revisions to the proposed rule, and discusses modifications made to the proposed rule in response to public input. USDA greatly appreciates the public comments as they have been essential in developing a final rule that is expected to improve school meals in a sound and practical manner. To view all public comments on the proposed rule go to *www.regulations.gov* and search for public submissions under docket number FNS–2007–0038. A Summary of Public Comments is available as supporting material under the docket folder summary.

Note: This final rule does not update the Pre-K school meal patterns. These are under review and will be updated in a future rulemaking amending regulations implementing the USDA's Child and Adult Care Food Program. However, two provisions in this final rule, menu planning approach and fluid milk requirements, impact Pre-K meals as discussed later in this preamble.

II. Public Comments and USDA Response

USDA received comments from nutrition, health, and child advocates at the national, state and local levels; SAs that administer the school meal programs; school districts/boards; schools; school food service staff; superintendents, principals, and teachers; food manufacturers and distributors; food industry representatives; food service management companies; academia; nutritionists/dietitians; community organizations; parents and students; and many other interested groups and individuals. Overall, the comments provided were generally more supportive of the proposed rule than opposed. Comments from nutrition, health and child advocates; community organizations; academia; and parents favor the proposed rule, citing concern about the national childhood obesity problem and the increased likelihood of preventable diseases such as cardiovascular disease, high blood pressure, high cholesterol, stroke, and type 2 diabetes, all of which increase the cost of healthcare nationally. Many comments enthusiastically supported the increase in fruits, vegetables, whole grains, fat-free milk/low-fat milk in the school menus, and most other proposed changes designed to improve the nutritional quality of school meals.

Comments from SAs and school food authorities (SFAs), food industry, industry representatives, food service management companies, and others in the public and private sectors associated with the operation of the school meals programs also supported improving school meals but voiced strong concerns about some aspects of the proposed rule. The proposed food quantities, meat/meat alternate component at breakfast, weekly vegetable subgroup requirement at lunch, starchy vegetables limit, sodium reductions, whole grains requirement, and frequency of administrative review were the parts of the proposal that prompted most of their concerns. Program operators also raised concerns about the rule cost and implementation timeline, the impact of the proposed changes on student participation in the meal programs, and the potential for increased plate waste if meals are not acceptable to students. A number of commenters suggested that USDA conduct additional research or pilot test the proposed changes before implementation. All of the above concerns are more prevalent in the SBP than the NSLP. Schools that operate the SBP voiced significant concern about the estimated 50 cents increase in food and labor costs for each reimbursable breakfast in FY 2015, when all the requirements will be in place as stated in the proposed rule.

USDA has taken into consideration the different views expressed by commenters and seeks to be responsive to the concerns raised by stakeholders, especially those responsible for the management and day to day operation of the school meal programs. At the same time, we are mindful that the overweight and obesity epidemic affecting many children in America requires that all sectors of our society, including schools, help children make significant changes in their diet to improve their overall health and become productive adults. This final rule makes significant improvements to the NSLP and SBP to facilitate successful implementation of the requirements at the State and local levels. This final rule modifies several key proposed requirements to respond to commenter concerns as well as to address requirements of the Consolidated and Further Continuing Appropriations Act, 2012, Public Law 112–55. Most notably, this final rule provides additional time for implementation of the SBP requirements and modifies those requirements in a manner that reduces the estimated costs of breakfast changes, as compared to the proposed rule.

No changes to the SBP meal pattern take effect immediately upon publication of this final rule, except limiting flavor to fat-free milk, and requiring the service of only fat-free and low-fat milk (the latter is a statutory requirement codified in the NSLA in the HHFKA. See the discussion on ''Milk'' for further details). Furthermore, this rule introduces selected requirements into the SBP beginning SY 2013–2014 (the second year of implementation) to ease the estimated increase in breakfast costs and minimize impact on SBP operations. This approach is intended to enable program operators to concentrate on improving school lunches first and then focus on the breakfast changes. It also allows USDA to meet the statutory requirement to offer meals that reflect the Dietary Guidelines while being responsive to the concerns raised by program operators and other stakeholders. However, SFAs that are able to implement the new meal requirements concurrently in the SBP and NSLP are encouraged to do so with SA approval.

Section G of the Regulatory Impact Analysis discusses in greater detail the key differences between the proposed and final rules. Most of the estimated reduction in cost is due to the policy changes discussed above, including the

phased in breakfast meal pattern requirements and the elimination of a separate meat component at breakfast, as well as more modest changes to the lunch meal pattern requirements' grain and vegetable components. In addition to these policy changes, lower food inflation since preparation of the proposed rule cost estimate contributes to the reduction in the cost of the final rule compared to the proposed rule.

The following is a summary of the key public comments on the proposed rule and USDA's response. Public comments unrelated to the specific provisions of the rule (*e.g.,* standards for cholesterol, dietary fiber, artificial sweeteners, caffeine) are not discussed here but are addressed in the Summary of Public Comments. For a more detailed discussion of the public comments see the Summary of Public Comments posted online at *www.Regulations.gov*.

Menu Planning Approach

Proposed Rule: Follow a single Food-Based Menu Planning (FBMP) approach.

Comments: Nutrition, health and child advocates; community organizations; academia; parents; and SAs support the FBMP approach because it helps children easily identify the key food groups necessary for a well-balanced meal. According to a health advocate, FBMP also minimizes the opportunity to offer unhealthy foods that have been fortified to meet the nutrient requirements. SAs support a single menu planning approach as it supports a more cost effective delivery of training and technical assistance resources.

However, a number of SFAs that currently use the Nutrient Standard Menu Planning (NSMP) and some school advocacy organizations, trade associations, food manufacturers, nutritionists, and other commenters suggested that NSMP be allowed as an option. SFAs that use NSMP claimed that they would still have to conduct a nutrient analysis to assess if they are meeting the new dietary specifications (calories, sodium, and saturated fat levels). Several commenters also claimed that NSMP schools are better able to control costs and that changing to FBMP would result in increased training costs. Some stated that eliminating NSMP decreases menu planning flexibility and menu variety.

USDA Response: To ensure that school meals reflect the key food groups recommended by the Dietary Guidelines, this final rule establishes FBMP as the single menu planning approach for the NSLP (including for Pre-K meals) in SY 2012–2013. A single food-based menu planning approach simplifies menu planning, serves as a teaching tool to help children choose a balanced meal, and assures that students nationwide have access to key food groups recommended by the Dietary Guidelines. It also makes it easier for schools to communicate the meal improvements to parents and the community-at-large. Simplifying program management, training and monitoring is expected to result in program savings. Over 70 percent of the program operators currently use FBMP, and training and technical assistance resources will be available to help all schools successfully transition to the new meal patterns.

In response to commenters' concerns about the estimated cost increase of the breakfast meal, this final rule gives those SBP program operators not currently using FBMP additional time to convert to this planning approach. SBP operators who are not currently using FBMP may continue with their current menu planning approach through SY 2012–2013. However, all SBP operators must use a single FBMP approach beginning SY 2013–2014 (the second year of implementation).

This final rule sets forth the new food-based meal patterns in 7 CFR 210.10 for lunches and § 220.8 for breakfasts. In order to accommodate the extended implementation for non-FBMP operators, this final rule creates a new § 220.23 that restates the nutrition standards and menu planning approaches that apply to all SBP operators in SY 2012–2013 only. Individual SFAs wishing to adopt the provisions of § 220.8 prior to the required implementation date specified therein may do so with the approval of the SA.

Accordingly, this final rule implements the proposed FBMP approach and codifies the proposal under § 210.10(a)(1)(i) of the regulatory text for the NSLP and § 220.8(a)(1) for the SBP. Menu planning approaches applicable to the SBP in SY 2012–2013 are under § 220.23(a)(5).

Age/Grade Groups

Proposed Rule: Plan lunches and breakfasts using age/grade groups K–5, 6–8, and 9–12.

Comments: A number of nutrition, health and child advocates; and dietitians agreed that the proposed age/grade groups would result in more age-appropriate school meals. They also supported the provision allowing schools to serve the same breakfast and lunch meal patterns for students in grades K through 8, provided that the meals meet the calorie, saturated fat, and sodium standards for each the of the age/grade groups.

Several commenters argued the proposed meal patterns offer too much food, especially for young children. Some commenters recommended different age/grade groups, and an SA recommended that USDA retain the current age/grade groups. Some SFAs requested flexibility in the use of the age/grade groups (*e.g.,* a one-grade level leeway). A number of commenters expressed concerns regarding use of the age/grade groups in the SBP, as schools generally serve K–12 students in the same line.

USDA Response: This final rule requires schools to use the age/grade groups K–5, 6–8, and 9–12 to plan menus in the NSLP upon implementation of this rule in SY 2012–2013. These age/grade groups reflect predominant school grade configurations and are consistent with the IOM's Dietary Reference Intake (DRI) groupings. This rule allows reasonable flexibility in the use of the age/grade groups and permits a school to use one meal pattern for students in grades K through 8 as food quantity requirements for groups K–5 and 6–8 overlap. In such a case, the school continues to be responsible for meeting the calorie, saturated fat, and sodium standards for each of the age/grade groups receiving the school meals. The following example illustrates this concept:

Example: A school could offer all students in grade groups K–5 and 6–8 the same lunch choices for the fruit, vegetable, grains, meat/meat alternate, and milk components because the quantity requirements are the same or overlap. Similarly, the calorie requirements for grades K–5 (550–650 average calories per week) and grades 6–8 (600–700 average calories per week) overlap. Therefore, a school could offer both grade groups a range of 600–650 average calories per week to meet the requirement for each grade group. While the saturated fat and *trans* fat requirement are the same for both grade groups, the school must carefully consider the sodium requirements. The school would have to comply with the lower sodium standard that was developed for age/grades K–5 but would also meet the requirement for students in age/grades 6–8.

In the SBP, the new age/grade groups take effect in SY 2013–2014 (the second year of implementation) to ease the burden on program operators. Until then, schools have the option to continue the age/grade group K–12 for planning breakfasts. Meals planned for the age/grade group K–12 must meet the nutrition standards developed for that

age/grade group, which have been moved from § 220.8 to a new § 220.23 of the regulatory text.

Accordingly, this final rule implements the proposed age/grade groups and codifies the proposal under § 210.10(c)(1) of the regulatory text for the NSLP and § 220.8(c)(1) for the SBP. Age/grade groups applicable to the SBP in SY 2012–2013 are under § 220.23(b) for nutrient standards menu planning, and under § 220.23(g) for food based menu planning.

Meal Components

Fruits

Proposed Rule: Offer fruit as a separate food component at lunch daily. Increase the fruit and vegetable amounts at lunch and double the minimum required fruit quantity at breakfast. Allow schools to offer a non-starchy vegetable in place of fruit/fruit juice at breakfast. Allow frozen fruit without added sugar only.

Comments: There is general support for the proposal to establish fruit as separate food component. Stakeholders such as nutrition, health and child advocates supported the proposal because they are concerned that children are not consuming the recommended intake of fruits. One major health advocate noted that it is possible to significantly increase the quantity of fruits and vegetables in the school menu in a cost effective way, stating that many schools already exceed the current NSLP meal requirements, and noting that of thousands of schools participating in the Alliance for a Healthier Generation's Healthy School Program, 85 percent provide at least one fruit (fresh, canned, or frozen in fruit juice or light syrup) at breakfast and 72 percent provide at least four non-fried, no-added-sugars fruit or vegetable options daily.

However, many commenters opposed the proposed minimum required fruit quantities, and were particularly concerned about the fruit requirement for breakfast. A number of commenters stated that one cup of fruit at breakfast is too much for young children to consume at one time and will result in significant plate waste. Commenters also emphasized that students usually have very little time to eat breakfast at school and are concerned about the logistics of offering more food through alternative breakfast delivery methods such as Breakfast in the Classroom or on the bus. In general, these commenters argued that the proposal to double the amount of fruit at breakfast would contribute to higher costs for food, labor, equipment, and storage.

Regarding the types of fruit to be offered, several commenters supported the proposed limitation on added sugar in frozen fruit to limit the sources of discretionary calories. Some commenters recommended a prohibition on canned fruit in light syrup. Some program operators asked how to credit whole fresh fruit, and other commenters requested that the quantities in the meal patterns be changed from cups to servings to better account for fresh whole fruit. A few suggested that USDA adopt the HealthierUS School Challenge Gold Level requirement to serve fresh fruit twice per week with school meals.

USDA Response: This final rule establishes fruits and vegetables as separate food components in the NSLP and adds a fruits requirement at lunch beginning SY 2012–2013. The intent of the new requirements is to promote the consumption of these fruits, as recommended by the Dietary Guidelines. Fruits (and vegetables) that are prepared without added solid fats, sugars, refined starches, and sodium are nutrient rich foods and supply important nutrients that are under-consumed by school children in the United States (including potassium and dietary fiber) with relatively little calories.

This rule also gives program operators additional time to meet the required minimum fruit quantity increase in the SBP. Schools are required to offer 1 cup of fruit to all age/grade groups at breakfast beginning in SY 2014–2015 (the third year of implementation). This modification gives program operators more time to prepare for this important change to SBP menus. This rule also gives schools the option to offer vegetables in place of all or part of the required fruit component for menu flexibility and as a potential cost control measure. However, the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or other vegetable subgroups. These vegetable subgroups have been identified as being under-consumed by school children, according to the IOM report. Starchy vegetables may also be offered in substitution of fruits, once the first two cups offering of non-starchy vegetables have been met. This change to the proposed rule allows schools flexibility and the option to offer vegetables in place of fruit in accordance with the substitution protocol specified here.

Although schools must offer the full amount of the required food component, to minimize the potential for food waste in the NSLP and SBP, all students are allowed to select ½ cup of fruit for a reimbursable meal under Offer versus Serve (OVS), instead of requiring them to take the full fruit component. This change in the application of OVS with regard to the fruits and vegetables components is further discussed in ''Standards for Meals Selected by the Student (Offer versus Serve).''

Schools may meet the fruit component at lunch and breakfast by offering fruit that is fresh; canned in fruit juice, water, or light syrup; frozen without added sugar, or dried. Through its USDA Foods Programs, USDA offers schools a range of fresh, frozen without added sugar, dried and canned fruits. Although 100 percent juice can be offered, no more than half of the per-meal fruit component may be juice because it lacks dietary fiber and when consumed in excess can contribute extra calories. Schools should offer fresh fruit whenever possible.

Although some commenters suggested that the meal patterns set the fruit and other food requirements as servings rather than cups, this final rule does not adopt this suggestion, as a serving can be any amount of food determined by the menu planner and does not ensure uniformity. The 2005 Dietary Guidelines recommended amounts were given in cups and ounce equivalents (oz. eq.), which are standard defined amounts. Menu planners must continue to use the *Food Buying Guide for Child Nutrition Programs* to determine how to credit whole fruit. USDA will update the *Food Buying Guide* as soon as possible, and will also develop other technical assistance resources as needed.

Accordingly, this final rule implements the proposed fruit requirements, with modifications, and codifies them under § 210.10(c) for the NSLP and under § 220.8(c) for the SBP. Fruit requirements applicable to the SBP in SY 2012–2013 are under § 220.23(g).

Vegetables

Proposed Rule: Offer vegetables as a separate food component at lunch daily. Increase the variety of vegetables over the week to include the following subgroups: dark green, orange, legumes, and other as defined in the Dietary Guidelines. Limit starchy vegetables at lunch to 1 cup per week for all age/grade groups. Allow non-starchy vegetables in place of fruit at breakfast.

Comments: Nutrition, health and child advocates; community organizations; academia; and parents welcomed the proposal to divide fruits and vegetables into two separate components and expressed support for the proposed weekly vegetable requirements. Some of these

commenters stated the proposed increase in vegetable variety and quantity should positively impact overall consumption.

State and local program operators, however, suggested that the vegetable subgroups be encouraged, rather than required (similar to the approach in the HealthierUS School Challenge guidelines). Some commenters stated that the vegetable subgroup requirements are too complicated. Others argued that children will not eat vegetables they are not familiar with and, therefore, the vegetable subgroup requirements will result in plate waste. Several commenters expressed concern that procuring some vegetable subgroups will be difficult and costly during specific times of the year in certain parts of the country. Others requested clarification regarding when beans should be considered a legume versus a meat alternate.

Many State and local program operators opposed the starchy vegetable limit. They argued that all vegetables should be encouraged, and that a limit on starchy vegetables will lead to a decrease in vegetable consumption, or a decrease in participation in the NSLP. Some suggested that the weekly limit only apply to potatoes. Several suggested that instead of limiting starchy vegetables, USDA should prohibit French fries or deep-fried preparation methods for all vegetables. Others requested gradual introduction of the weekly limit on starchy vegetables. Many program operators argued that white potatoes are inexpensive and would need to be replaced by more expensive fruits and vegetables, which will be a costly strain on school/state budgets. A few asked that starchy vegetables in mixed dishes, such as soups, not count towards the weekly starchy vegetable limit.

Nutrition and health advocates favored allowing non-starchy vegetables in place of fruit in the SBP. However, numerous commenters opposed disallowing starchy vegetables at breakfast. These commenters, including SFAs, food industry, and some parents, stated that starchy vegetables such as potatoes are affordable and popular, and complement many breakfast dishes. They also noted that potatoes supply potassium and other minerals, vitamins and fiber, and are naturally low in fat and sodium. Many stakeholders suggested that USDA ease the proposed restrictions on starchy vegetables.

Program operators also addressed the use of salad bars to meet the vegetable requirement. They stated that salad bars are good ways to serve a wide variety of fruits and vegetables and are an effective strategy to increase children's consumption of these food groups. However, they expressed concern that the proposed vegetable requirements increase challenges with or could discourage the use of self-serve salad bars. Schools asked how to determine if the required foods/portions are being served.

USDA Response: This final rule establishes vegetables as a separate food component in the NSLP, and requires schools to offer all the vegetable subgroups identified by the 2010 Dietary Guidelines (dark green, red/orange, beans and peas (legumes), starchy, and other) over the course of the week at minimum required quantities as part of the lunch menus in SY 2012–2013. As required by the Consolidated and Further Continuing Appropriations Act, 2012, Public Law 112–55 (FY 2012 Agriculture Appropriations Act), we are removing the proposed rule limit on starchy vegetables, and instead requiring schools to offer at least minimum quantities of all vegetable subgroups in the NSLP over the course of the week. This change encourages consumption from all vegetable subgroups, and is consistent with the Dietary Guidelines' recommendation to increase variety in vegetable consumption. In addition, to be consistent with the 2010 Dietary Guidelines classification of vegetable subgroups, this final rule expands the proposed orange vegetable subgroup to include red/orange vegetables. USDA asked commenters about this change in the vegetable subgroups in the Notice published by USDA in the **Federal Register** (76 CFR 15225) on March 21, 2011 and there was no public opposition.

This final rule also allows schools the option to offer vegetables in place of all or part of the fruits requirement at breakfast beginning July 1, 2014. This is consistent with the Dietary Guidelines' recommendation to eat a variety of vegetables, especially dark green, red and orange vegetables, and beans and peas (legumes). This recommendation is applicable to the school meals because most vegetables and fruits are major contributors of nutrients that are under-consumed in the United States, including potassium and dietary fiber. Consumption of vegetables and fruits is also associated with reduced risk of many chronic diseases, including obesity, heart attack, stroke, and cancer. By providing more and a variety of vegetables in a nutrient-dense form (without added solid fats, sugars, refined starches, and sodium), schools help students obtain important nutrients and maintain a healthy weight.

This final rule does not implement the proposed rule limitation on servings of starchy vegetables offered as part of the lunch and breakfast reimbursable meals. This change is in response to commenters' concerns and the requirements of the FY 2012 Agriculture Appropriations Act, which specifically prevented USDA from adopting the IOM recommendation for setting maximum limits on starchy vegetables, providing for fiscal year 2012 USDA appropriations. Therefore, schools are allowed to offer any vegetable subgroup identified by the 2010 Dietary Guidelines to meet the vegetables component required for each reimbursable school meal. The vegetable quantities in the lunch meal pattern have been modified to reflect this change to the proposal while remaining consistent with the Dietary Guidelines' focus on increasing the intake of vegetables that are under-consumed.

Commenters asked USDA to clarify when to credit beans and peas (legumes) toward the vegetable component. Local menu planners decide how to incorporate beans and peas (legumes) into the school meal but may not offer one serving of beans and peas (legumes) to meet the requirements for both vegetables and meat/meat alternate components. Beans and peas (legumes) can be credited toward the vegetable component because they are excellent sources of dietary fiber and nutrients such as folate and potassium. These nutrients are often low in the diets of many Americans. Because of their high nutrient content and low cost, USDA encourages menu planners to include beans and peas (legumes) in the school menu regularly, either as a vegetable or as a meat alternate (as discussed later). Some foods commonly referred to as beans and peas (*e.g.,* green peas, green lima beans, and green (string) beans) are not considered part of the beans and peas subgroup because their nutrient profile is dissimilar. More information on the use and categorization of beans and peas (legumes) is available online at *http://www.choosemyplate.gov/foodgroups/proteinfoods_beanspeas.html.*

In response to commenter questions about how to use salad bars to meet the new meal requirements, the Department would like to emphasize that schools may continue to use salad bars to enhance the variety of vegetables in the school menu. See FNS memorandum SP 02–2010—Revised (January 21, 2011) for more information on how salad bars can be used effectively as part of the reimbursable meals. The memorandum is available online at *http://www.fns.usda.gov/cnd/governance/*

Policy-Memos/2011/SP02–2011revised_os.pdf.

As with the proposed rule, this final rule allows schools to use fresh, frozen, and canned products to meet the vegetable requirement. Schools have access to nutritious vegetable choices through USDA Foods. For example, USDA Foods offers only reduced sodium canned vegetables at no more than 140 mg of sodium per half-cup serving, which is in line with the 2010 Dietary Guidelines. Schools also have the option to order frozen vegetables with no added salt, including green beans, carrots, corn, peas, and sweet potatoes.

Accordingly, this final rule implements the proposed vegetables requirements, with modifications, and codifies them under § 210.10(c) for the NSLP and under § 220.8(c) for the SBP. Vegetable requirements applicable to the SBP in SY 2012–2013 are under § 220.23(g).

Grains

Proposed Rule: Offer at least a daily serving of grains at breakfast and lunch. When this rule is initially implemented, at least half of the grains offered during the week must be whole grain-rich. Two years after implementation, all grains offered during the week must be whole grain-rich. In addition, allow schools the option to offer up to one serving of a grain-based dessert daily to meet part of the weekly grains requirement.

Comments: Many commenters, primarily nutrition and health advocates, and parents, favored introducing a whole grains requirement in the NSLP and SBP. A number of program operators, however, objected to the final whole grains requirement (that all grains offered must be whole grain-rich), and stated that the initial requirement (at least half of grains offered must be whole grain-rich) is sufficient. These commenters asserted that prohibiting all refined grains would restrict many grains that children and adolescents enjoy such as white rice and white bread. Other program operators that objected to the final whole grains requirement expressed concern with the timeline and the higher food costs associated with using only whole grain-rich products, which they argued are generally more expensive than refined grain products. Many commenters asked that USDA clarify the criteria schools must use to identify whole grain-rich products.

USDA Response: While children generally eat enough total grains, most of the grains they consume are refined grains rather than whole grains. Whole grains (*e.g.,* whole-wheat flour, oatmeal, whole cornmeal, and brown rice) are a source of nutrients such as iron, magnesium, selenium, B vitamins, and dietary fiber. Evidence suggests that eating whole grains in nutrient dense forms may lower body weight and reduce the risk of cardiovascular disease. Currently, schools may offer enriched or whole grains, and are allowed to offer enriched, refined grains only. Therefore, this final rule establishes a minimum whole grain-rich requirement in the NSLP and SBP to help children increase their intake of whole grains and benefit from the important nutrients they provide.

For the NSLP, the whole grain requirement takes effect upon implementation of the rule. Therefore, in SY 2012–2013 and SY 2013–2014 (the first two years of implementation) whole grain-rich products must make up half of all grain products offered to students. During this time only, refined-grain foods that are enriched may be included in the lunch menu. In SY 2014–2015 (the third year of implementation) and beyond, schools must offer only whole grain-rich products.

In the SBP, this final rule provides that schools must offer the weekly grain ranges and half of the grains as whole grain-rich beginning July 1, 2013 (SY 2013–2014, the second year of implementation). All grains offered in the SBP must be whole grain-rich in SY 2014–2015 (the third year of implementation) and beyond. Once schools meet the daily minimum grain quantity required (1 oz. eq. for all age-grade groups) for breakfast, they are allowed to offer a meat/meat alternate in place of grains. The meat/meat alternate can count toward the weekly grains requirement (credited as 1 oz. eq. of meat/meat alternate is equivalent to 1 oz. eq. of grain). This modification is intended to retain the flexibility that menu planners currently have to offer a combination of grains and meats/meat alternates at breakfast. This final rule eliminates the proposed provision to require a meat/meat alternate daily at breakfast due to the cost concerns voiced by program operators. (For more details, please see the discussion on meat/meat alternate.)

In this final rule, to receive credit in the meal programs, a whole grain-rich food must contain at least 51 percent whole grains and the remaining grain content of the product must be enriched. Because current labeling regulations and practices may limit the school's ability to determine the actual whole grain content of many grain products, schools would use both elements of the following criterion to identify whole grain-rich foods. This is consistent with USDA's approach on whole grains in the HealthierUS School Challenge (HealthierUS School Challenge Whole-Grains Resource, *http://teamnutrition.usda.gov/healthierUS/NFSMI/lesson2handouts.pdf*). Therefore, until the whole grain content of food products is required on a product label by the Food and Drug Administration (FDA), schools must evaluate a grain product according to forthcoming FNS guidance as follows:

Element #1. A serving of the food item must meet portion size requirements for the Grains/Breads component as defined in FNS guidance.

And

Element #2. The food must meet at least *one* of the following:

a. The whole grains per serving (based on minimum serving sizes specified for grains/breads in FNS guidance) must be ≥ 8 grams. This may be determined from information provided on the product packaging or by the manufacturer, if available. Also, manufacturers currently may apply for a Child Nutrition Label for qualifying products to indicate the number of grains/breads servings that are whole grain-rich.

b. The product includes the following Food and Drug Administration (FDA)-approved whole grain health claim on its packaging. ''Diets rich in whole grain foods and other plant foods and low in total fat, saturated fat and cholesterol may reduce the risk of heart disease and some cancers.''

c. Product ingredient listing lists whole grain first, specifically:

I. *Non-mixed dishes (e.g., breads, cereals):* Whole grains must be the primary ingredient by weight (a whole grain is the first ingredient in the list).

II. *Mixed dishes (e.g., pizza, corn dogs):* Whole grains must be the primary grain ingredient by weight (a whole grain is the first grain ingredient in the list).

For foods prepared by the school food service, the recipe is used as the basis for a calculation to determine whether the total weight of whole grain ingredients exceeds the total weight of non-whole grain ingredients.

Several commenters noted that the industry standard of identity for whole grain products is 14.75 grams, while the IOM recommendations for school meals were based on 16 grams per serving. They suggested that schools be permitted to round up to the nearest quarter on gram equivalents in products. USDA will continue to provide SAs and schools guidance on this subject.

Many program operators expressed concern about the increased quantity of

food offered to children. The weekly grains quantity for the NSLP is reduced to 8–9 oz. eq. for age/grade group K–5, to 8–10 oz. eq. for age/grade group 6–8, and to 10–12 oz. eq. for age/grade group 9–12. This grains requirement still reflects the Dietary Guidelines' recommendation to increase consumption of whole grains as half of all grains offered must be whole grain-rich during the first two years of implementation, and all grains must be whole grain-rich thereafter.

Commenters also expressed concerns regarding the cost and availability of whole grain-rich products. USDA would like to emphasize that such products are now available through USDA Foods, including: brown rice; parboiled brown rice; rolled oats; whole-wheat flour; whole-grain kernel corn; and whole-grain rotini, spaghetti, and macaroni.

This final rule modifies the provision in the proposed rule to allow schools the option to meet part of the weekly grains requirement with grain-based desserts. USDA had proposed to allow up to one serving of grain-based dessert per day to allow additional opportunities to incorporate whole grains in the lunch menu. However, the 2010 Dietary Guidelines cite grain-based desserts as a significant source of solid fats and added sugars in Americans' diets. Therefore, this final rule reduces the number of allowable grain-based desserts from five to two per school week, as recommended by several commenters.

Accordingly, this final rule implements the proposed grains requirements and codifies them under § 210.10(c) for the NSLP and under § 220.8(c) for the SBP. Grains requirements applicable to the SBP in SY 2012–2013 are under § 220.23(g).

Meats/Meat Alternates

Proposed Rule: Offer a meat/meat alternate at lunch and breakfast daily to meet weekly requirements. Solicit comments on whether or not the meat/meat alternate component should include the three protein food subgroups recommended by the 2010 Dietary Guidelines: (1) Seafood; (2) meat, poultry, and eggs; and (3) nuts, seeds, and soy products. Solicit comments on whether or not tofu should be an allowable meat alternate and a methodology for crediting commercially prepared tofu.

Comments: A few commenters, primarily health advocates, expressed support for the overall meat/meat alternate requirement. They supported the proposed rule's emphasis on lean sources of protein and on lower-sodium meats/meat alternates. Several commenters, however, indicated that applying a weekly meat/meat alternate requirement, rather than a daily source of protein, might decrease the estimated meal cost and increase menu planning flexibility.

Many of the public comments focused on the proposed requirement to offer a meat/meat alternate daily at breakfast. Commenters who favored the proposal stated that a breakfast with a meat/meat alternate would provide greater satiety and help increase the protein intake for children that do not drink milk. They said the protein requirement would result in a more nutritious and balanced breakfast.

However, many school districts expressed concerns about offering a daily meat/meat alternate at breakfast. Several of these commenters argued that there is insufficient scientific support for the proposed meat/meat alternate requirement at breakfast. Others asserted that the daily requirement would be costly, create logistical difficulties and food safety challenges for schools, make it difficult for schools to achieve the new sodium limits, and discourage new breakfast modalities and school participation in the SBP. Some also noted that children in most schools have very limited time to eat breakfast and offering more food would result in increased plate waste.

A few commenters also expressed concerns about the availability of meat/meat alternate products that will enable schools to offer meals that meet the dietary specifications for sodium, saturated fat, and *trans* fat. A commenter asked whether USDA Foods is able to provide low-sodium processed meats, cheeses, and other meat/meat alternate products.

Commenters had different opinions on whether or not the meal pattern should require that schools offer the specific protein food subgroups identified in the 2010 Dietary Guidelines. Those in favor stated that it would diversify students' diet and provide health benefits. Those against it said that requiring protein food subgroups would be cost-prohibitive to many schools and that it might not be feasible in certain geographical areas. They also indicated that many parents do not recognize nuts, seeds, and soy products as a substitute for meats.

Many commenters suggested that USDA allow schools to offer tofu as a meat/meat alternate. A range of stakeholders, including SAs, nutrition professionals, advocacy organizations, and individual commenters, expressed support for allowing commercially prepared tofu in the school meal programs. Some commenters suggested a methodology for crediting commercially prepared tofu as a meat alternate. The predominant approach suggested is that USDA credit tofu based on the grams of protein per ounce equivalent.

USDA Response: This final rule implements the meat/meat alternate requirements for the NSLP as proposed. Schools must offer at least a minimum amount of meat/meat alternate daily (2 oz eq. for students in grades 9–12, and 1 oz eq. for younger students), and provide a weekly required amount for each age/grade group. Offering a meat/meat alternate daily as part of the school lunch supplies protein, B vitamins, vitamin E, iron, zinc, and magnesium to the diet of children, and also teaches them to recognize the components of a balanced meal. Menu planners are encouraged to offer a variety of protein foods (*e.g.,* lean or extra lean meats, seafood, and poultry; beans and peas; fat-free and low-fat milk products; and unsalted nuts and seeds) to meet the meat/meat alternate requirement.

The Department is mindful of the cost and operational concerns expressed by schools and other stakeholders regarding the proposed meat/meat alternate component in the SBP. Previously, schools have had the flexibility to offer one serving each of grains and meat/meat alternate, or two servings of either one at breakfast. We have seen a steady increase in the number of schools participating in the SBP and more schools are offering breakfast in the classroom and other creative delivery options. Therefore, this final rule retains some flexibility offered by the grains and meat/meat alternate combination available in the current SBP meal pattern, and does not require a daily meat/meat alternate in the SBP. Menu planners may offer a meat/meat alternate in place of grains after the minimum daily grains requirement is met. For example, for the K–5 age-grade group, the SBP minimum daily grain requirement is 1 oz. eq. As long as at least 1 oz. eq. of grain is served as part of the breakfast menu, a meat/meat alternate may also be served. The meat/meat alternate may count toward meeting the weekly grains requirement. For crediting, 1 oz. eq. of meat/meat alternate is equivalent to 1 oz. eq. of grains.

As suggested by many stakeholders, this final rule gives schools the option to offer commercially prepared tofu as a meat alternate in the NSLP and SBP. This provision, which is codified under § 210.10(c)(2)(i)(D) of the regulatory text for the NSLP, allows schools to diversify the sources of protein available to students and better meet the dietary

needs of vegetarians and culturally diverse groups in schools. Although tofu does not have an FDA standard of identity, the Dietary Guidelines recognize plant-based sources of protein such as tofu. USDA will continue to provide SAs and schools guidance on this issue.

USDA wishes to clarify that schools have the option to offer mature beans and dry peas (*e.g.,* kidney beans, pinto beans, black beans, garbanzo beans/chickpeas, black-eyed peas, split peas and lentils) as meat alternates. Mature beans and peas dry longer on the plant, fix more nitrogen, and have a higher protein content, which makes them nutritionally comparable to protein foods. They are also excellent sources of other nutrients such as iron and zinc. Because beans and peas are similar to meats, poultry, and fish in their contribution of these nutrients, they can be credited as a meat alternate.

Note that a serving of beans and peas must not be offered as a meat alternate and as a vegetable in the same meal. Some foods commonly referred to as beans and peas (*e.g.,* green peas, green lima beans, and green (string) beans) are not considered part of the beans and peas subgroup because their nutrient profile is dissimilar. For more information about the use and categorization of beans and peas see *http://www.choosemyplate.gov/foodgroups/proteinfoods_beanspeas.html.*

Schools also have discretion to offer ready-to-eat foods such as cold cuts, cheese, and yogurt to meet the meat/meat alternate component. Regardless of the protein foods offered, schools must plan all meals with the goal to meet the dietary specifications for sodium, saturated fat, *trans* fat, and calories. When selecting protein foods that are affordable and easy to prepare, we strongly encourage menu planners to use low-fat and low-sodium products that contribute to improved nutrient intake and health benefits (*e.g.,* fat-free/low-fat yogurt and unsalted nuts and seeds).

To support school meal improvements, USDA Foods has reduced the upper salt limit on mozzarella cheese from 2 percent to 1.6 percent. The current range for mozzarella is 130–175 mg of sodium per 28 g (1 oz.) serving. The sodium in processed and blended cheeses has been reduced from 450 milligrams or more, to between 200 and 300 milligrams per 28 g (1 oz.) serving, which is closer to the sodium levels found in natural cheeses.

USDA had solicited comments on whether schools should be required to offer the protein food subgroups recommended by the 2010 Dietary Guidelines. In response to program operators' concerns, this final rule does not require the three protein food subgroups recommended by the 2010 Dietary Guidelines. However, USDA is developing technical assistance to assist schools in offering students a variety of protein foods consistent with the Dietary Guidelines.

Accordingly, this final rule implements the proposed meat/meat alternate requirements, with modifications, and codifies them under § 210.10(c) for the NSLP and under § 220.8(c) for the SBP. Meat/meat alternate requirements applicable to the SBP in SY 2012–2013 are under § 220.23(g).

Fluid Milk

Proposed Rule: Offer plain or flavored fat-free milk and unflavored low-fat milk (1 percent milk fat or less), and include variety that is consistent with Dietary Guidelines recommendations.

Comments: Many parents and nutrition and health advocates favored the proposed requirement to limit flavor to fat-free milk. They believe that saturated fat and sugar in children's diets can be reduced by restricting milk choices to fat-free and low-fat, and by limiting flavor to fat-free milk. Several commenters stated that schools have already limited flavor to fat-free milk and student acceptability has been good. Some commenters recommended a total ban on flavored milk and argued that several states are in the process of banning flavored milk.

However, more commenters stated that flavored low-fat (1 percent or ½ percent) milk should be allowed. Many of these cited a lack of availability of flavored fat-free milk. Others were concerned that poor student acceptability of flavored fat-free milk could result in lower milk consumption or participation in the school meal programs. Some commenters said that the amount of extra calories and fat in low-fat flavored milk is not significant enough to warrant allowing only flavored fat-free milk. A few asked that USDA phase in the limit on flavored milk, and others suggested that USDA set a maximum level of added sugar in flavored milk instead of allowing flavor only in fat-free milk.

Several commenters addressed the need to accommodate lactose-intolerant students and, others requested USDA to clarify milk variety in school meals. Also, although the proposed rule did not address meal variations for special dietary reasons, some commenters discussed the nutrition standards for non-dairy milk substitutes (*e.g.,* soy drinks) and other miscellaneous topics related to the milk component, including OVS.

USDA Response: This final rule allows flavor in fat-free milk only, and fat-free and low-fat choices only (consistent with Dietary Guidelines recommendations and the NSLA as amended by the HHFKA). Flavored low-fat (1 percent or ½ percent) milk is not allowed in the NSLP or the SBP upon implementation of the rule in SY 2012–2013 because it contributes added sugars and fat to the meal and would make it more difficult for schools to offer meals that meet the limits on calories and saturated fat. We anticipate that the new calorie limits will lead menu planners to select milk with the lowest levels of added sugar. Implementing calorie maximums gives menu planners more flexibility than limiting added sugar.

Schools already have the option to offer lactose-free and reduced-lactose milk (fat-free and/or low-fat) as part of the reimbursable meal. Offering lactose free/reduced milk (fat-free or low-fat) is allowed and counts toward the milk variety requirement established by in the NSLA by the HHFKA. For the NSLP and SBP, variety (at least two choices of milk) can be accomplished by offering different allowable fat levels (fat-free and low-fat) and milk flavor in fat-free milk only. For additional guidance on milk variety, please see the FNS memorandum SP–29–2011, Child Nutrition Reauthorization: Nutrition Requirements for Fluid Milk, dated April 14, 2011.)

The milk fat restriction established by this final rule also applies to the meals for children in the age group 3–4 even though the meal patterns for preschoolers will be updated later through a separate rule. The amendments made to the NSLA by the HHFKA require fat-free and low-fat milk for all school lunches. Although this change was not addressed in the proposed rule due to the timing of publication, USDA notified program operators of this requirement for all school meals through implementation memorandum SP–29–2011. The milk flavor restriction also extends to the milk offered to children in age group 3–4.

As requested by commenters, we wish to clarify that this final rule does not change the nutrition standards for the optional non-dairy drinks offered to students with special dietary needs (not disabilities) in place of milk at the request from parents. Those products (*e.g.,* soy, rice and almond drinks) are offered as meal exceptions on a case by

case basis and are not intended for general consumption with the school meal. The nutrition standards for non-dairy milk substitutes for children without disabilities were established through a separate final rule ''Fluid Milk Substitutions in the School Nutrition Program,'' which was published in the **Federal Register** (73 FR 52903) on September 12, 2008. Those standards do not include fat or flavor/sugar restrictions.

We also wish to clarify that although fluid milk must be offered with every school meal, students may decline milk under OVS. In addition, water may not be offered in place of fluid milk as part of the reimbursable meal, but must be available in the food service area for students who wish to drink it in accordance with the NSLA as amended by the HHFKA and as discussed in the memorandum ''SP–28–2011 Revised Child Nutrition Reauthorization 2010: Water Availability During National School Lunch Program Meal Service'' dated July 12, 2011.

Accordingly, this final rule implements the proposed milk requirements and codifies them under § 210.10(d) for the NSLP and under § 220.8(d) for the SBP.

Dietary Specifications

Calories

Proposed Rule: Offer lunches and breakfasts that supply, on average over the school week, a number of calories that is within the established minimum and maximum levels for each age/grade group.

Comments: Many commenters agreed in general with the proposal to establish minimum and maximum calorie levels, and were particularly supportive of the maximum calorie levels. These commenters included advocacy organizations, food banks, a health department, a professional association, and an industry association. Many stated that setting minimum and maximum calorie levels along with providing nutrient dense meals will help address food insecurity and obesity concerns.

A few commenters said many students are not active enough and recommended lower calorie limits. Others, however, indicated that the proposed maximum calorie limits for school lunch might not be adequate to meet the dietary needs of taller and active students. Several commenters asserted that the calorie levels must be adequate enough to support the dietary needs of children who may not have access to sufficient food outside of school. There is also a concern among commenters about the ability of schools to adhere to the minimum and maximum calorie limits in the absence of a nutritional analysis.

In order to control calorie intake, some commenters suggested that USDA establish limits on added sugars for products such as such ready-to-eat cereal, grain-based desserts, and dairy-based desserts to improve the diet of school children. A few commenters, including an advocacy organization, suggested adopting the World Health Organization's recommendation to limit added sugars to ''no more than 10 percent of a person's daily caloric intake.'' An advocacy organization and a professional association of health nutrition directors suggested adopting the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) breakfast standard, which sets the added sugars limit to no more than 6 grams of sugars per ounce of dry cereal.

USDA Response: This final rule is intended to respond to serious concerns about childhood obesity, and the importance for children to consume nutritious school meals within their calorie needs. Therefore, this rule implements the proposed minimum and maximum calorie levels for each grade group. In the NSLP, the calorie limits for each age/grade group take effect upon implementation of this final rule. In the SBP, however, calorie limits are not implemented until the SY 2013–2014 (the second year of implementation). This modification from the proposed rule is intended to give program operators additional time to implement the new meal requirements in the SBP.

USDA acknowledges the school meal programs provide a nutrition safety net for food-insecure children and agrees with commenters that meals must supply adequate calories for growth and development. IOM considered this aspect of the Child Nutrition Program missions when developing the minimum and maximum calorie levels for various age/grade groups in the NSLP and SBP. They also took into consideration other opportunities for food intake available to most children outside of school, and the role of community organizations and other groups in supporting the nutritional needs of low-income children.

Although some commenters suggested setting a limit on added sugars for products such as flavored milk, USDA, consistent with the Institute of Medicine recommendations, does not believe a standard is necessary and would unnecessarily restrict menu planning flexibility. The required maximum calorie levels are expected to drive menu planners to select nutrient dense foods and ingredients to prepare meals, and avoid products that are high in fats and added sugars. In addition, this final rule includes other provisions that limit the sources of discretionary calories.

We also wish to clarify that the calorie standards established for each age/grade group are to be met on average over the course of the week. On any given school day, the calorie level for the meal may fall outside of the minimum and maximum levels as long as the average number of calories for the week is within the required range. This provides some flexibility to menu planners, but careful procurement, planning and preparation are important to stay within the calorie ranges.

Accordingly, this final rule implements the proposed calorie requirements and codifies them under § 210.10(f) for the NSLP and under § 220.8(f) for the SBP. Calorie requirements applicable to the SBP in SY 2012–2013 are under § 220.23(b) and § 220.23(c).

Saturated Fat

Proposed Rule: Offer lunches and breakfasts that supply, on average over the school week, less than 10 percent of total calories from saturated fat.

Comments: Most commenters concerned about childhood obesity also expressed general support for limiting saturated fat in school meals at less than 10 percent of total calories. This is the same as the current saturated fat restriction and the 2010 Dietary Guidelines did not change this recommendation. A small number of commenters (a health care professional, a member of academia, and an advocacy organization) suggested a more restrictive standard, recommending that USDA require less than 7 percent of total calories from saturated fat. This limit is listed in the Dietary Guidelines Advisory Committee report but was not adopted as a recommendation in the 2010 Dietary Guidelines.

USDA Response: This final rule implements the proposed saturated fat standard, which is the same as the restriction currently in place in the NSLP and SBP. Schools must continue to limit saturated fat in the school meals to help reduce childhood obesity and children's risk of cardiovascular disease later in life. Many schools are still having difficulty meeting this requirement in the NSLP. Several major sources of saturated fat in the American diet are popular items in the lunch menu.

This final rule implements two new requirements set forth in the proposed rule and are anticipated to encourage

schools to reduce the saturated fat in meals: allowing only fat-free and low-fat milk, and establishing maximum calorie limits. USDA's technical assistance will continue to emphasize the need to purchase and prepare foods in ways that help reduce the saturated fat level in school meals (*e.g.,* procuring skinless chicken or using meat from which fat has been trimmed, and using vegetable oils that are rich in monounsaturated and polyunsaturated fatty acids such as canola and corn oils).

This rule does not require schools to meet a total fat standard under current regulations. The IOM report did not recommend that USDA require a total fat standard for school meals. The expectation is that the new meal requirements, including the dietary specifications for calories, saturated fat and *trans* fat, will enable schools to offer meals that are low in total fat.

Accordingly, this final rule implements the proposed saturated requirement and codifies it under § 210.10(f) for the NSLP and under § 220.8(f) for the SBP.

Sodium

Proposed Rule: Offer lunches and breakfasts that supply, on average over the school week, no more than the maximum sodium levels set for each age/grade group. Meet the intermediate sodium targets (two and four years post implementation of the rule), and the final sodium targets (ten years post implementation of the rule; changes represent a sodium reduction of approximately 25–50 percent in breakfasts and lunches). The proposed targets aimed to help reduce students' sodium intakes to less than the Tolerable Upper Intake Levels established in the Dietary Reference Intakes, which range from 1,900–2,300 milligrams per day for children ages 4–18.

Comments: Nutrition and health advocates, community-action groups, individuals, and some school districts expressed support for the proposed sodium restrictions and timeline. A medical association and an advocacy organization supported the proposed sodium restriction to help address the health risks associated with high sodium intake. A professional association recommended that USDA consider further reductions in sodium limits after progress has been assessed. An advocacy organization suggested that USDA base the proposed restrictions on the Dietary Guidelines recommendation of 1,500 mg of sodium per day for special population groups. The 2010 Dietary Guidelines recommend that persons who are 51 years and older, African American children and adults, and persons of any age that have hypertension, diabetes, or chronic kidney disease limit sodium intake to 1,500 mg per day (compared to the 2,300 mg per day recommended for the general population).

However, many commenters were concerned that schools will likely struggle to meet the proposed intermediate sodium limits and fail to achieve the final target within 10 years. Some commenters asserted that the final targets for each age/grade group are lower than the therapeutic levels set for certain high-risk populations and should be increased. A school advocacy organization and school districts argued that it would be difficult for schools to prepare palatable foods at the proposed final sodium targets and, therefore, students would be motivated to drop from the meal program and pack lunches that contain high levels of sodium.

Some commenters expressed concerns about the potential use of sodium substitutes in schools. Commenters also indicated that industry needs time for product development and testing, and schools need time for procurement changes, menu development, sampling, and to foster student acceptance. Two food manufacturers commented that pizza manufacturers would need to complete research in order to secure low sodium cheeses that adhere to the proposed final target and that children like. Some argued that many schools rely on canned and processed food items and have limited access to reduced-sodium products.

School food service staff, a food manufacturer, a nutrition professional and individual commenters suggested that USDA lengthen the time to reach the intermediate sodium targets, and eliminate or reevaluate the final target. Commenters also encouraged USDA to monitor the progress of sodium reductions toward targets before moving forward. Some offered various alternatives to the proposed sodium limits and timeline (*e.g.,* a food manufacturer suggested 33 percent reduction over ten years and a school food service staff member suggested 30 percent over ten years). Several commenters suggested a 10–20 percent reduction over ten years to allow schools to continue purchasing affordable processed foods while working on recipe modification, in order to reduce food costs and potential loss of student participation. Others recommended establishing daily limits for each school meal (*e.g.,* 1,000–1,200 mg/day for lunch and 1,000 mg/day for breakfast).

Some school districts and a child nutrition consultant stated that there is not enough scientific data linking sodium consumption with health issues in children, and did not agree with claims that children's early exposure to sodium leads them to develop a preference for salty foods. A child nutrition consultant, a school nutrition directors' association, a professional association, and a school district argued that further studies should be conducted so that the final target levels are science-based.

USDA Response: Reducing the sodium content of school meals is a key objective of this final rule reflecting the Dietary Guidelines recommendation for children and adults to limit sodium intake to lower the risk of chronic diseases. USDA has encouraged schools to reduce sodium since the implementation of the School Meals Initiative in 1995. According to the SNDA–III study, the average sodium content of school lunches (for all schools) remains high: More than 1400 mg. Therefore, this final rule requires schools to make a gradual reduction in the sodium content of the meals, as recommended by IOM and consistent with the requirements of the FY 2012 Agriculture Appropriations Act.

Schools will be required to meet the first intermediate sodium target for each age/grade group (target 1 in the chart) in the NSLP and SBP no later than July 1, 2014 (SY 2014–2015), two years post implementation of this final rule. To meet target 1, schools are expected to modify menus and recipes promptly to reduce the sodium content of school lunches by approximately 5–10 percent from their baseline.

Prior to the implementation of the second (target 2) and final sodium targets contained in this rule, USDA will evaluate relevant studies on sodium intake and human health, as required by Section 743 of the FY 2012 Agriculture Appropriations Act. The scheduled compliance date for target 2 is no later than July 1, 2017 (SY 2017–2018), five years post implementation of the final rule for both meal programs. In response to stakeholders' concerns, and the provisions of Section 743 of the FY 2012 Agriculture Appropriations Act, this final rule lengthens the time to reach the second intermediate targets from 4 to 5 years. This modification to the sodium proposal is intended to allow food manufacturers additional time to reformulate products and schools more time to build student acceptance of lower sodium meals. To meet target 2, schools have to reduce sodium in school lunches by approximately 15–30 percent from their baseline. We

anticipate schools will have to incorporate new low-sodium products and ingredients in meals offered in order to meet this target.

The scheduled compliance date for the final sodium targets is no later than July 1, 2022 (SY 2022–2023), ten years post implementation of the final rule. To meet the final sodium target, schools will have to reduce the sodium content of the meals by approximately 25–50 percent from the school baseline. This will require innovation on the part of product manufacturers in the form of new technology and/or food products. As required by Section 743 of the FY 2012 Agriculture Appropriations Act, USDA will certify that it has evaluated relevant data on sodium intake and human health prior to requiring compliance with the second and final sodium targets.

Meeting the final sodium targets will enable schools to offer meals that reflect the 2010 Dietary Guidelines' recommendation to limit sodium intake to less than 2,300 mg per day. Nearly all schools have to reduce the sodium content of school meals to meet final sodium targets, but the extent of the needed reduction varies by school/district as sodium limits for school meals do not currently exist. The following chart illustrates the sodium reduction in school meals:

Age/grade group	Baseline: Current average sodium levels as offered [1] (mg)	Sodium reduction: Timeline and amount			
		Target 1: meet by July 1, 2014 (SY 2014–2015) (mg)	Target 2: meet by July 1, 2017 (SY 2017–2018) (mg)	Final target: [2] Meet by July 1, 2022 (SY 2022–2023) (mg)	Percent change (current levels vs. final targets)
School Breakfast Program					
K–5	573 (elementary)	≤ 540 (28.4% of UL)	≤ 485 (25.5% of UL)	≤ 430 (22.6% of UL)	−25
6–8	629 (middle)	≤ 600 (27.3% of UL)	≤ 535 (24.3% of UL)	≤ 470 (21.4% of UL)	−25
9–12	686 (high)	≤ 640 (27.8% of UL)	≤ 570 (24.8% of UL)	≤ 500 (21.7% of UL)	−27
National School Lunch Program					
K–5	1,377 (elementary)	≤ 1,230 (64.8% of UL)	≤ 935 (49.2% of UL)	≤ 640 (33.7% of UL)	−54
6–8	1,520 (middle)	≤ 1,360 (61.8% of UL)	≤ 1,035 (47.0% of UL)	≤ 710 (32.3% of UL)	−53
9–12	1,588 (high)	≤ 1,420 (61.7% of UL)	≤ 1,080 (47.0% of UL)	≤ 740 (32.2% of UL)	−53

[1] Current Average Sodium Levels as Offered are from the School Nutrition and Dietary Assessment Study-III. Data were collected in the 2004–05 school year.

[2] The IOM final targets are based on the Tolerable Upper Intake Limits (ULs) for sodium, established in the Dietary Reference Intakes (DRI) (IOM, 2004). The sodium ULs for school-aged children are 2,300 mg (ages 14–18), 2,200 mg (ages 9–13), and 1,900 mg (ages 4–8). The final sodium targets represent the UL for each age/grade group multiplied by the percentage of nutrients supplied by each meal (approximately 21.5% for breakfast, 32% for lunch), as recommended by IOM. IOM's recommended final sodium targets for the K–5 age/grade group breakfasts and lunches are slightly higher than 21.5% and 32% 32%, respectively, of the UL because this proposed elementary school group spans part of two DRI age groups (ages 4–8 and 9–13 years).

USDA is committed to helping program operators reduce sodium in school menus. USDA's Team Nutrition and the National School Food Service Management Institute have developed guidance for reducing sodium. USDA also continues to make low-sodium USDA Foods available to schools. For example, USDA offers only reduced sodium canned beans and vegetables at no more than 140 mg per half-cup serving, including spaghetti sauce, salsa, and tomato paste. Canned whole kernel corn, whole tomatoes, and diced tomatoes are being offered with no added salt. Frozen vegetables, including green beans, carrots, corn, peas, and sweet potatoes are available with no added salt. USDA has also reduced the upper salt limit on mozzarella cheese (current range is 130–175 mg of sodium per 1 oz. serving) and chicken fajita strips (220 mg per 2 oz serving).

Accordingly, this final rule implements the proposed sodium limits, with modifications, and codifies them under § 210.10(f) for the NSLP and under § 220.8(f) for the SBP.

Tracking Calories, Saturated Fat, and Sodium

Proposed Rule: State agencies must monitor compliance with the dietary specifications (calories, saturated fat and sodium levels) by conducting a weighted nutrient analysis for the schools selected for administrative review every 3 years. The analysis must cover menu and production records for a 2-week period.

Comments: Commenters did not specifically address the proposal to combine the nutritional assessment of school meals with the administrative review for stronger program accountability. Overall, health and child nutrition advocates welcomed the new SA requirement to conduct administrative reviews every 3 years, which is codified through this final rule. They also agreed in general that reviewing menu and production records for a 2-week period and conducting a weighted nutrient analysis offer a more accurate assessment of school meals than current regulations.

However, State and local program operators expressed concern about the requirement to conduct administrative reviews every 3 years. Several commenters stated that SAs have limited time and resources to conduct more frequent administrative reviews and provide technical assistance to all SFAs. In addition, school districts, SAs, trade associations, advocacy organizations and others opposed removing responsibility to conduct a nutrient analysis from the SFAs, believing this change limit the SFAs' ability to assess their own efforts to reduce sodium and saturated fat, and comply with the calorie ranges. Other commenters also opposed the requirement for a weighted nutrient analysis because it would not identify issues in menu planning or reflect what students actually consume. Several commenters requested that a tool be developed for SAs to identify issues and help implement the new meal requirements for schools.

USDA Response: The HHFKA amended the NSLA to require improvements to school meals and more frequent monitoring of school meals to facilitate transition to the new meal requirements. This rule requires SAs to begin the 3-year Coordinated Review Effort (CRE) cycle on July 1, 2013 (SY 2013–2014) for the NSLP and SBP. To

help SAs meet this requirement, USDA will develop technical assistance tools to facilitate monitoring of school meals.

This rule requires SAs to conduct the nutrient analysis of school lunches and breakfasts as part of the administrative review, but does not limit SFA discretion to conduct a nutrient analysis of the school meals to determine if they are in line with the dietary specifications. We understand that many SFAs currently have the ability to conduct a nutrient analysis.

USDA is mindful of SA concerns about increased administrative burden. In response to concerns about the requirement to conduct a nutrient analysis of school meals using menus for a two-week period, this final rule reduces the time period to one-week, which is the current requirement. This modification to the proposed rule is expected to lessen the information collection burden on SAs without affecting their ability to assess the nutritional integrity of the meals offered and the general quality of the food service operation.

Accordingly, this final rule implements the proposed monitoring requirements, with modifications, and codifies them under § 210.18(c), § 210.18(g)(2), § 210.18(i)(3), § 210.18(m), and § 210.19(c) for the NSLP and under § 220.8(h), § 220.8(i), and § 220.8(j) for the SBP.

Tracking Trans Fat

Proposed Rule: Food products and ingredients used to prepare school lunches and breakfasts must contain zero grams of *trans* fat per serving (less than 0.5 grams per serving) according to the nutrition labeling or manufacturer's specifications.

Comments: Many commenters, including advocacy organizations, schools, health care professionals, community organizations and others expressed support for the proposal to restrict *trans* fat in school meals. Several of them asked that naturally-occurring *trans* fat be excluded from the *trans* fat limit. A few commenters suggested that the *trans* fat limit be greater than zero due to concerns over potential increased use of hydrogenated oils and saturated fats in school meals. No commenters opposed the proposal to restrict *trans* fat.

USDA Response: A number of studies suggest an association between *trans* fatty acid intake and increased risk of cardiovascular disease. The Dietary Guidelines recommend that all persons keep *trans* fatty acid consumption as low as possible by limiting foods that contain synthetic sources of *trans* fats, such as partially hydrogenated oils, and by limiting other solid fats. Therefore, to safeguard children's health, this final rule requires that food products and ingredients used to prepare school meals contain zero grams of added *trans* fat per serving (less than 0.5 grams per serving as defined by FDA) according to the nutrition labeling or manufacturer's specifications. This requirement takes effect in the NSLP on July 1, 2012 (SY 2012–2013). In the SBP, the requirement is effective on July 1 2013 (SY 2013–2014, the second year of implementation).

This requirement is intended to restrict synthetic *trans* fatty acids and does not apply to naturally occurring *trans* fats, which are present in meat and dairy products. Synthetic *trans* fatty acids are found in partially hydrogenated oils used in some margarines, snack foods, and prepared desserts. See USDA Foods guidance on *trans* fat at *http://www.fns.usda.gov/fdd/facts/nutrition/TransFatFactSheet.pdf.*

Accordingly, this final rule implements the proposed *trans* fat restriction and codifies it under § 210.10(g) § 210.10(h) and § 210.10(j), for the NSLP and under § 220.8(g), § 220.8(h), and § 220.8(j) for the SBP.

Standards for Meals Selected by the Student (Offer versus Serve (OVS)

Proposed Rule: Under OVS, students may not decline more than two food items at lunch and one food item at breakfast, and must select a fruit or a vegetable at each meal.

Comments: Many commenters expressed their views about this proposed requirement. Nutrition and health advocates, a professional association, a State department of health, some school districts and food service staff, and individuals expressed support for the proposed requirement to require a fruit or a vegetable as part of the reimbursable meal. They viewed this requirement as a means to encourage children to eat more fruits and vegetables. An advocacy group commented that requiring students to take a fruit or a vegetable should help increase actual fruit and vegetable consumption citing a pilot study in which more students consumed fruit when prompted to take a fruit item.

However, many commenters expressed concerns about potential food waste and overall costs associated with this proposed requirement. The commenters that opposed this proposal included a State department of education, school districts, school food service staff, school advocacy organizations, a teachers union, students, a child nutrition industry consultant, a food manufacturer, food service industry firms, nutrition professionals, and individuals. Generally, these commenters argued the proposed requirement that a reimbursable meal include a fruit or a vegetable would result in increased plate waste and increased cost by requiring students to choose a food they do not intend to eat. School food service staff also argued that indirect costs such as more frequent trash collection would increase if the students throw away more food. These commenters asserted that this proposed requirement would negate the purpose of OVS.

Commenters asked USDA to clarify the minimum amount of fruit or vegetable that a student must take for a reimbursable meal. Many commenters suggested that USDA allows students to select less than the full fruit or vegetable component under OVS. Suggestions included a minimum of ½ cup, ¼ cup, and ⅛ cup of fruit or vegetable for a reimbursable meal.

USDA Response: Increased vegetable and fruit intake is a key recommendation of the Dietary Guidelines. This recommendation applies to the NSLP and SBP because these programs are intended to nourish children but also help them develop healthy eating patterns. By requiring students to take a fruit or a vegetable, schools emphasize food choices that are high in nutrients and low in calories. Therefore, consistent with the Dietary Guidelines and the IOM recommendations, this final rule requires that the reimbursable lunch selected by the student includes a fruit or a vegetable beginning SY 2012–2013. In the SBP, this requirement is effective in SY 2014–2015 (the third year of implementation), when the fruit quantities for breakfast are required to increase.

However, in response to the commenters' concerns about potential food waste and cost increases, this final rule allows students to take ½ cup of a fruit or a vegetable as suggested by several commenters, rather than the full component, to have a reimbursable meal under OVS. For example, if a school is offering ½ cup of fruit pieces and ½ cup fruit juice to meet the 1 cup fruit component at lunch, the student must select at least one of those two items to have a reimbursable lunch under OVS.

This rule continues the current OVS practice under FBMP to allow students to decline up to two food components at lunch (preferred OVS option presented in the IOM report). Some commenters suggested that USDA implement the second OVS option identified in the IOM report to allow

students to decline more food components and, thus, have greater control of the amount of food on their plate. USDA is not adopting this suggestion. Although the second option would give school districts greater flexibility, it could negatively affect the nutritional integrity of the meal.

In the SBP, OVS applies to food items rather than food components because of the flexibility to substitute meats/meat alternates for grains (once the daily grain requirement is met). In SBP, schools must offer fruit, milk, and grains daily. On multiple days per week, schools will need to offer more than the minimum daily grains requirement of 1 oz. eq. per day to meet the weekly grain requirement. To accomplish this, schools will need to offer at least three or four food items on the breakfast menu. When a school offers four food items at breakfast, students may decline one food item. If only three food items are offered, students must take all the food items to preserve the nutritional integrity of the breakfast. More details about OVS will be provided in guidance.

Schools that offer salad bars must follow the OVS requirements. To ensure that students actually take the minimum required portion size from a salad bar, foods may be pre-portioned to allow staff to quickly identify if the student has a reimbursable meal under OVS. If not pre-portioning, then the cashier must be trained to judge accurately the quantities of self-serve items on student trays, to determine if the food item can count toward a reimbursable meal. For more information, see FNS memorandum SP 02–2010—Revised, dated January 21, 2011.

Accordingly, this final rule implements the proposed requirements, with modifications, and codifies them under § 210.10(e) for the NSLP and under § 220.8(e) for the SBP. The OVS requirements applicable to the SBP in SY 2012–2013 are under § 220.23(e)(2) and § 220.23(g)(4).

Monitoring Procedures

Proposed Rule:

- State agencies must review school lunches and breakfasts every three years during scheduled administrative reviews to monitor compliance with the meal requirements (meal patterns and dietary specifications for calories, saturated fat, sodium and *trans* fats).
- State agencies must conduct a weighted nutrient analysis for the schools selected for an administrative review to monitor compliance with the specifications for calories, saturated fat, and sodium. The analysis must cover menu and production records for a two-week meal period.
- State agencies must take immediate fiscal action if a required food component is not offered.
- For repeat violations of the vegetable subgroup and milk requirements, State agencies must take fiscal action if technical assistance and corrective action have not resolved these violations.
- For repeat violations of the food quantity and whole grain requirements, and the dietary specifications (calorie, sodium, saturated fat and *trans* fat), State agencies have discretion to take fiscal action if technical assistance and corrective action have not resolved these violations.

Comments: Various commenters, including a health care association, State department of education, trade association, nutrition professional, food service staff, and advocacy organizations supported the proposal to eliminate the School Meals Initiative (SMI) review and monitor the nutritional quality of school meals through the scheduled administrative review. Although a few commenters expressed concern with eliminating the SMI review, several commenters voiced support for a single monitoring system.

However, numerous commenters said that this proposal would not simplify monitoring because it increases the frequency of the review cycle and the meal review period, and requires SAs to conduct a nutrient analysis for the SFAs to determine compliance with the dietary specifications. Some commenters argued that SFAs would still have to conduct their own nutrient analysis to plan meals that meet the calorie, saturated fat, and sodium restrictions. They expressed concern that many food-based SFAs do not have the specialized tools to ensure compliance with the dietary specifications, and that SAs do not have enough time or resources to provide technical assistance to all SFAs.

Although some commenters supported establishing a 3-year review cycle, most commenters opposed increasing the frequency of the administrative reviews. Those in favor of the proposal (health and nutrition advocates and providers) stated that it would increase opportunities to provide technical assistance to the SFAs and result in improved meals. Those opposed included school districts, food service management companies, school food service staff, a school advocacy organization, State departments of education, and nutrition professionals. These commenters argued that retaining the 5-year review cycle would give SAs more time to provide training and technical assistance to the SFAs. They indicated that SAs would not have the staff to handle the increased workload of a 3-year review cycle and, therefore, the quality of the reviews could suffer.

Regarding the proposal to review menu and production records for a two-week meal period, most commenters expressed opposition. These commenters, including State and local operators, school food service staff, school advocacy organizations, professional associations, trade associations, and other groups argued that reviewing menus for one week is a reasonable amount of time to determine if an SFA is meeting the meal requirements. Some commenters estimated that the increased paperwork of a 3-year review cycle and a 2-week review of menus would triple the cost of completing the administrative review.

There was a mixed response to the proposal to include breakfast in the administrative reviews. Commenters that agreed school breakfasts should be included argued that these meals often contain less nutrient-dense foods than lunch. A similar number of commenters opposed the proposal because of cost concerns. The latter group stated that the reviews should only include lunch to offset the increased time and effort involved in conducting reviews every 3 years rather than every 5 years.

There were few and mixed opinions about the use of fiscal action. School food service staff argued that fiscal penalties are counterproductive and create an adversarial relationship between the SA and the SFA. They recommended that more emphasis be placed on providing technical assistance, not fiscal action. Other commenters favored increasing accountability to improve meal quality.

Commenters offered some suggestions regarding monitoring procedures, including that SAs monitoring report be made available on-line to the public. Another suggested that SAs target schools with prior non-compliance rather that assess a broad sample of schools.

USDA Response: Section 207 of the HHFKA amended the NSLA to require USDA to establish a unified monitoring system. Accordingly, this final rule eliminates the SMI review and strengthens the administrative review to assess compliance with the new meal requirements. As required by this rule, SAs must monitor compliance with the meal patterns and the dietary specifications (calories, saturated fat, sodium and *trans* fat) under the administrative review responsibilities established in 7 CFR 210.18. This

change is intended to focus more attention on the importance of providing lunches and breakfasts that reflect the science-based meal requirements, in accordance with § 9 of the NSLA and § 201 of the HHFKA.

In addition to observing the serving line and the meals counted at point of service during the administrative review, the SAs must conduct a nutrient analysis to ensure that the average levels of calories, saturated fat, and sodium in the meals offered over the school week are within the values specified in this final rule. However, in response to commenters' concerns, this final rule requires SAs to review menu and production records for one week only within the review period, instead of the two weeks stated in the proposed rule. This modification reduces the information collection burden for SAs. USDA is reviewing potential alternative approaches to nutrient analysis and will provide further guidance to SAs.

This final rule changes the administrative review cycle from 5 to 3 years in accordance with the NSLA, as amended by § 207 of the HHFKA. This change takes effect in SY 2013–2014, after the current 5-year review cycle ends. More frequent monitoring is intended to increase opportunities for the SAs to provide guidance and technical assistance to the SFAs during implementation of the new meal requirements. USDA is aware of program operators' concerns regarding increased monitoring and will provide technical assistance resources and guidance to SAs to facilitate transition to the 3-year review cycle.

This final rule also makes several improvements to the SBP to bring those meals closer to the recommendations of the Dietary Guidelines. Therefore, and in accordance with the NSLA as amended by the HHFKA, beginning SY 2013–2014, SAs must monitor breakfasts under the administrative review. However, because the new meal requirements (other than limiting types of milk) are being implemented gradually in the SBP, part of the compliance assessment must be based on prior nutrition standards (which are now in § 220.23) until new requirements in the SBP regulations at § 220.8 take effect. The requirement to conduct a nutrient analysis of breakfast menu records for one-week period begins July 1, 2013 (SY 2013–2014).

SAs must continue to use technical assistance and corrective action as the primary strategies to help schools comply with the meal requirements. However, this final rule gives SAs the ability to use fiscal action to enforce compliance with specific meal requirements. As currently done, SAs must apply immediate fiscal action if the meals offered are completely missing one of the required food components. SAs must also take fiscal action for repeated violations of the vegetable subgroup and milk type requirements when technical assistance efforts and required corrective action have not resolved these violations. However, SAs have discretion to take fiscal action for repeated violations of the food quantity and whole grain requirements, and for repeated violations of the dietary specifications (calories, saturated fat, sodium and *trans* fats).

A commenter suggested public disclosure of the administrative review findings. The NSLA, as amended by the HHFKA, requires schools to post review final findings and make findings available to the public. Also, the NSLA requires local education agencies to report on the school nutrition environment to USDA and to the public, including information on food safety inspections, local wellness policies, school meal program participation, and nutritional quality of program meals. These statutory requirements will be implemented through a separate rule.

Accordingly, this final rule implements the proposed monitoring requirements, with the modification discussed above, and codifies them under § 210.18(a), § 210.18(c), § 210.18(g) and § 210.18(m) for the NSLP and under § 220.8(h) and § 220.8(j) for the SBP.

Identification of Reimbursable Meal

Proposed Rule: Identify the foods that are part of the reimbursable meal(s) for the day at or near the beginning of the serving line(s).

Comments: Most of the commenters that addressed this proposal supported it because they believe it helps students avoid unintentional purchase of food items not included in the reimbursable meal. A few commenters opposed the proposed requirement and argued that it will overtly identify students that receive free and reduced price meals.

USDA Response: Beginning July 1, 2012 (SY 2012–2013), this final rule requires schools to identify the components of the reimbursable meal at or near the beginning of the serving line(s) as students and parents often are not aware of what is included in the school meal. Identifying the components of the reimbursable meal also reinforces nutrition education messages that emphasize selecting healthy choices for a balanced meal. Schools have discretion to determine the best way to present this information on the serving line. Implementing this requirement must not result in overt identification of any student participating in the NSLP or SBP through use of a separate serving line for the reimbursable meal or other segregation of certified students.

Accordingly, this final rule implements the proposed requirement and codifies it under § 210.10(a)(2) for the NSLP, and under § 220.8(h) and § 220.8(j) for the SBP.

Crediting

Proposed Rule:

- Disallow the crediting of any snack-type fruit or vegetable products (such as fruit strips and fruit drops), regardless of their nutrient content, toward the fruits component or the vegetables component.
- Require that all fruits and vegetables (and their concentrates, purees, and pastes) be credited based on volume as served with two exceptions: (1) Dried whole fruit and dried whole fruit pieces would be credited for twice the volume served; and (2) leafy salad greens would be credited for half the volume served.

Comments: Comments in favor of disallowing snack-type fruit or vegetable products exceeded the comments opposed. Those in favor stated that permitting such products sends the wrong nutrition message to children. Others said that children should be offered a variety of whole fruits and vegetables. However, some commenters opposed the requirement due to concerns over the cost of providing whole fruit. They suggested that USDA allow products made with 100 percent fruit.

Many commenters opposed the proposal that all fruits and vegetables (and their concentrates, purees, and pastes) be credited based on volume as served. These commenters included school districts, school advocacy organizations, trade associations, food manufacturers, a food service management company, a State department of education and others. They expressed concern over the potential cost increase due to product reformulation and reduced product acceptability. Many commenters recommended that USDA keep the current practice to credit tomato paste and puree based on their whole-food equivalency using the percent natural tomato soluble solids in paste and puree.

USDA Response: One of the goals of the School Meal Programs is to help children easily recognize the key food groups that contribute to a balanced meal, including fruits and vegetables.

Effective July 1, 2012 (SY 2012–2013), reimbursable meals must not include snack-type fruit products that have been previously credited by calculating the whole-fruit equivalency of the processed fruit in the product using the FDA's standards of identity for canned fruit nectars (21 CFR 146.113). FDA revoked the standard of identity for canned fruit nectars through a final rule published in the **Federal Register** (60 FR 56513) on November 9, 1995; therefore, there is no regulatory basis for allowing the crediting of these snack-type fruit products.

As a result of Section 743 of the FY 2012 Agriculture Appropriations Act, this final rule does not adopt the proposed crediting change for tomato paste and puree. USDA will credit tomato paste and puree as a calculated volume based on the whole food equivalency. Although this specific proposal was intended to promote consistency and improved nutrition by crediting all fruits and vegetables (and their concentrates, purees, and pastes) based on volume as served, this final rule must comply with the statutory provision.

Accordingly, this final rule disallows the crediting of any snack-type fruit or vegetable products, and continues the crediting of tomato paste and puree as a calculated volume under § 210.10(c)(2)(iii) of the regulatory text.

Fortification

Proposed Rule: Disallow the use of formulated grain-fruit products as defined in Appendix A to 7 CFR part 220.

Comments: Most commenters were in favor of removing formulated grain-fruit products from the School Meal Programs. They indicated that such products do not support the Dietary Guidelines' recommendation to consume fruits as a separate food group. However, some commenters opposed the removal of formulated grain-fruit products, and claimed that these products are cost-effective and convenient in new breakfast delivery systems such as Grab and Go and Breakfast in the Classroom.

USDA Response: This final rule disallows the use of formulated grain-fruit products to meet the grain and fruit components in the SBP beginning July 1, 2012 (SY 2012–2013). Formulated grain-fruit products, as defined in Appendix A to 7 CFR part 220, are (1) grain-type products that have grain as the primary ingredient, and (2) grain-fruit type products that have fruit as the primary ingredient. Both types of products must have at least 25 percent of their weight derived from grain. These products typically contain high levels of fortification, rather than naturally occurring nutrients, and are high in sugar and fat. Furthermore, they no longer meet a need in the school meal programs because schools can procure more nutrient-dense breakfast options with a similar shelf-life. This rule does not prohibit the use of fortified cereals or cereals with fruit (*e.g.,* ready-to-eat cereals) which may provide good sources of whole grains, fiber, and other important nutrients. In most instances, however, the use of highly-fortified food products is inconsistent with the Dietary Guidelines.

Accordingly, this final rule amends Appendix A to 7 CFR part 220 by removing Formulated Grain-Fruit Products in its entirety. It also makes a technical change to Appendix B to 7 CFR part 210 by removing the statement that affirms that Appendix B will be updated to exclude individual foods that have been determined to be exempted from the categories of Foods of Minimal Nutritional Value. Although USDA has published **Federal Register** Notices in the past to inform the public of exempted foods, Appendix B has not been amended subsequently to reflect these exemptions. A list of these exempted foods is maintained and available to all State agencies participating in the Programs. There have been no changes to the categories of exempted foods and USDA is maintaining the requirement to publish a **Federal Register** Notice and update the regulations to reflect any changes to the categories.

Accordingly, this final rule implements the proposed change by removing the Formulated Grain-Fruit Products from Appendix A to 7 CFR part 220.

III New Meal Patterns and Dietary Specifications

The following meal patterns must be implemented in SY 2012–2013 for the NSLP, and phased-in the SBP as specified in the footnotes and regulatory text.

Meal pattern	Breakfast meal pattern			Lunch meal pattern		
	Grades K–5 [a]	Grades 6–8 [a]	Grades 9–12 [a]	Grades K–5	Grades 6–8	Grades 9–12
	Amount of food [b] per week (minimum per day)					
Fruits (cups) [c d]	5 (1) [e]	5 (1) [e]	5 (1) [e]	2½ (½)	2½ (½)	5 (1)
Vegetables (cups) [c d]	0	0	0	3¾ (¾)	3¾ (¾)	5 (1)
Dark green [f]	0	0	0	½	½	½
Red/Orange [f]	0	0	0	¾	¾	1¼
Beans/Peas (Legumes) [f]	0	0	0	½	½	½
Starchy [f]	0	0	0	½	½	½
Other [f g]	0	0	0	½	½	¾
Additional Veg to Reach Total [h]	0	0	0	1	1	1½
Grains (oz eq) [i]	7–10 (1) [j]	8–10 (1) [j]	9–10 (1) [j]	8–9 (1)	8–10 (1)	10–12 (2)
Meats/Meat Alternates (oz eq)	0 [k]	0 [k]	0 [k]	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups) [l]	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week						
Min-max calories (kcal) [m n o]	350–500	400–550	450–600	550–650	600–700	750–850
Saturated fat % of total calories) [n o]	< 10	< 10	< 10	< 10	< 10	< 10
Sodium (mg) [n p]	≤ 430	≤ 470	≤ 500	≤ 640	≤ 710	≤ 740
Trans fat [n o]	Nutrition label or manufacturer specifications must indicate zero grams of *trans* fat per serving.					

[a] In the SBP, the above age-grade groups are required beginning July 1, 2013 (SY 2013–14). In SY 2012–2013 only, schools may continue to use the meal pattern for grades K–12 (see § 220.23).

[b] Food items included in each food group and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.

[c] One quarter-cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.
[d] For breakfast, vegetables may be substituted for fruits, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or "Other vegetables" subgroups as defined in § 210.10(c)(2)(iii).
[e] The fruit quantity requirement for the SBP (5 cups/week and a minimum of 1 cup/day) is effective July 1, 2014 (SY 2014–2015).
[f] Larger amounts of these vegetables may be served.
[g] This category consists of "Other vegetables" as defined in § 210.10(c)(2)(iii)(E). For the purposes of the NSLP, "Other vegetables" requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in § 210.10(c)(2)(iii).
[h] Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.
[i] At least half of the grains offered must be whole grain-rich in the NSLP beginning July 1, 2012 (SY 2012–2013), and in the SBP beginning July 1, 2013 (SY 2013–2014). All grains must be whole grain-rich in both the NSLP and the SBP beginning July 1, 2014 (SY 2014–15).
[j] In the SBP, the grain ranges must be offered beginning July 1, 2013 (SY 2013–2014).
[k] There is no separate meat/meat alternate component in the SBP. Beginning July 1, 2013 (SY 2013–2014), schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met.
[l] Fluid milk must be low-fat (1 percent milk fat or less, unflavored) or fat-free (unflavored or flavored).
[m] The average daily amount of calories for a 5-day school week must be within the range (at least the minimum and no more than the maximum values).
[n] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent milk fat are not allowed.
[o] In the SBP, calories and *trans* fat specifications take effect beginning July 1, 2013 (SY 2013–2014).
[p] Final sodium specifications are to be reached by SY 2022–2023 or July 1, 2022. Intermediate sodium specifications are established for SY 2014–2015 and 2017–2018. See required intermediate specifications in § 210.10(f)(3) for lunches and § 220.8(f)(3) for breakfasts.

IV Implementation Timeline

The following chart provides a summary of the new requirements and the required implementation dates in the NSLP and SBP. Refer to the regulatory text for details.

New requirements	Implementation (school year) for NSLP (L) and SBP (B)						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2022/23
Fruits Component:							
• Offer fruit daily	L						
• Fruit quantity increase to 5 cups/week (minimum 1 cup/day).			B				
Vegetables Component:							
• Offer vegetables subgroups weekly	L						
Grains Component:							
• Half of grains must be whole grain-rich	L	B					
• All grains must be whole-grain rich			L, B				
• Offer weekly grains ranges	L	B					
Meats/Meat Alternates Component:							
• Offer weekly meats/meat alternates ranges (daily min.)	L						
Milk Component:							
• Offer only fat-free (unflavored or flavored) and low-fat (unflavored) milk.	L, B						
Dietary Specifications (to be met on average over a week):							
• Calorie ranges	L	B					
• Saturated fat limit (no change)	L, B						
• Sodium Targets [1]			L, B				L, B
○ Target 1.							
○ Target 2.							
○ Final target.							
• Zero grams of *trans* fat per portion	L	B					
Menu Planning:							
• A single FBMP approach	L	B					
Age-Grade Groups:							
• Establish age/grade groups: K–5, 6–8, and 9–12	L	B					
Offer vs. Serve:							
• Reimbursable meals must contain a fruit or vegetable (½ cup minimum).	L		B				
Monitoring:							
• 3-year adm. review cycle		L, B					
• Conduct weighted nutrient analysis on 1 week of menus	L	B					

[1] Target 2 and the final target will only be required after USDA evaluates relevant data on sodium intake and human health, as required by Section 743 of the FY 2012 Agriculture Appropriations Act.

Implementation Resources

With respect to resources for the changes, USDA estimates suggest that the common-sense revenue reforms for school food businesses included in the HHFKA will provide an additional $7.5 billion in non-Federal revenues over 5 years to the food service accounts of local school districts. This includes over $5.3 billion in additional revenue from a la carte foods, over $300 million in additional payments from paid lunches, and over $1.9 billion in additional revenue schools resulting from making school meals more competitive with a la carte foods.

Since the statute mandated that revenue streams from non-Program

foods relative to the costs of those foods, should be at least as high as the revenue stream for Program meals bears to costs beginning July 1, 2011, schools should receive over $1 billion in new revenues in School Year 2011–2012. That will help schools work toward implementing the new standards effective the following year, *i.e.,* July 1, 2012. In addition, USDA estimates that the interim rule ''National School Lunch Program: School Food Service Account Revenue Amendments Related to the Healthy, Hunger-Free Kids Act of 2010'' will increase participation in school meals programs by 800,000 children.

The six-cent performance-based reimbursement increase included in the HHFKA will provide additional revenue beyond this amount. The Congressional Budget Office estimated about $1.5 billion over the same period in performance-based funding.

USDA will work with the SAs to facilitate transition to the new meal requirements. USDA and the National Food Service Management Institute are developing technical assistance resources and training to help school foodservice staff improve menus, order appropriate foods to meet the new meal requirements, and control costs while maintaining quality. Resources and training materials being developed include identifying and purchasing whole grain-rich foods, lowering the sodium on menus, and meeting the new meal pattern requirements. Training will be available through a variety of methods including webinars and online learning modules.

We are updating the Child Nutrition Database and will reevaluate nutrient analysis software systems available from industry to assist SAs with monitoring calories, saturated fat, and sodium in the meals offered to students in grades K through 12 during the administrative review. The Child Nutrition Labeling Program is being updated to report whole grain-rich contributions to the grains component and to provide standardized claims for the vegetable subgroups consistent with the 2010 Dietary Guidelines.

In addition, the HHFKA provides USDA $50 million for each of the first two years of the new meal requirements for use in assisting SAs implement the new requirements. These funds, combined with increases in State Administrative Expense funding, should assist States and local operators in improving the quality of school meals provided to children.

V. Procedural Matters

Executive Order 12866 and Executive Order 13563

Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated an ''economically significant regulatory action'' under section 3(f) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget.

Regulatory Flexibility Act

This final rule has been reviewed with regard to the requirements of the Regulatory Flexibility Act of 1980 (5 U.S.C. 601–612). Pursuant to that review, it has been determined that this rule will have a significant impact on a substantial number of small entities.

The requirements established by this final rule will apply to school districts, which meet the definitions of ''small governmental jurisdiction'' and ''small entity'' in the Regulatory Flexibility Act. A Regulatory Flexibility Act analysis is included in the preamble.

Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, USDA generally must prepare a written statement, including a cost/benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, or tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. When such a statement is needed for a rule, section 205 of the UMRA generally requires USDA to identify and consider a reasonable number of regulatory alternatives and adopt the most cost-effective or least burdensome alternative that achieves the objectives of the rule. The Regulatory Impact Analysis conducted by FNS in connection with this final rule includes a cost/benefit analysis and explains the options considered to implement the Dietary Guidelines in the school meal programs.

USDA sought the assistance of the Institute of Medicine of the National Academies to recommend changes to school meal standards in the least burdensome and costly manner consistent with the Dietary Guidelines. However, this final rule contains Federal mandates (under the regulatory provisions of Title II of the UMRA) that could result in costs to State, local, or tribal governments or to the private sector of $100 million or more in any one year. The HHFKA authorizes $50 million over two years to help State agencies implement the new meal pattern requirements. These funds, combined with increases in State Administrative Expense funding, should assist States and local operators in implementing the requirements established by this final rule. Local program operators need to optimize the use of USDA Foods and adopt other cost-savings strategies in various areas of the food service operation, including procurement, menu planning, and meal production to meet the rule requirements in a cost-effective manner.

Executive Order 12372

The NSLP is listed in the Catalog of Federal Domestic Assistance under No. 10.555 and the SBP is listed under No. 10.553. For the reasons set forth in the final rule in 7 CFR part 3015, Subpart V and related Notice published at 48 FR 29114, June 24, 1983, these Programs are included in the scope of Executive Order 12372, which requires intergovernmental consultation with State and local officials.

Since the NSLP and SBP are State-administered, federally funded programs, FNS headquarters staff and regional offices have formal and informal discussions with State and local officials, including ITO representatives, on an ongoing basis regarding program requirements and operation. This structure allows FNS to receive regular input which contributes to the development of meaningful and feasible Program requirements.

Federalism Summary Impact Statement

Executive Order 13132 requires Federal agencies to consider the impact of their regulatory actions on State and local governments. Where such actions have federalism implications, agencies are directed to provide a statement for inclusion in the preamble to the regulations describing the agency's considerations in terms of the three categories called for under section (6)(b)(2)(B) of Executive Order 13132.

Prior Consultation With State Officials

FNS staff received informal input from various stakeholders while participating in various State, regional, national, and professional conferences. Various departments of education, boards of education, departments of health, and other state and local organizations provided input during the public comment period. The School Nutrition Association, School Food Industry Roundtable, National Alliance for Nutrition and Activity, Association of State and Territorial Public Health Nutrition Directors, and the Center for Science in the Public Interest shared their views about changes to the school meals. Numerous stakeholders also provided input at the public meetings held by the Institute of Medicine in connection with its school meals study.

Nature of Concerns and the Need to Issue This Rule

State Agencies and school food authorities want to provide the best possible school meals through the NSLP and SBP but are concerned about program costs, food waste, and increasing administrative burden. While FNS is aware of these concerns, section 9(a)(4) and section 9(f)(1) of the National School Lunch Act, 42 U.S.C. 1758(a)(4) and (f)(1), require that school meals reflect the most recent ''Dietary Guidelines for Americans'' and promote the intake of the food groups recommended by the Dietary Guidelines.

Extent To Which We Meet Those Concerns

Although there is general support for the meal requirements established by this final rule, State and local program operators, food industry, and others associated with the operation of the school meals programs expressed concern about the proposed increase in food quantities, limit on starchy vegetables, sodium reductions, and implementation timeline, as well as the estimated meal costs. USDA has taken into consideration these concerns, and the requirements of the FY 2012 Agriculture Appropriations Act, and has modified several of the key meal requirements to be responsive to the concerns of State and local program operators. This final rule makes significant improvements to the school meals, while modifying the following provisions to facilitate successful implementation of the final rule at the State and local levels:

- Reduce the proposed grains quantities at lunch to reduce food cost,
- Remove the proposed starchy vegetable restrictions at lunch and breakfast as required by the FY 2012 Agriculture Appropriations Act,
- Allow students to select ½ cup of a fruit or a vegetable to reduce food waste,
- Allow more time to comply with the second intermediate sodium targets,
- Remove the daily meat/meat alternate requirement at breakfast to reduce food cost,
- Provide additional time for implementation of the breakfast requirements, and
- Reduce the administrative burden by requiring State agencies to conduct a nutrient analysis of school meals using one week of menus, rather than two weeks as proposed.

Executive Order 12988

This final rule has been reviewed under Executive Order 12988, ''Civil Justice Reform.'' This final rule is intended to have preemptive effect with respect to any State or local laws, regulations or policies which conflict with its provisions or which would otherwise impede its full and timely implementation. This rule would permit State or local agencies operating the National School Lunch and School Breakfast Programs to establish more rigorous nutrition requirements or additional requirements for school meals that are not inconsistent with the nutritional provisions of the rule. Such additional requirements would be permissible as part of an effort by a State or local agency to enhance the school meals and/or the school nutrition environment. To illustrate, State or local agencies would be permitted to establish more restrictive saturated fat and sodium limits. For these components, quantities are stated as maximums (*e.g.,* ≤) and could not be exceeded; however, lesser amounts than the maximum could be offered. Likewise, State or local agencies could accelerate implementation of the breakfast requirements in an effort to improve all school meals promptly. This rule is not intended to have a retroactive effect. Prior to any judicial challenge to the provisions of this rule or the application of its provisions, all applicable administrative procedures under § 210.18(q) or § 235.11(f) must be exhausted.

Civil Rights Impact Analysis

FNS has reviewed this final rule in accordance with USDA Regulation 4300–4, ''Civil Rights Impact Analysis,'' to identify and address any major civil rights impacts the rule might have on program participants on the basis of age, race, color, national origin, sex or disability. After a careful review of the rule's intent and provisions, FNS has determined that this final rule is not expected to affect the participation of protected individuals in the NSLP and SBP. This final rule is intended to improve the nutritional quality of school meals and is not expected to limit program access or otherwise adversely impact the protected classes.

Executive Order 13175—Consultation and Coordination With Indian Tribal Governments

USDA is unaware of any current Tribal laws that could be in conflict with the requirements of this final rule. However, we have made special efforts to reach out to Tribal communities. We held five consultations (webinars and conference calls) with Indian Tribal Organizations in 2011 to discuss implementation of the Healthy, Hunger-Free Kids Act of 2010. These sessions provided the opportunity to address Tribal concerns related to school meals, clarify that traditional foods and local products can be incorporated into the school meals, and highlight the proposed changes to the meal pattern (increase in whole grains, fruits and vegetables) that are expected to support Tribal efforts to reduce diabetes in the community.

In addition, USDA will undertake, within 6 months after this final rule implementation, a series of Tribal consultation sessions to gain input by elected Tribal officials or their designees concerning the impact of this rule on Tribal governments, communities and individuals. These sessions will establish a baseline of consultation for future actions, should any be necessary, regarding this rule. Reports from these sessions for consultation will be made part of the USDA annual reporting on Tribal Consultation and Collaboration. USDA will respond in a timely and meaningful manner to all Tribal government requests for consultation concerning this final rule and will provide additional venues, such as webinars and teleconferences, to periodically host collaborative conversations with Tribal leaders and their representatives concerning ways to improve this rule in Indian country.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. chap. 35; see 5 CFR 1320) requires the Office of Management and Budget (OMB) approve all collections of information by a Federal agency before they can be implemented. Respondents are not required to respond to any collection of information unless it displays a current valid OMB control number. This rule contains information

collection requirements subject to approval by OMB under the Paperwork Reduction Act of 1995. FNS will merge these burden hours into National School Lunch Program, OMB # 0584–0006 which is currently under review. A 60-day notice was published in the **Federal Register** at 76 FR 2509 on January 13, 2011 which provided the public an opportunity to submit comments on the information collection burden resulting from this rule. This information collection burden has not yet been approved by OMB. FNS will publish a document in the **Federal Register** once these requirements have been approved. The current total estimated annual burden for OMB No. 0584–0006 is now 11,880,415 hours, rather than the 11,882,408 indicated in the proposed rule.

The average burden per response and the annual burden hours are explained below and summarized in the chart which follows:

Respondents for this rule: State Education Agencies (57) and School Food Authorities (6,983).

Estimated Number of Respondents for this rule: 7040.

Estimated Number of Responses per Respondent for this rule: 3.87217.

Estimated Total Annual Responses: 27,260.

Estimated Total Annual Burden on Respondents for this rule: 73,849 hours.

ESTIMATED ANNUAL BURDEN FOR 0584–NEW, NATIONAL SCHOOL LUNCH PROGRAM, 7 CFR 210

	Section	Estimated number of respondents	Frequency of response	Average annual responses	Average burden per response	Annual burden hours
Reporting:						
SA shall verify compliance with critical and general areas of review.	7 CFR 210.18(g) & 210.18(h).	57	1	57	33	1,881
SFA shall submit to SA documented corrective action, no later than 30 days from the deadline for completion, for violations of critical or general area identified on administrative follow-up review.	7 CFR 210.18(k)(2)	6,983	1	6,983	6	41,898
Total Reporting for DGA rule		7,040		7,040	6.2186	43,779
Total Existing Reporting Burden for Part 210						2,912,745
Total Reporting Burden for Part 210 with DGA rule.						2,956,524
Recordkeeping:						
SA establishes guidelines and approves School Food Authorities menu planning alternatives. (Burden removed by proposed rule).	7 CFR 210.10 (1)	0	0	0	0	*(57)
SA modifies menu planning alternatives or develops menu planning alternatives. (Burden removed by proposed rule).	7 CFR 210.10 (1)	0	0	0	0	*(100)
SA records document the details of all reviews and the degree of compliance with the critical and general areas of review. To include documented action on file for review by FNS.	7 CFR 210.18 (k), 210.18 (p), & 210.20 (b)(6).	57	93.23	5,314	2.0	10,628
SA documentation of fiscal action taken to disallow improper claims submitted by SFAs, as determined through claims processing, CRE reviews, and USDA audits. Contracts awarded by SFAs to FSMCs.	7 CFR 210.19 (c) & 210.18 (p).	57	139	7,923	0.50	3,962
SFAs adopt menu planning alternatives, modify menu planning alternatives or develop menu planning alternatives and submit them to the State agency for approval at SFA level. (Burden removed by proposed rule.).	7 CFR 210.10(1)	0	0	0	0	*(26,261)
SFA documentation of corrective action taken on program disclosed by review or audit.	7 CFR 210.18 (k)(2)	6,983	1	6,983	6	41,898
Total Recordkeeping for New burden		7,040		20,220	1.4871	30,070
Total Existing Recordkeeping Burden for 0584–0006, Part 210.						8,893,821
Total Recordkeeping Burden for 0584–0006, Part 210 with proposed rule.						8,923,891

*Indicates reduced burden hours due to changes in proposed DGA rule.

SUMMARY OF BURDEN (OMB #0584–NEW)

Total No. Respondents	7,040
Average No. Responses Per Respondent	3.87217
Total Annual Responses	27,260
Average Hours Per Response	2.70
Total Annual Burden Hours Requested	11,880,415
Current OMB Inventory	11,806,566
Difference	73,849

Reporting: Affected citation is 7 CFR 210.18(g) and 7 CFR 210.18(h)—Based on the comments received, this final rule changed the requirement to analyze two weeks' worth of menus to one week. Hence, average burden time per response is reduced from 40 hours to 33 hours for this citation.

Recordkeeping: 7 CFR 210.18 (k) and (p) and 210.20 (b)(6). As the record keeping time related to administrative review documents is reduced, average burden time per response is reduced from 2.3 hours to 2 hours. The current total estimated annual burden for OMB No. 0584–0006 is now 11,880,415 hours, rather than the 11,882,408 indicated in the proposed rule.

E-Government Act Compliance

The Food and Nutrition Service is committed to complying with the E-Government Act, 2002 to promote the use of the Internet and other information technologies to provide increased opportunities for citizen access to Government information and services, and for other purposes.

Regulatory Impact Analysis Summary

As required for all rules that have been designated significant by the Office of Management and Budget, a Regulatory Impact Analysis (RIA) was developed for this final rule. The following is a summary of the RIA. The complete RIA appears later in this document.

Need for Action

Under Section 9(a)(4) and Section 9(f)(1) of the NSLA, schools that participate in the NSLP or SBP must offer lunches and breakfasts that are consistent with the goals of the most recent Dietary Guidelines for Americans. School lunches must provide one-third of the Recommended Dietary Allowances (RDA) for protein, calcium, iron, and vitamins A and C, on average over the course of a week; school breakfasts must satisfy one-fourth of the RDAs for the same nutrients. Current nutrition requirements for school lunches and breakfasts are based on the 1995 Dietary Guidelines and the 1989 RDAs. School lunches and breakfasts were not updated when the 2000 Dietary Guidelines were issued because those recommendations did not require significant changes to the school meal patterns. The 2005 and 2010 Dietary Guidelines, provide more prescriptive and specific nutrition guidance than earlier releases, and require significant changes to school meal requirements.

Benefits

The United States Department of Agriculture's Food and Nutrition Service (FNS) contracted with the National Academies' Institute of Medicine (IOM) in 2008 to examine current NSLP and SBP nutrition requirements. IOM formed an expert committee tasked with comparing current school meal requirements to the 2005 Dietary Guidelines and to current Dietary Reference Intakes. The committee released its recommendations in late 2009 (IOM 2009).

In developing its recommendations, the IOM sought to address low intakes of fruits, vegetables, and whole grains among school-age children, and excessive intakes of sodium and discretionary calories from solid fats and added sugar. The final rule addresses these concerns by increasing the amount of fruit, the amount and the variety of vegetables, and the amount of whole grains offered each week to students who participate in the school meals programs. The rule also replaces higher fat fluid milk with low-fat and skim fluid milk in school meals. And it limits the levels of calories, sodium, and saturated fat in those meals.

A proposed rule, published by USDA in January 2011, made only small changes to the IOM recommendations. The final rule makes additional changes. These changes respond primarily to comments received from school and State officials, nutrition and child advocates, industry groups, parents of schoolchildren, and the general public. The most significant of these changes reduce the immediate and long-term costs of implementing the rule. Additional changes respond to recommendations contained in the 2010 Dietary Guidelines which were released after development of the proposed rule.

The linkage between poor diets and health problems such as childhood obesity are a matter of particular policy concern, given their significant social costs. One in every three children (31.7 percent) ages 2–19 is overweight or obese. Along with the effects on our children's health, childhood overweight and obesity imposes substantial economic costs, and the epidemic is associated with an estimated $3 billion in direct medical costs. Perhaps more significantly, obese children and adolescents are more likely to become obese as adults. In 2008, medical spending on adults that was attributed to obesity increased to an estimated $147 billion.

Because of the complexity of factors that contribute both to overall food consumption and to obesity, we are not able to define a level of disease or cost reduction that is attributable to the changes in meals expected to result from implementation of the rule. As the rule is projected to make substantial improvements in meals served to more than half of all school-aged children on an average school day, we judge that the likelihood is reasonable that the benefits of the rule exceed the costs, and that the final rule thus represents a cost-effective means of conforming NSLP and SBP regulations to the statutory requirements for school meals. Beyond these changes a number of qualitative benefits—including alignment between Federal program benefits and national nutrition policy, improved confidence of parents and families in the nutritional quality of school meals, and the contribution that improved school meals can make to the overall school nutrition environment, are expected from the rule.

Costs

This final rule will increase the amount of fruits, vegetables, and whole grains offered to participants in the NSLP and SBP. The final rule will also limit certain fats and reduce calories and sodium in school meals. Because some foods that meet these requirements are more expensive than foods served in the school meal programs today, the food cost component of preparing and serving school meals will increase.

The biggest contributors to this increase are the costs of serving more vegetables and more fruit, and replacing refined grains with whole grains. We estimate that food costs will increase by 2.5 cents per lunch served, as compared with prior requirements, on initial implementation of the final rule requirements. There is no immediate increase in breakfast food costs. Two years after implementation, when the fruit requirement is phased in for breakfast, and when all grains served at breakfast and lunch must be whole grain rich, we estimate that food costs will increase by 5 cents per lunch served and 14 cents per breakfast, as compared with prior requirements.

Compliance with this rule is also likely to increase labor costs. Serving

healthier school meals that are acceptable to students may require more on-site preparation, and less reliance on prepared foods. For purposes of this impact analysis, labor costs are assumed to grow so that they maintain a constant ratio with food costs, consistent with findings from a national study of school lunch and breakfast meal costs (USDA 2008). In practice, this suggests that food and labor costs may increase by nearly equal amounts relative to current costs.

The estimated overall costs of compliance are summarized below. Increased food and labor costs will be incurred by the local and State agencies that control school food service accounts. The rule will also increase the administrative costs incurred by the State agencies responsible for reviewing school district compliance with the new meal patterns. The analysis estimates that total costs may increase by $3.2 billion from fiscal year (FY) 2012 through fiscal year (FY) 2016, or roughly 8 percent when the rule's food group requirements are fully implemented in FY 2015. The estimated increases in food and labor costs are equivalent to about 10 cents for each reimbursable school lunch and about 27 cents for each reimbursable breakfast in FY 2015.

Estimated Cost of Final Rule (millions)

	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Food Costs	$20.8	$135.4	$178.7	$612.8	$642.8	**$1,590.5**
Labor Costs	20.7	141.9	174.4	598.0	627.2	**1,562.3**
State Agency Administrative Costs	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$41.6**	**$286.2**	**$362.1**	**$1,220.2**	**$1,279.7**	**$3,189.9**
Percent Change Over Baseline	**2.0%**	**2.0%**	**2.5%**	**8.0%**	**8.1%**	**5.2%**

Alternatives

One alternative to the final rule is to retain the proposed rule without change. The proposed rule closely followed IOM's recommendations. IOM developed its recommendations to encourage student consumption of foods recommended by the Dietary Guidelines in quantities designed to provide necessary nutrients without excess calories. The final rule still achieves that goal. Students will still be presented with choices from the food groups and vegetable subgroups recommended by the Dietary Guidelines. In that way, the final rule, like the proposed rule, will help children recognize and choose foods consistent with a healthy diet.

The most significant differences between the proposed and final rules are in the breakfast meal patterns, and those differences are largely a matter of timing. The final rule allows schools more time to phase-in key IOM recommendations on fruit and grains at breakfast. Once fully implemented, the most important difference between the final and proposed rule breakfast meal patterns is the elimination of a separate meat/meat alternate requirement. That change preserves current rules that allow the substitution of meat for grains at breakfast. It also responds to general public comments on cost, and on the need to preserve schools' flexibility to serve breakfast outside of a traditional cafeteria setting.

Even with these changes, and with the less significant changes to the proposed lunch standards, the final rule remains consistent with Dietary Guidelines recommendations. The added flexibility and reduced cost of the final rule relative to the proposed rule should increase schools' ability to comply with the new meal patterns. The final rule's less costly breakfast patterns will make it easier for schools to maintain or expand current breakfast programs, and may encourage other schools to adopt a breakfast program. These changes reduce the estimated 5-year cost of the final rule, relative to the proposed rule, by $2.9 billion.

A second alternative would implement the final rule's lunch meal pattern changes, but retain the proposed rule's breakfast meal pattern recommendations. Adopting all of the lunch provisions contained in the final rule, but retaining the proposed rule's breakfast provisions, would cost an estimated $5.9 billion over 5 years, or $2.7 billion more than the final rule. This alternative responds less effectively than the final rule to comments received by USDA from SFA and school administrators who expressed concerns about the cost of the proposed rule.

An alternative that implements the final rule's breakfast meal pattern changes, but retains the proposed rule's lunch meal pattern recommendations, would cost $3.4 billion over 5 years, about $180 million more than the final rule.

Regulatory Impact Analysis

Title: Nutrition Standards in the National School Lunch and School Breakfast Programs

Action

a. *Nature:* Final Rule.

b. *Need:* Section 103 of the Child Nutrition and WIC Reauthorization Act of 2004 inserted Section 9(a)(4) into the National School Lunch Act requiring the Secretary to promulgate rules revising nutrition requirements, based on the most recent Dietary Guidelines for Americans, that reflect specific recommendations, expressed in serving recommendations, for increased consumption of foods and food ingredients offered in school nutrition. This final rule amends Sections 210 and 220 of the regulations that govern the National School Lunch Program (NSLP) and the School Breakfast Program (SBP). The rule implements many of the recommendations of the National Academies' Institute of Medicine (IOM). Under contract to the United States Department of Agriculture (USDA), IOM proposed changes to NSLP and SBP meal pattern requirements consistent with the 2005 Dietary Guidelines and IOM's Dietary Reference Intakes. The final rule advances the mission of the Food and Nutrition Service (FNS) to provide children access to food, a healthful diet, and nutrition education in a manner that promotes American agriculture and inspires public confidence.

c. *Affected Parties:* The programs affected by this rule are the NSLP and the SBP. The parties affected by this regulation are USDA's Food and Nutrition Service, State education agencies, local school food authorities, schools, students, and the food

production, distribution and service industry.

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Abbreviations

The following abbreviations are used throughout this document:

CN Child Nutrition Programs
CPI Consumer Price Index
CRE Coordinated Review Effort
DRI Dietary Reference Intake
FNS Food and Nutrition Service
FY Fiscal Year
IOM Institute of Medicine
NSLA National School Lunch Act
NSLP National School Lunch Program
RDA Recommended Dietary Allowance
SA State Agency
SBP School Breakfast Program
SY School Year
SFA School Food Authority
SLBCS–II School Lunch and Breakfast Cost Study II
SMI USDA School Meals Initiative for Healthy Children
SNDA–III School Nutrition Dietary Assessment III
USDA United States Department of Agriculture

I. Background

The National School Lunch Program (NSLP) is available to over 50 million children each school day; an average of 31.7 million children per day ate a reimbursable lunch in fiscal year (FY) 2010. The School Breakfast Program (SBP) served an average of 11.7 million children daily. Schools that participate in the NSLP and SBP receive Federal reimbursement and USDA Foods (donated commodities) for lunches and breakfasts that meet program requirements. In exchange for this assistance schools serve meals at no cost or at reduced price to income-eligible children. Federal meal reimbursements and USDA Foods totaled $13.7 billion in FY 2010. FNS projections of the number of meals served and Federal program costs are summarized in Table 1.[1]

TABLE 1—PROJECTED NUMBER OF MEALS SERVED AND TOTAL FEDERAL PROGRAM COSTS

[In millions]

	Fiscal year					
	2011	2012	2013	2014	2015	2016
NSLP:						
—Lunches Served	5,386.7	5,465.3	5,530.9	5,586.2	5,630.9	5,675.9
—Program Cost	$11,822.8	$12,373.0	$12,499.8	$12,584.9	$12,679.3	$12,782.4
SBP:						
—Breakfasts Served	2,090.9	2,187.0	2,252.7	2,297.7	2,332.2	2,367.2
—Program Cost	$3,115.3	$3,337.7	$3,469.8	$3,556.7	$3,628.6	$3,721.0

In FY 2010, schools served 2.9 billion free NSLP lunches, 0.5 billion reduced price lunches, and 1.8 billion full price or ''paid'' lunches. Schools served 1.5 billion free breakfasts, 0.2 billion reduced price breakfasts, and 0.3 billion paid breakfasts. These figures do not include non-Federally reimbursable à la carte meals or other non-program foods.[2]

Reimbursement rates for meals served under the current meal patterns are established by law and are adjusted annually for inflation.[3] For school year (SY) 2011–2012, the Federal reimbursement for a free breakfast for schools in the contiguous United States and ''not in severe need'' is $1.51; the Federal reimbursement for a free lunch to schools in SFAs in the contiguous United States that served fewer than 60 percent free and reduced price lunches was $2.77. Schools that participate in the NSLP also receive USDA Foods for each free, reduced price, and paid lunch served, as provided by Section 6 of the Richard B. Russell National School Lunch Act (NSLA). Table 2 provides a breakdown of breakfast and lunch reimbursements in SY 2011–2012, including USDA Foods.

[1] The figures in Table 1 are USDA projections of the number of program meals served and the value of USDA reimbursements for those meals. These figures are baseline Federal government costs of the NSLP and the SBP estimated for the President's budget proposal for FY 2012. Elsewhere in this document, baseline costs refer to the cost to schools of serving meals that satisfy current program requirements.

[2] USDA program data.

[3] Reimbursement rates and annual inflation adjustments are set by statute, not regulation. The final rule does not alter current reimbursement rates. Reimbursement rates for school lunch under current nutrition standards are specified in Sections 4(b)(2) and 11(a)(2) of the NSLA (42 U.S.C. 1753(b)(2) and 42 U.S.C. 1759a(a)(2)). Breakfast reimbursement rates are specified in Section 4(b)(1)(B) of the Child Nutrition Act (42 U.S.C. 1773(b)(1)(B)). Both lunch and breakfast reimbursement rates are subject to the annual inflation adjustment prescribed by Section 11(a)(3) of the NSLA (42 U.S.C. 1759a(a)(3)).

TABLE 2—FEDERAL PER-MEAL REIMBURSEMENT AND MINIMUM VALUE OF USDA FOODS, SY 2011–2012 [4]

	Breakfast reimbursement		Lunch reimbursement		Minimum value of donated foods
	Schools in "severe need"	Schools not in "severe need"	SFAs that serve at least 60% of lunches free or at reduced price	SFAs that serve fewer than 60% of lunches free or at reduced price	Additional Federal assistance for each NSLP lunch served
Contiguous States:					
—Free	$1.80	$1.51	$2.79	$2.77	$0.2225
—Reduced Price	1.50	1.21	2.39	2.37	0.2225
—Paid	0.27	0.27	0.28	0.26	0.2225
Alaska:					
—Free	2.88	2.41	4.52	4.50	0.2225
—Reduced Price	2.58	2.11	4.12	4.10	0.2225
—Paid	0.40	0.40	0.45	0.43	0.2225
Hawaii:					
—Free	2.10	1.76	3.27	3.25	0.2225
—Reduced Price	1.80	1.46	2.87	2.85	0.2225
—Paid	0.30	0.30	0.33	0.31	0.2225

Under Section 9(a)(4) and Section 9(f)(1) of the NSLA, schools that participate in the NSLP or SBP must offer lunches and breakfasts that are consistent with the goals of the most recent Dietary Guidelines for Americans. School lunches must provide one-third of the Recommended Dietary Allowances (RDA) for protein, calcium, iron, and vitamins A and C, on average over the course of a week; school breakfasts must satisfy one-fourth of the RDAs for the same nutrients. Current nutrition requirements for school lunches and breakfasts are based on the 1995 Dietary Guidelines and the 1989 RDAs. (School lunches and breakfasts were not updated when the 2000 Dietary Guidelines were issued because those recommendations did not require significant changes to the school meal patterns.) The 2005 and 2010 Dietary Guidelines, provide more prescriptive and specific nutrition guidance than earlier releases, and require significant changes to school meal requirements.

The United States Department of Agriculture's Food and Nutrition Service (FNS) contracted with the National Academies' Institute of Medicine (IOM) in 2008 to examine current NSLP and SBP nutrition requirements. IOM formed an expert committee tasked with comparing current school meal requirements to the 2005 Dietary Guidelines and to current Dietary Reference Intakes. The committee released its recommendations in late 2009 (IOM 2009). For a summary discussion of the scientific standards that guided the committee, and the development of recommended targets for micro- and macronutrients, see the preamble to the proposed rule.[5]

II. Summary of Final Rule Meal Requirements

The proposed rule, published in January 2011, made only minor changes to the IOM recommendations. This final rule makes more significant changes. These changes respond primarily to comments received from school and State officials, nutrition and child advocates, industry groups, parents of schoolchildren, and the general public. Additional changes respond to recommendations contained in the 2010 Dietary Guidelines which were released after development of the proposed rule. As a group, these changes reduce program costs relative to the proposed rule. The final rule is effective at the start of SY 2012–2013.

The final rule, like the proposed rule, makes the following changes to current NSLP and SBP meal standards:

- Increases the amount and variety of fruits, vegetables, and whole grains;
- Sets minimum and maximum levels of calories; and
- Increases the focus on reducing the amounts of saturated fat and sodium provided in school meals.

Table 3 summarizes the breakfast and lunch meal standards with all provisions fully phased in. The following provisions are subject to a phased implementation; all other provisions are effective July 1, 2012:

- Minimum breakfast fruit requirement is effective July 1, 2014,
- Minimum breakfast grain requirement is effective July 1, 2013,
- Intermediate sodium targets take effect on July 1, 2014 and July 1, 2017; the final sodium target (in Table 3) takes effect on July 1, 2022. (See Table 3a.)

TABLE 3—SUMMARY OF FINAL RULE MEAL REQUIREMENTS [6]

Meal pattern	Breakfast meal pattern			Lunch meal pattern		
	Grades K–5 [a]	Grades 6–8 [a]	Grades 9–12 [a]	Grades K–5	Grades 6–8	Grades 9–12
	Amount of food [b] per week (minimum per day)					
Fruits (cups) [c d]	5 (1) [e]	5 (1) [e]	5 (1) [e]	2½ (½)	2½ (½)	5 (1)
Vegetables (cups) [c d]	0	0	0	3¾ (¾)	3¾ (¾)	5 (1)
Dark green [f]	0	0	0	½	½	½

[4] School year 2011–2012 NSLP and SBP reimbursement rates, and the minimum value of donated foods, can be found in the July 20, 2011 **Federal Register**, Vol. 76, No. 139, pp. 43256 and 43258.

[5] **Federal Register**, Vol. 76, No. 9, pp. 2494–2570.

[6] Table taken from preamble to the final rule.

TABLE 3—SUMMARY OF FINAL RULE MEAL REQUIREMENTS [6]—Continued

Meal pattern	Breakfast meal pattern			Lunch meal pattern		
	Grades K–5 [a]	Grades 6–8 [a]	Grades 9–12 [a]	Grades K–5	Grades 6–8	Grades 9–12
Red/Orange [f]	0	0	0	¾	¾	1¼
Beans/Peas (Legumes) [f]	0	0	0	½	½	½
Starchy [f]	0	0	0	½	½	½
Other [f g]	0	0	0	½	½	¾
Additional Veg to Reach Total [h]	0	0	0	1	1	1½
Grains (oz eq) [i]	7–10 (1) [j]	8–10 (1) [j]	9–10 (1) [j]	8–9 (1)	8–10 (1)	10–12 (2)
Means/Meat Alternates (oz eq)	0 [k]	0 [k]	0 [k]	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups) [l]	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week						
Min-max calories (kcal) [m n o]	350–500	400–500	450–600	550–650	600–700	750–850
Saturated fat (% of total calories) [n o]	< 10	< 10	< 10	< 10	< 10	< 10
Sodium (mg) [n p]	≤ 430	≤ 470	≤ 500	≤ 640	≤ 710	≤ 740
Trans fat [o]	Nutrition label or manufacturer specifications must indicate zero grams of *trans* fat per serving.					

[a] In the SBP, the above age-grade groups are required beginning July 1, 2013 (SY 2013–14). In SY 2012–2013 only, schools may continue to use the meal pattern for grades K–12 (See § 220.23).
[b] Food items included in each food group and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.
[c] One quarter-cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.
[d] For breakfast, vegetables may be substituted for fruits, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or ''Other vegetables'' subgroups, as defined in 210.10(c)(2)(iii).
[e] The fruit quantity requirement for the SBP (5 cups/week or a minimum of 1 cup/day) is effective July 1, 2014 (SY 2014–2015).
[f] Larger amounts of these vegetables may be served.
[g] This category consists of ''Other vegetables'' as defined in Section 210.10(c)(2)(iii)(E). For the purposes of the NSLP, the ''Other vegetables'' requirement may be met with any additional this category also includes any additional amounts from the dark green, red/orange, and beans/peas (legumes) as defined in 210.10(c)(2)(iii) vegetable subgroups.
[h] Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.
[i] At least half of the grains offered must be whole grain-rich in the NSLP beginning July 1, 2012 (SY 2012–2013), and in the SBP beginning July 1, 2013 (SY 2013–2014). All grains must be whole grain-rich in both the NSLP and the SBP beginning July 1, 2014 (SY 2014–15).
[j] In the SBP, the grain ranges must be offered beginning July 1, 2013 (SY 2013–2014).
[k] There is no separate meat/meat alternate component in the SBP. Beginning July 1, 2013 (SY 2013–2014), schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met.
[l] Fluid milk must be low-fat (1 percent milk fat or less, unflavored) or fat-free (unflavored or flavored).
[m] The average daily amount of calories for a 5-day school week must be within the range (at least the minimum and no more than the maximum values).
[n] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, trans fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent milk fat are not allowed.
[o] In the SBP, calories and trans fat specifications take effect beginning July 1, 2013 (SY 2013–2014).
[p] Final sodium specifications are to be reached by SY 2022–2023 or July 1, 2022. Intermediate sodium specifications are established for SY 2014–2015 and 2017–2018. See required intermediate specifications in § 210.10(f)(3) for lunches and § 220.8(f)(3) for breakfasts.

TABLE 3A—INTERMEDIATE AND FINAL SODIUM TARGETS

Age/grade group	Sodium reduction: timeline and amount		
	Target 1: July 1, 2014 (SY 2014–2015) (mg)	Target 2: July 1, 2017 (SY 2017–2018) (mg)	Final target: July 1, 2022 (SY 2022–2023) (mg)
K–5	≤ 1,230	≤ 935	≤ 640
6–8	≤ 1,360	≤ 1,035	≤ 710
9–12	≤ 1,420	≤ 1,080	≤ 740

Key differences between current meal pattern requirements and the final rule include:

• The number of fruit and vegetable servings offered to students over the course of a week would double at breakfast and would rise substantially at lunch.

• Schools would no longer be permitted to substitute between fruits and vegetables; each has its own requirement, ensuring that students are offered both fruits and vegetables every day.

• A minimum number of vegetable servings would be required from each of 5 vegetable subgroups. The proposed rule included tomatoes in the ''other'' vegetable category, consistent with the 2005 Dietary Guidelines. The 2010 Dietary Guidelines and this final rule create a new ''red/orange'' group that combines tomatoes with all of the vegetables in the previous ''orange'' category.

• Initially, half of grains offered to students would have to be whole grain rich. Two years after implementation, all grain products offered would have to be whole grain rich.

• Schools would be required to substitute low fat and fat free milk for higher fat content milk. This is a separate requirement of the Healthy Hunger-Free Kids Act of 2010 (HHFKA).

Section 202 of HHFKA requires schools to offer a variety of fluid milk consistent with the recommendations of the most recent Dietary Guidelines for Americans. The 2010 Dietary Guidelines recommends fat free or low fat milk (1 percent milkfat) for children ages 2 and older.

Table 4: School breakfast Program – Current Requirements Compared to Final Rule Requirements for a 5-Day School Week[a]

	Current Requirements	Final Rule		
Grade Levels	K-12	K-5	6-8	9-12
Fruit (cups)	2.5	5	5	5
Vegetable (cups)	0	0	0	0
Grain/Bread (oz eq)	0-10[b,c]	7-10	8-10	9-10
Meat/Meat Alternates (oz eq)	0-10[c]	0[d]	0[d]	0[d]
Milk (cups)	5	5	5	5

[a] Requirements and recommendations are for meals as offered for a 5-day school week. Requirements are minimum portion sizes based on the Traditional Food-Based Menu Planning approach.

[b] Must be enriched or whole grain.

[c] Requirements call for two grains, two meats, or one of each

[d] Schools retain ability to substitute meat for grains. See Table 3, footnote k for additional detail.

Table 5: National School Lunch Program: Current Requirements Compared to Final Rule Requirements for a 5-Day School Week[a]

	Current Requirements: Traditional Food-Based Approach			Current Requirements: Enhanced Food-Based Approach			Final rule[e]		
Grade Levels	K-3[b]	4-12[b]	7-12[c,d]	K-3[b,d]	4-12[b]	7-12	K-5	6-8	9-12
Fruit (cups)	2.5[f]	3.75[f]	3.75[f]	3.75[f]	4.25[h]	5[f]	2.5	2.5	5
Vegetable (cups)							3.75	3.75	5
Dark Green	NS	NS	NS	NS	NS	NS	0.5	0.5	0.5
Orange	NS	NS	NS	NS	NS	NS	0.75	0.75	1.25
Legumes	NS	NS	NS	NS	NS	NS	0.5	0.5	0.5
Starchy	NS	NS	NS	NS	NS	NS	0.5	0.5	0.5
Other	NS	NS	NS	NS	NS	NS	0.5	0.5	0.75
Additional Veg to Reach Total	NS	NS	NS	NS	NS	NS	1	1	1.5
Grain/Bread (oz eq)	8 (min 1/day)[g]	8 (min 1/day)[g]	8 (min 1/day)[g]	10 (min 1/day)[g]	12 (min 1/day)[g]	15 (min 1/day)[g]	8-9	8-10	10-12
Meat/Meat Alternates (oz eq)	7.5	10	15	7.5	10	10	8-10	9-10	10-12
Milk (cups)	5	5	5	5	5	5	5	5	5

[a] Requirements and recommendations are for meals as offered for a 5-day school week.

[b] Minimum portion sizes.

[c] Recommended potion sizes for the Traditional Food-Based Menu Planning approach.

[d] Optional grade configuration.

[e] See Table 3 and Table 3 footnotes for additional detail. Final rule standards shown in this table are after full phase-in (SY 2014-2015).

[f] Two or more servings of fruit, vegetables, or both a day.

[g] Must be enriched or whole grain.

[h] Two or more servings of fruit, vegetables, or both a day, plus an extra half-cup over the 5-day school week.

III. Cost/Benefit Assessment

A. Summary

1. Costs

The final rule will more closely align school meal pattern requirements with the science-based recommendations of the 2005 and 2010 Dietary Guidelines. These changes will increase the amount of fruits, vegetables, and whole grains offered to participants in the NSLP and SBP.[7] The final rule meal patterns will also limit certain fats and reduce calories and sodium in school meals. Because some foods that meet these requirements are more expensive than foods served in the school meal programs today, the food cost component of preparing and serving school meals will increase.

The biggest contributors to this increase are the costs of serving more vegetables and more fruit, and replacing refined grains with whole grains. We estimate that food costs will increase by 2.5 cents per lunch served, as compared with prior requirements, on initial implementation of the final rule requirements. There is no immediate increase in breakfast food costs. Two years after implementation, when the fruit requirement is phased in for breakfast, and when all grains served at breakfast and lunch must be whole grain rich, we estimate that food costs will increase by 5 cents per lunch served and 14 cents per breakfast, as compared with prior requirements.[8] In aggregate, we estimate that the rule may increase SFA food costs by $1.6 billion from FY 2012 through FY 2016. The annual increase in food costs relative to current standards is estimated to be about $0.6 billion by FY 2015.

The rule sets sodium targets that will not be fully implemented in the five year period covered by this analysis. The rule's initial sodium targets take effect in SY 2014–2015. Our cost estimate does not include an explicit adjustment to meet those targets. The rule's initial sodium targets impose relatively modest reductions from levels observed in SY 2004–2005.[9] Our estimate assumes that schools will meet the rule's initial targets as they reformulate recipes to meet the rule's food group requirements; that cost is contained in our estimate's food group and labor components.

Compliance with this rule is likely to increase labor costs. Serving healthier school meals that are acceptable to students may require more on-site preparation, and less reliance on prepared foods. IOM did not estimate the overall required increase in labor costs to implement its recommended changes in meal requirements, but noted an analysis of data from some Minnesota school districts that showed that ''healthier'' meals had higher labor costs—principally because of increased use of on-site preparation.[10].

For purposes of this impact analysis, labor costs are assumed to grow so that they maintain a constant ratio with food costs, consistent with findings from a national study of school lunch and breakfast meal costs (USDA 2008). In practice, this suggests that food and labor costs may increase by nearly equal amounts relative to current costs. Additional costs of compliance with the rule are discussed in subsections III C and III D of this analysis.[11]

The estimated overall costs of compliance are summarized in Table 6. For purposes of this analysis, the rule is assumed to take effect on July 1, 2012, the start of school year (SY) 2012–2013. The additional requirement to offer only whole grain rich grain products is assumed to begin in SY 2014–2015.

The analysis estimates that total costs may increase by $3.2 billion through fiscal year (FY) 2016, or roughly 8 percent when the rule's food group requirements are fully implemented in FY 2015. The estimated increases in food and labor costs are equivalent to about 10 cents for each reimbursable school lunch and about 27 cents for each reimbursable breakfast in FY 2015. These costs would be incurred by the local and State agencies that control school food service accounts.

TABLE 6—PROJECTED COST OF FINAL RULE

[Dollars in Millions]

	Fiscal year					
	2012	2013	2014	2015	2016	Total
Food Costs	$20.8	$135.4	$178.7	$612.8	$642.8	$1,590.5
Labor Costs	20.7	141.9	174.4	598.0	627.2	1,562.3
State Agency Administrative Costs.	0.1	8.9	9.1	9.4	9.7	37.1
Total	$41.6	$286.2	$362.1	$1,220.2	$1,279.7	$3,189.9
Percent Change Over Baseline	2.0%	2.0%	2.5%	8.0%	8.1%	5.2%

[7] Although a separate rulemaking will propose changes to the meal patterns for preschoolers, this rule makes one significant change for that age/grade group. Section 202 of the Healthy Hunger-Free Kids Act (Pub. L. 11–296) requires that schools offer a variety of milk, and that the milk offered comply with the recommendations of the most recent *Dietary Guidelines.* Consistent with that statutory requirement, this rule requires that schools serve only fat-free and low-fat milk in school lunches and breakfasts. That requirement applies to meals served by schools to children ages 3–4 as well as to older children in grades K–12. Because low-fat and fat-free milk tend to cost less than milk with higher fat content, that change will have a small negative effect on the cost of meals served to pre-K children. In addition to that change, the rule requires that schools serving meals to pre-K children adopt food-based menu planning (FBMP) for consistency with the rule's FBMP requirement for meals served to older children. Because the switch to FBMP, where necessary, makes no substantive change to the pre-K meal requirements, our analysis assumes that this provision of the rule has no impact on the cost of serving meals to these children. More than ⅔ of elementary schools used traditional or enhanced FBMP in SY 2004–2005 (USDA 2008, vol. 1, p. 36) and would need to make no changes at all to comply with the rule's pre-K menu planning requirement. For elementary schools that serve meals to pre-K children using a nutrient based menu planning system, the rule would require a change to FBMP. But that change is required for meals served to older children as well, and the administrative cost of that change is incorporated into the labor cost estimate of this analysis.

[8] The 2.5 cent per lunch figure is an estimate for the end of FY 2012 (the start of SY 2012–2013). The higher numbers are for FY 2015.

[9] USDA 2008, volume 1, pp. 162 and 196.

[10] IOM 2009, p. 148.

[11] The SLBCS–II found that costs other than food and labor accounted for 9.9 percent of reported SFA costs. These costs include ''supplies, contract services, capital expenditures, indirect charges by the school district, *etc.*'' (USDA 2008, pp. 3–5).

2. Benefits

The primary benefit of this rule is to align the regulations with the requirements placed on schools under NSLA to ensure that meals are consistent with the goals of the most recent Dietary Guidelines and the Dietary Reference Intakes. In increasing access to children for such meals it will address key inconsistencies between the diets of school children and Dietary Guidelines by (1) Increasing servings of fruits and vegetables, (2) replacing refined-grain foods with whole-grain rich foods, and (3) replacing higher-fat dairy products with low-fat varieties. It also results in a number of additional benefits, including alignment between Federal program benefits and national nutrition policy, improved confidence by parents and families in the nutritional quality of school meals, and the contribution that improved school meals can make to the overall school nutrition environment.

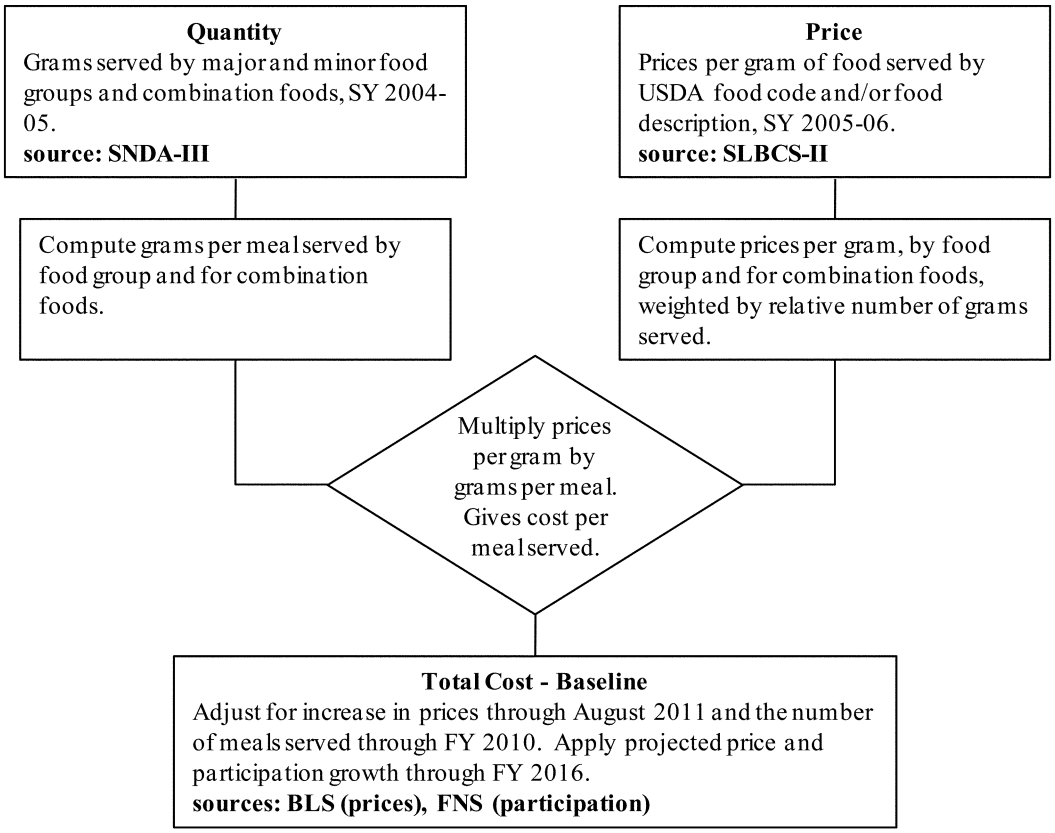
B. Food and Labor Costs

1. Baseline Cost Estimate

Food Costs: The analysis begins with an assessment of the cost of purchasing food to meet the rule's food-based meal requirements. The estimated increase in food cost is the difference between the cost of serving the quantities and types of foods used to meet current requirements and the cost of serving the quantities and types of foods outlined in the rule.

Figure 1: Baseline Food Cost Estimate Under Current Requirements and Practices

Objective: Use price and quantity data collected from schools to compute the total cost of NSLP and SBP meals served under current program rules.



The data sources that we use in this analysis, and their contribution to our food cost estimate, are summarized in Table 7.

TABLE 7—SUMMARY OF FOOD COST ESTIMATE DATA SOURCES

Data source	Contribution to food cost estimate
School Nutrition Dietary Assessment Study III (USDA 2007).	• Food codes and descriptions and food quantities served to students in SY 2004–05. Prices are applied to these food quantities to determine baseline food costs. • Meals served, quantities served, and quantities offered (''offer weights'') by food type, by school type (elementary, middle, and high). Used to determine students' inclinations to take an offered menu item (''take rates''). Take rates are applied to the types and quantities of food that must be offered to students under the rule to estimate quantities served.
School Lunch and Breakfast Cost Study II (USDA 2008).	• Food codes and descriptions, number of servings, average gram weight per serving, total grams served, cost per serving. These are used, along with other data sources, to estimate the cost per cup or ounce equivalent of each of the rule's required food types and combination entrées. • Also used to estimate the relative cost of food group subtypes: whole versus refined grain products, and the various vegetable varieties with separate serving requirements under the rule.

TABLE 7—SUMMARY OF FOOD COST ESTIMATE DATA SOURCES—Continued

Data source	Contribution to food cost estimate
USDA Child Nutrition Food Labels	• USDA food labels contain information on food group crediting for child nutrition program administrators. USDA maintains a collection of food labels for thousands of commercially-prepared entrees. Food group crediting information is used to determine the cup or ounce equivalents of meat, meat alternate, grain, vegetable, and fruit that may be credited by schools for a particular entrée. • Food group crediting is used to determine how much of the rule's food group requirements are satisfied by prepared foods offered by schools, and how much remains to be met with single food or non-entrée items.
USDA, National Food Service Management Institute, Recipe Database.	• The recipe database is used to supplement the information from USDA food labels. The recipe records, like the food labels, contain food group crediting information used to determine how much of the rule's food group requirements are satisfied by particular food items.
USDA Food Buying Guide	• The Food Buying Guide also contains information on food group crediting. The crediting information for various grain products is used in this estimate.
USDA, Agricultural Research Service, National Nutrient Database for Standard Reference, SR22.	• The SR22 is used to supplement the other food group crediting resources listed above. SR22 information was used to estimate food credits for food items without a CN food label, or a USDA recipe. SR22 provides protein and fiber content per given volume of a particular food. That information is used to estimate the food group credits for foods that are similar, but not identical, to foods with CN labels or USDA recipe records. • SR22 data is also used to compute the proper conversion factor from grams to cups for various school foods.
USDA, Agricultural Research Service, MyPyramid Equivalents Database for USDA Food Codes, Version 1.0.	• Used to determine the relative share of vegetables in combination foods and entrées by each of the varieties with separate serving requirements under the rule.
School Nutrition Dietary Assessment Study II (USDA 2001).	• Average food group crediting information for school salad bars is taken from SNDA–II.

We first totaled the value of food served by food group, as reported by schools in a national school nutrition assessment (SNDA–III), separately for lunch and breakfast. SNDA–III provides an estimate of the amount or quantity (in grams) of foods offered and served in the school lunch and breakfast programs for SY 2004–2005, based on a nationally representative sample of all participating public schools.[12] SNDA–III provides quantities of both minimally processed single foods (such as whole fruit, fruit juice, milk, and vegetables) and combination foods or entrees (such as beef stew, macaroni and cheese, and breakfast burritos). We summed the quantities of foods served to generate total gram weights for each single food and combination food category. We then divided these sums by SNDA–III's count of total meals served to generate average per-meal gram amounts for the same broad food categories.

We estimated the cost per gram within each food category using detailed price and quantity information collected as part of another nationally representative sample of public schools in SY 2005–2006 (SLBCS–II). SLBCS–II provides information on the number of servings, the average gram weight per serving, total grams served, and the cost per serving for a comprehensive list of single foods and combination entrees. The SLBCS–II dataset provides sufficient information to estimate weighted average prices for the same broad food categories identified in SNDA–III.

We computed preliminary per-meal baseline costs for breakfast and lunch as the product of the food quantities reported in SNDA–III and the unit prices computed from the SLBCS–II. Because the food prices available for this analysis are from SY 2005–2006, we inflated our estimates by the actual and projected increase in prices since that time. We computed a set of food group inflators weighted by SNDA–III's relative mix of foods served by schools in SY 2004–2005. We used the Consumer Price Index (CPI–U) for the specific food items in our weighted group averages. Because the mix of foods served in school breakfasts differs from the mix served at lunch (the grain group, for example, is weighted more heavily with bread at lunch, and more heavily with cereal at breakfast) we computed two sets of food group inflators. Through August 2011, these inflators are constructed with actual CPI values.[13] For years after 2011, the food group inflators rely on historic 7-year averages.

Our proposed rule analysis computed 5-year historic averages through FY 2009. Price inflation for most major food groups in the two years since FY 2009 was lower than inflation in the 5 years ending in September 2009. For our final rule cost analysis we use a 7-year average to project future prices. This 7-year average adds the most recent 2 years of price data to the 5 years used in the proposed rule methodology. We use a 7-year average, retaining all of the 5 years used in the proposed rule methodology, to avoid giving too much weight to the reduction in price inflation observed during the most recent two years, a period of weak economic growth and consumer demand. Use of a 5-year average ending in FY 2011 would produce a lower cost estimate than the one presented here.[14]

Food group inflation factors are summarized in Table 8.

[12] If patterns of student selection of foods are different in private schools than they are in public schools, then the reliance on public school data alone may bias our results. However, enrollment in public schools accounts for 97 percent of total enrollment in NSLP participating schools. Public schools account for more than 98 percent of total enrollment in SBP participating schools (USDA program data). Because public schools account for such a large share of total enrollment by participating schools, we expect that any differences in selection patterns between public and private schools would have little impact on our analysis.

[13] We used index values for the 11 months ending in August 2011 to estimate average index values for all of FY 2011.

[14] If, instead, we entirely discount the most recent two years of inflation, and instead used a 5-year average ending in FY 2009 to project future food prices, then our cost estimate would be higher. That scenario is discussed in Section F.

TABLE 8—FOOD GROUP PRICE INFLATORS [15]

	Cumulative increase 2006 to 2011 (percent)	*7-year Historic average (for years after 2011)* (percent)
Lunch inflators:		
—Milk	12.33	2.03
—Meat or Meat Alternate	17.54	2.75
—Fruit Juice	19.18	2.82
—Fruit (non-juice)	12.39	2.82
—Vegetables	18.52	3.97
—Refined and Whole Grains	25.16	3.85
—Combination Foods/Entrees	15.62	2.67
Breakfast inflators:		
—Milk	12.33	2.03
—Meat or Meat Alternate	16.52	2.63
—Fruit Juice	19.18	2.82
—Fruit (non-juice)	10.38	2.66
—Vegetables	19.81	4.83
—Refined and Whole Grains	17.39	2.50
—Combination Foods/Entrees	15.62	2.67

The value of USDA Foods and the value of cash in lieu of such food donations enters into both our baseline and final rule cost estimates; we treat them as food ''costs'' in both estimates. This is the same approach used in the SLBCS–II to estimate the cost of preparing and serving school meals.

We assume in the analysis that the types of commodities offered to schools in future years may satisfy the food group requirements of the final rule as effectively as they do now. USDA's annual commodity purchase plan, developed by FNS in consultation with the Agricultural Marketing Service and the Farm Service Agency, is driven by school demand for particular products as well as by current prices, available funds, and the variable nature of agricultural surpluses.[16]

In large measure, USDA Foods offered to schools are already well positioned to support the final rule's requirements. In recent years USDA has purchased relatively more canned foods and meats with reduced levels of fat, sodium, and sugar for school distribution. As products such as butter and shortening have been removed from the USDA Foods available to schools, new products such as whole grain pasta have been added. The rule is likely to move school demand towards a greater emphasis on these new offerings as schools introduce new menus. We assume that the contribution of USDA Foods to the cost of preparing school meals will not change after implementation of the rule.

The final step in constructing the baseline cost estimate was to multiply the per-meal cost estimates by the projected number of breakfasts and lunches served through our 5-year forecast period. Projected growth in the number of NSLP and SBP meals served in the absence of the rule is shown in Table 9.

TABLE 9—PROJECTED BASELINE GROWTH IN REIMBURSABLE MEALS SERVED [17]

	Fiscal year					
	2011	2012	2013	2014	2015	2016
Lunches:						
Meals (billions)	5.4	5.5	5.5	5.6	5.6	5.7
Percent change	2.4%	1.5%	1.2%	1.0%	0.8%	0.8%
Breakfasts:						
Meals (billions)	2.1	2.2	2.3	2.3	2.3	2.4
Percent change	6.8%	4.6%	3.0%	2.0%	1.5%	1.5%

Appendix A contains a set of tables that detail the calculations described above. The appendix tables present baseline and final rule food prices, food quantities, and meals served for each year from FY 2012 through FY 2016.

Note that our baseline per-meal cost estimates are averages. They reflect the variety of meals served across all NSLP and SBP participating schools. Some schools may be much closer than others to serving meals that meet the requirements of the rule, and the costs of compliance with the rule may therefore vary at the school level. The use of an average baseline cost estimate is appropriate, however, for estimating the aggregate cost of compliance across all schools.

[15] Computed by USDA from CPI figures from the Bureau of Labor Statistics. The figures for combination foods are based on the CPI values for the Food at Home series.

[16] For more information see *http://www.commodityfoods.usda.gov/fd_purchasing.htm.*

[17] The projected growth above in meals served through FY 2011 reflects the difference between FNS estimates for FY 2011 prepared for the 2012 President's Budget and actual meals served in FY 2010. The remaining percentages are FNS projections prepared for the FY 2012 President's Budget.

2. Final Rule Cost Estimate

Food Costs: Both our baseline and final rule food cost estimates rely on quantity and price information reported by schools in SNDA–III and SLBCS–II. These datasets contain detailed information on the quantity, variety, and unit prices of foods offered and served to students. Many of the records on these datasets describe single item foods that are served alone or are used in school recipes. But other records describe prepared or heat-and-serve entrees and other ''combination foods.'' As described above, we developed our baseline cost estimate by multiplying the gram weight of food items served by their cost per gram. For both single item foods and combination foods, prices and quantities are given in SLBCS–II and SNDA–III; our baseline cost estimate required limited processing of these datasets.

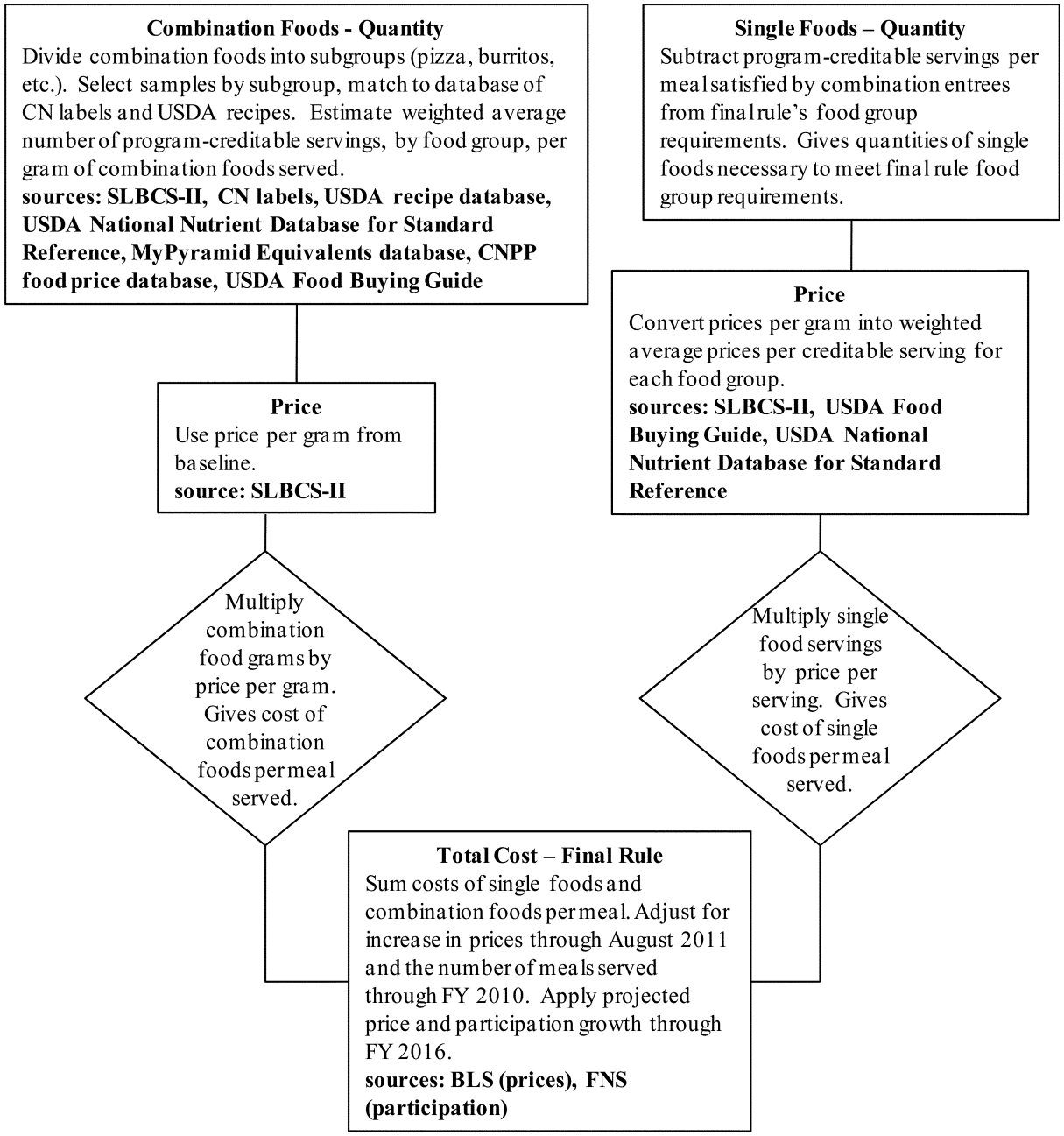
For the final rule cost estimate we continue to rely on prices per gram from SLBCS–II. But for quantities served we need to look to the requirements of the rule rather than to SNDA–III. We use the midpoints of the rule's food group requirements, expressed in servings rather than grams, to estimate the quantities of food that schools must purchase.[18] For single foods, the number of program-creditable food group servings per gram is a function of the foods themselves (density and fat content, for example) and whether the foods (primarily vegetables) are served raw or cooked. We relied on several sources for this information, including the *USDA Food Buying Guide* and the *National Nutrient Database for Standard Reference.* For combination foods we relied on the USDA's child nutrition food labels and the USDA's recipe database; these sources contain the result of analyses performed by food manufacturers and USDA. Because the sources for program-creditable servings per gram are different for single foods and combination foods, we need to separate single foods from combination foods and estimate their costs separately.

A basic assumption underlying the estimated cost of reimbursable meals under the final rule is that schools will continue to serve entrees that have proven popular with students on current school menus. Some of these entrees may be modified to replace a portion of their refined grains with whole grains, or starchy vegetables with other vegetable varieties. But, because pizza, burritos, and salad bars are successful items today, this impact analysis assumes that they will remain on school menus after implementation of the rule.

Figure 2: Food Costs Under Final Rule

Objective: Use price data collected from schools and new meal pattern requirements to estimate the cost of serving meals under the final rule.

[18] The rule's food group requirements are expressed in servings per week. Because we are developing an average cost per meal we divide these weekly figures by 5. Some of the rule's requirements are given in ranges of servings, such as 10–12 meat or meat alternate servings (for lunches) per high school child per week (see Table 3). FNS's primary cost estimate targets the midpoints of the rule's food group requirements where requirements are expressed as ranges.



We separated combination foods from single food items in the SNDA–III and SLBCS–II datasets.[19] Using USDA food codes and the descriptive food labels found on the records of both datasets, we divided the combination foods into sub-categories such as chili, beef dishes, lasagna, chicken sandwiches, macaroni and cheese, and peanut butter and jelly. Recognizing that there is variation within these groups, we selected a sample of the most commonly served varieties, and retrieved paper food labels with matching USDA food codes from USDA's Child Nutrition food label collection (CN labels).

CN labels are affixed to many of the commercially prepared and processed foods purchased by school food authorities. The labels provide information on serving size and the number of cup and ounce equivalents of meat, meat alternate (such as cheese, eggs, legumes, or soy protein), grains, or vegetables that schools may credit toward current reimbursable meal pattern requirements.[20] We averaged the crediting information for several varieties within each combination food category to generate representative food credits for the category.

CN labels are not available for some combination foods. However, foods with similar descriptions are often found in USDA's recipe database. The USDA recipe database provides the same type of food crediting information found on CN labels. We used the crediting information from the recipe database when CN labels were unavailable for sampled combination foods. FNS averaged the crediting information from labels and recipes when both sources returned data for particular combination foods.

[19] As with the baseline estimate, we prepared separate estimates of meals served under the final rule for breakfast and lunch.

[20] Many large commercial food vendors prepare their own CN labels to help market their foods to SFAs. Other labels are developed by USDA.

CN labels and USDA recipes do not indicate whether creditable grain servings are refined or whole grains, nor do they specify what fraction of creditable vegetable servings are satisfied by dark green, deep yellow, starchy, or other varieties. But, USDA's *MyPyramid* database breaks down total grain and vegetable content for given foods into those subcategories or varieties. We matched USDA food codes for the sample of combination foods against the *MyPyramid* database in order to estimate relative shares of whole and refined grains, and vegetable varieties for the combination foods served.[21]

With these average food credits, and with unit prices from the SLBCS–II, we estimated a price per creditable ounce or cup equivalent of meat, grain, vegetable, and fruit for each combination food served. We then computed a weighted average price per food credit for combination foods as a whole, using the SLBCS–II's relative gram weight of each item. Finally, we multiplied the average price and food credit per gram by SNDA–III's total gram weight of combination foods served per reimbursable meal at the elementary, middle, and high school levels.

These steps generate a price, and a set of food group credits, contributed by combination foods to the average elementary, middle, and high school lunch and breakfast.

We subtracted the food credits accrued by combination foods from a set of school-level food group targets that represent the requirements of the rule after adjustment for student selection. Under the final rule, as under current program rules, students need not take all of the food items offered to them in order for their lunch or breakfast to qualify for Federal reimbursement. The difference between what is offered to students and what they select is the ''take rate.'' We computed average take rates by school level for milk, meat/meat alternate, fruit, vegetables, and grains from SNDA–III and applied those rates, unchanged, to the final rule's food group requirements from Tables 4 and 5.[22]

These adjusted requirements are estimates of what elementary, middle, and high schools are likely to serve to students after implementation of the rule. The unadjusted requirements are what schools must offer to their students to be in compliance.

The take-rate adjusted requirements not satisfied by combination foods must be met with single offerings of meat or meat alternates, grains, fruit, vegetables, and milk. We computed weighted average prices for these broad food groups, and for dark green, deep yellow and other vegetable varieties, from the SLBCS–II dataset. We estimated the cost of whole grains relative to all grain and bread products with information contained in a food price database developed by USDA's Center for Nutrition Policy and Promotion. The prices per unit of these foods, multiplied by the balance of the rule's requirements that are not met by combination foods, give a total cost per meal for single item foods.

Note that this analytic framework uses an identical set of combination foods in the baseline and final rule cost estimates; we do not attempt to construct a reformulated set of combination foods to satisfy the rule's requirements for whole grains or dark green, yellow, and other vegetable varieties. The deficits in whole grains and in dark green and other vegetable varieties are satisfied entirely through increased offerings of single foods.[23] As a result, the cost per unit of combination foods served is unchanged in the baseline and under the final rule, and the entire cost of meeting the new rule's requirements is reflected in the cost of single foods.

In practice, we expect manufacturers will offer reformulated versions of popular combination foods, and that schools will incorporate more whole grains and vegetable varieties in their entree recipes, so that students will not be expected to consume all of their whole grains and healthier vegetables as single foods. Implicit in this modeling approach is the assumption that the cost of serving more whole grains and vegetable varieties is similar, whether those foods are part of combination recipes or single items. The reasoning behind this assumption is that the likely effect of these reformulations on the cost of combination foods is uncertain. While some varieties of combination foods may help schools meet the new requirements at lower cost than single foods, others may be developed to provide greater student acceptance or ease of preparation than single items. These products could command higher prices. We thus assume that, on average, these two propensities combine to result in no net difference in the cost of whole grains and vegetable varieties as combination foods or as single items.[24]

The final rule requires that no more than half of the fruit requirement be met with fruit juice because juice lacks fiber and may contribute to excessive calorie consumption. Schools may therefore find it necessary to offer more whole or cut-up fruit relative to fruit juice than they offer today. For this reason, this cost estimate assumes that the rule's entire increase in the fruit group requirement will be satisfied with additional servings of whole or cut-up fruit; the estimate assumes that schools will serve no more fruit juice to students under the final rule than they serve today. As a result, there is no added cost for fruit juice in Table 11.

The methodology outlined above generates a set of per-meal cost estimates for breakfast and lunch under the requirements of the final rule. Like our baseline estimates, these are multiplied by weighted food group inflation factors, then multiplied by the projected number of meals served to generate projected aggregate costs through FY 2016.

Labor costs: Compliance with this rule is also likely to increase labor costs because of the need for more on-site preparation, and less reliance on prepared foods, than current requirements. The challenge faced by schools in reducing the sodium content of school meals, one element of both the IOM recommendations and this rule, illustrates the need for additional labor hours by school kitchen staff.

More local food preparation and the use of a greater proportion of fresh foods and frozen vegetables could result in acceptable school meals with a lower sodium content. However, many food production kitchens are designed to heat and hold food items rather than to prepare them.[25]

In addition to the implied need for new kitchen equipment, IOM notes that

[21] Because CN crediting values and *MyPyramid* equivalents are not the same, information from the *MyPyramid* database was used only to determine *relative* shares of vegetable or grain subtypes. FNS also used the *MyPyramid* database to determine if particular combination foods contained *any* dark green vegetables, orange vegetables, *etc.*

[22] Our take rates are weighted averages computed from all school level records on SNDA–III. SNDA data allows the computation of take rates for single food items and combination entrees. We use estimates of the component foods contained in combination entrees to estimate overall take rates for each of the final rule's food groups, whether those foods are served separately or as part of a combination entrée. We cap individual school take rates for any food group at 100%. We assume that these take rates remain unchanged after implementation of the rule for two primary reasons: lack of an evidence-based alternative, and to avoid understating the costs of the rule.

[23] The amount of refined grains in combination foods in excess of final rule requirements are offset by subtracting the value of an equivalent amount of single food refined grain products from the rule's per-meal cost.

[24] Note that we are only referring to the incremental cost of foods above the quantities already purchased by schools (singly or in combination items), not the overall cost of all foods in the final rule's meal patterns.

[25] IOM 2009, p. 110.

''switching from heat and hold to food production requires the addition of staff. Those districts that estimate meals per labor hour (MPLH) to monitor productivity may see an unfavorable decrease in their numbers.'' [26]

If schools choose to prepare more meals on-site to meet new requirements, IOM sees the need for ''greater managerial skill,'' and ''more skilled labor and/or training.'' [27] At the same time, lesser reliance on prepared foods offers some opportunity for offsetting savings.

An empirical analysis of data from 330 Minnesota school districts found that ''healthier'' meals had higher labor costs (for on-site preparation) but lower costs for processed foods (Wagner, *et al.,* 2007). The authors call for funds to be made available for labor training and kitchen upgrades. They suggest that higher federal meal reimbursement rates may be unnecessary (under the assumption that the meals do not cost more to produce because lower food costs offset higher labor costs).[28]

The effect of the final rule's meal requirements on the mix of food and labor costs is unclear. The rule requires schools to offer relatively more foods with higher unit costs than schools now offer to their students. The rule requires, for example, that schools replace many of their refined grain foods with whole grain substitutes. Because prices for whole grain products tend to exceed the prices of similar products made with refined grains, savings from eliminating a particular refined grain product is more than offset by the cost of its whole grain counterpart. Where pre-baked whole grain foods are simply substituted for pre-baked refined grain products, or whole grain flour is substituted for refined flour in existing recipes, the added cost of serving these new foods is strictly a food cost; labor costs may not increase at all.

But the rule includes other provisions that are likely to increase both food and labor costs. One is the requirement that schools offer more vegetables, from a variety of vegetable subgroups, than schools tend to offer today. Some schools may choose to meet those targets by offering vegetables in school salad bars. It is possible that the cost of installing and maintaining a salad bar could increase the overall cost of school meal production. Similarly, to meet the rule's calorie and fat requirements, schools may find it necessary to rely less on pre-purchased entrees, and hire more central kitchen or cafeteria workers to prepare healthier meals from scratch.

SLBCS–II data show that the cost of purchasing food accounted for 45.6 percent of SFA reported costs, on average. Labor accounted for an additional 44.5 percent of reported SFA costs. The remaining 9.9 percent of reported costs are attributable to ''supplies, contract services, capital expenditures, indirect charges by the school district, etc.'' [29] Labor costs are broadly defined in the SLBCS–II to include the costs of foodservice administrative tasks such as planning, budgeting, and management, and foodservice equipment maintenance.[30] Some of these tasks are detailed in section III.C.1. These tasks include training food preparation staff, servers, and cashiers. They also include the work of individuals who plan menus and prepare recipes.

For purposes of this analysis, we assume that the relative contributions of food and labor to the total cost of preparing reimbursable school meals will remain fixed at the levels observed in the SLBCS–II. As a result, we estimate that labor costs increase on a nearly dollar for dollar basis with estimated food costs.[31] We estimate that the rule may increase schools' food costs by about 8 percent by FY 2015. Although labor costs relative to food costs have held steady over many years,[32] this approach may overstate labor costs. We explore the potential effect of labor costs growing at a somewhat lower rate in section F.

Food and Labor Cost Summary: Table 10 summarizes the estimated increase in food and labor costs associated with the final rule through FY 2016.[33] (The final two rows of Table 10 also include the estimated administrative costs to State agencies.) Overall, we estimate that the rule may increase the total cost of reimbursable school meals by $3.2 billion over five years; the cost of food would increase by $1.6 billion, and the cost of labor would increase by $1.6 billion. In the first year of full implementation (FY 2015),[34] the combined cost of food and labor is expected to be about 8 percent higher under the final rule than under existing requirements. The estimated additional cost of food for a reimbursable lunch increases from about 2.5 cents in FY 2012 to 5.4 cents in FY 2016; food costs for a reimbursable breakfast grow to 14.1 cents in FY 2016. These per meal increases roughly double—to 11 cents and 28 cents by FY 2016—when the estimated cost of labor is included.

[26] Ibid.

[27] IOM 2009, p. 148.

[28] Ibid.

[29] USDA 2008, p. 3–5

[30] USDA 2008, p. 3–9

[31] The estimates contained in this analysis assume labor costs equal to food costs multiplied by (44.5/45.6), the ratio of reported labor to food costs in the SLBCS–II.

[32] Labor costs as a share of the total costs of preparing school meals were found to be 43.8 percent in FNS's SY 1992–1993 School Lunch and Breakfast Cost Study I, and 44.5 percent in the SY 2005–2006 School Lunch and Breakfast Cost Study II (a statistically insignificant difference). Food costs as a percent of total costs grew slightly from 45.6 percent in SY 1992–1993 to 48.3 percent in SY 2005–2006. But this change, too, is statistically insignificant. USDA 2008, p. 9–2.

[33] The new standards will take effect at the start of SY 2012–2013. Because the 2012–2013 school year begins in July 2012, there is just a small cost in Federal FY 2012. Note that these figures assume no effect on student participation. We discuss the possible effects of the rule on student participation in section III.F. We examine the effect of alternate participation assumptions in section F.

[34] Two years after implementation of the rule, in SY 2014–2015, all grains servings offered to meet meal pattern requirements must be whole grain rich. The new minimum fruit requirement at breakfast also takes effect in SY 2014–2015; this is the last of the rule's major changes to the breakfast meal patterns.

Table 10: Food and Labor Cost Summary

	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Food Costs						
Lunch						
Total Cost (millions)	$21.2	$145.4	$174.2	$291.4	$308.2	**$940.4**
Per Meal	0.025	0.026	0.031	0.052	0.054	
Breakfast						
Total Cost (millions)	-$0.4	-$10.0	$4.5	$321.4	$334.6	**$650.1**
Per Meal	-0.001	-0.004	0.002	0.138	0.141	
Lunch + Breakfast						
Total Cost (millions)	$20.8	$135.4	$178.7	$612.8	$642.8	**$1,590.5**
Per Meal	0.017	0.017	0.023	0.077	0.080	
Food + Labor Costs						
Lunch						
Total Cost (millions)	$41.9	$287.3	$344.2	$575.7	$609.0	**$1,858.1**
Per Meal	0.049	0.052	0.062	0.102	0.107	
Breakfast						
Total Cost (millions)	-$0.4	-$10.0	$8.8	$635.1	$661.0	**$1,294.7**
Per Meal	-0.001	-0.004	0.004	0.272	0.279	
Lunch + Breakfast						
Total Cost (millions)	$41.5	$277.3	$353.1	$1,210.9	$1,270.0	**$3,152.8**
Per Meal	0.035	0.036	0.045	0.152	0.158	
Food + Labor + State Administrative Costs						
Lunch + Breakfast						
Total Cost (millions)	$41.6	$286.2	$362.1	$1,220.2	$1,279.7	**$3,189.9**
Per Meal	0.035	0.037	0.046	0.153	0.159	

3. Food Cost Drivers

Table 11 provides a breakdown in the estimated food costs of the final rule by seven broad food categories. Consistent with the Dietary Guidelines, the rule will require schools to offer more fruits, vegetables, and whole grains than they currently offer today.

Changes in school demand also impact food producers. The figures in Table 11 indicate that the economic costs and benefits of the rule may not be shared equally by producer groups.

Table 11: Estimated Food Costs by Food Category (dollars in millions)

Food group	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Milk	-$4.5	-$30.0	-$30.9	-$31.8	-$32.7	**-$130.0**
Meat or Meat Alternate	-25.4	-169.0	-175.3	-181.6	-188.1	**-739.4**
Fruit Juice	0.0	0.0	0.0	0.0	0.0	**0.0**
Fruit (non-juice)	0.5	3.1	46.9	294.9	307.2	**652.6**
Vegetables	75.8	510.5	533.9	547.0	573.0	**2,240.2**
Refined Grains	-80.0	-569.6	-888.9	-1,569.2	-1,639.5	**-4,747.1**
Whole Grains	54.5	390.4	693.0	1,553.5	1,622.8	**4,314.3**
Total Cost of Rule	**$20.8**	**$135.4**	**$178.7**	**$612.8**	**$642.8**	**$1,590.5**

Milk: This impact analysis estimates that the amount of milk served to students will not change after implementation of the rule.[35] However, the rule does require schools to serve only low-fat or fat-free milk in the school meals programs.[36] Because the per-unit cost of low-fat and fat-free milk is less than the average per-unit cost of the mix of milk products now served in schools, the estimated cost of serving milk under the rule is reduced. Some comments on the proposed rule noted that schools had already made the transition to fat-free and low-fat milk, and that there would be no savings as a result of this provision. We discuss this and other comments in Section E.

Fruit Juice: The estimate assumes that schools will satisfy the rule's increased fruit requirement entirely through additional servings of whole or cut-up fruit, not fruit juice. We expect that schools will have to encourage consumption of additional whole or cut-up fruit in order to satisfy this requirement. The cost estimate assumes that the amount of fruit juice served to students will not increase above the levels assumed in the baseline estimate. As a result, the relative share of whole or cut-up fruit to fruit juice servings offered to (and taken by) students will increase after implementation of the rule.

Grains: The rule initially requires that half of grains offered to students be whole grain rich. Beginning in SY 2014–2015, the rule requires that all grains served be whole grain rich. This transition is reflected in the large changes in both the whole grain and refined grain figures between FY 2014 and FY 2016.

This analysis estimates that the total amount of grain products served will be less after implementation of the final rule than the amount served in our baseline (the per-meal amount taken by students according to SNDA–III). The effect of this net reduction in total grains served is reflected in figures for fiscal years 2012 to 2014, where the cost decrease for refined grains is substantially greater than the cost increase for whole grains. Throughout the estimation period, we assume that the unit cost of whole grains exceeds the unit cost of comparable refined grain products. Despite this, the net reduction in total grain products served through FY 2014 more than offsets the increased unit cost of whole grains. After FY 2014, when the rule's 100 percent whole grain rich requirement takes effect, the added cost of serving higher priced whole grain products about equals the savings from a reduction in grains products served.

4. Comparison of FNS and IOM Cost Estimates

IOM prepared its own food cost estimate for its recommended meal pattern changes. The methodology behind that estimate is discussed in *School Meals: Building Blocks for Healthy Children* (IOM 2009). While IOM relies on SLBCS–II and SNDA–III, the same primary sources used by FNS, to estimate unit costs and baseline quantities served, its methodology differs from ours in several ways.

Perhaps the most significant difference is in the establishment of baselines. We used all records on the SNDA–III dataset to estimate baseline quantities of food served and student take rates. IOM limited its analysis to a set of six representative baseline menus selected from the SNDA–III dataset. IOM selected one 5-day lunch menu and one 5-day breakfast menu for each of three age-grade groups (elementary, middle, and high school) at random from a subset that excluded practices identified as uncommon.[37] The goal of both methodologies is to estimate a baseline food cost representative of all schools that participate in the Federal school meals programs. We have not attempted to isolate and quantify the effect of this methodological difference on our cost estimates. Another important difference between the IOM and FNS estimates is our use of different student take rates in preparing food cost estimates for the recommended meal patterns. We computed take rates from SNDA–III and applied them, largely unchanged, to the food group serving requirements of the final rule.[38] We do not increase take rates in anticipation of greater demand for better meals, nor reduce take rates in anticipation of a decline in student acceptance of new vegetable varieties, whole grains, or low fat milk relative to the starchy

[35] See section F. for an examination of the cost implications of altering this assumption.

[36] This provision is required by Section 202 of the HHFKA and has already taken effect. Through implementation memo SP–29—2011, dated April 14, 2011, schools were required to offer a variety of milk that meets *Dietary Guidelines* recommendations. The USDA implementation memo clarifies that schools must offer at least two fat-free or low-fat (1 percent milkfat) varieties effective with the start of SY 2011–2012. This final rule includes the additional requirement that flavored milk be offered in fat-free form only.

[37] IOM excluded menus that did not offer a reduced fat or fat free unflavored milk, offered only one entree, offered 15 or more entree options, offered juice drinks rather than 100% fruit juice, or offered dessert every day. IOM 2009, p. 307

[38] FNS caps individual school take rates at the food group category to 100 percent. We also attempt to include the contribution of component foods in combination entrees in our estimates of take rates for the major food groups (fruit, milk, vegetables, grains, and meat/meat alternates).

vegetables, refined grains, and higher fat milk on current school menus.[39] IOM modified observed take rates from SNDA–III where the expert judgment of committee members and school meal practitioners deemed it appropriate.[40] Additional differences in FNS and IOM take rates can be attributed to IOM's use of six representative school menus in its analysis; IOM computed its take rates from those schools alone. FNS take rates are computed from all schools on the SNDA–III dataset.

C. Administrative Impact

1. School Food Authorities (SFA)

An initial increase in administrative staff time for training and implementation is anticipated at the SFA level. Most of these impacts will be limited to the transition to the rule's new requirements as a result of:

- Training staff on the required components of reimbursable lunches and breakfasts;
- Changes to menus and portion size may necessitate revisions to menus and recipes currently used by SFAs;
- Changes to food purchasing and commodity food use (for example, increasing purchases for fresh fruit and vegetables, whole grain products, and lower sodium products), as well as changes in the methods of preparation of food, may be necessary for many schools;
- Changes in SFA financial structure, as SFAs may need to review finances in order to determine how to deal with any cost changes associated with the rule's requirements;
- Forging new relationships with local farmers to supply fresh produce appealing to the tastes of school children; and
- Modifying a la carte foods and other foods at school to maintain NSLP and SBP participation rates.

The rule also increases the scope of State Agency administrative reviews of SFAs by combining the current Coordinated Review Effort (CRE) with the requirements of School Meals Initiative (SMI) reviews, and increases their frequency to once every three years. SFAs that previously held separate CREs and SMIs may experience a decrease in burden, because they will undergo just one State Agency administrative review every three years, rather than two reviews (one CRE and one SMI) every five years.

FNS expects these additional burdens on SFA staff time and budgets may be offset by other benefits. For instance, new age/grade groupings would require school districts to offer different portion sizes instead of the same portions to all ages/grades. While this could be an additional burden to some SFAs, it could also reduce plate waste with use of more appropriate age/grade groupings. Moreover, it is expected that, as food service workers gain experience and become comfortable with the new requirements, administrative efforts associated with implementation may decline. Therefore, although an initial administrative impact is anticipated, FNS does not expect any significant long-term increase in administrative burden.

2. State Agencies

State Child Nutrition Agencies (SAs) play a key role in the implementation of school meal programs through their agreements and partnership with local SFAs. FNS anticipates that SAs that administer the school meals programs will work closely with SFAs to meet the requirements of the rule, and to remove barriers that may hinder compliance.

Many changes associated with implementation of the rule may result in an increased burden and additional required level of effort from States, such as:

- *Training and technical assistance:* SAs will provide training and technical assistance to SFAs on new calorie and meal pattern requirements, age/grade groupings, and revised nutrient requirements. Moving to a single, food-based menu planning system may simplify the meal service for some schools and will likely streamline the meal planning process, but may require initial training to accomplish.

Although SAs may meet most of this demand by modifying current training and technical assistance efforts, we recognize that SAs may incur additional costs assisting SFAs with the transition to the final rule requirements. Our cost estimate provides for an additional 80 hours per SA in each of fiscal years 2012 and 2013, for a total of $0.2 million.

- *Systems assistance:* SAs may assist SFAs with any changes in the meal planning process occurring as a result of this rule. This is included in our $0.2 million estimate for training and technical assistance.
- *Food procurement and preparation:* More fruits, vegetables, whole grains, and foods that are lower in sodium may be necessary to align meals with the new meal patterns. SAs may also review SFA contracts with food service management companies (FSMCs). We have not estimated this cost, but expect that it will be small.
- *Monitoring and compliance:* SAs will be required to conduct administrative reviews (formerly CREs and SMIs) more frequently, once every 3 years for each SFA beginning in SY 2013–2014. Nutrient analysis will be required for all SFAs and will become an additional component of each review (separate SMIs will be eliminated). Nutrient-based menus will be eliminated and only food-based menu planning will be permitted. The final rule drops the proposed rule requirement to require administrative reviews to cover two weeks of menus and production records; instead, the final rule keeps the current one week review requirement. The final rule, like the proposed rule, would include breakfast in SA administrative reviews.[41]

SAs are currently required to conduct a CRE for each SFA once every 5 years; to conduct a nutrient analysis via SMI review for only those SFAs with food-based menu planning systems (although approximately 30 percent of these SFAs elect to conduct the nutrient analysis themselves); to review menus from a one-week period preceding the review date; and to review a breakfast meal only in the case of a follow-up CRE (which is only conducted in those cases in which problems are noted in the initial CRE). Total costs for each SA to complete a CRE include costs for staff labor, travel (including transportation, accommodations, and meals/incidental expenses), and possible printing costs for those SAs that provide CRE results to SFAs and FNS in hard copy rather than electronically.

Limited discussion with a small number of SA and FNS Regional Office officials suggest that a typical CRE or SMI review costs about $2,000 in 2010, with about half of that cost used for staff travel. Because travel is a largely fixed cost, SAs that previously conducted separate CRE and SMI reviews should realize some savings once SMIs are ended and the nutrient analysis is made part of the consolidated administrative review. That may help offset some of the cost of increased review frequency. A mid-sized State that now conducts 100 CRE reviews might incur annual

[39] As discussed elsewhere in this impact analysis, our take rate assumptions are intended to avoid understating the cost of the rule given the uncertain response of both students and school foodservice workers to the new meal pattern requirements. We test the cost implications of adopting different take rates in section F.

[40] IOM 2009, p. 136.

[41] FNS estimated in 1994 that extending the SFA review cycle from four to five years would decrease costs associated with this effort by 20 percent. (June 10, 1994, **Federal Register** Vol. 59, No. 111, p. 30234) A similar, but opposite, effect might be expected from shortening the cycle from five to three years.

expenses of $200,000. Under the final rule, that SA could expect to conduct ⅔ more administrative reviews, or roughly 167 per year. If we assume conservatively that the SA realizes no savings from elimination of SMI reviews, its review costs would increase by $134,000 per year—an upper-bound estimate. If all SAs incurred this same expense, the total cost would be roughly $8 million per year by FY 2013.

3. USDA/FNS

FNS will assist State Agencies by providing nutrition education, training, guidance, and technical assistance to facilitate their work with local school food professionals. This may include developing training standards, materials, updated measures for nutrition analysis, and revisions to the food buying guide.

While we expect a small increase in administrative burden for FNS under the rule because of the need to provide additional training and technical assistance to SAs, and to support their role in the administrative review process, this may largely be met by adapting existing efforts to the new requirements.

D. Food Service Equipment

Changes in meal pattern requirements may require some SFAs to replace or purchase additional foodservice equipment. For example, some SFAs may need to replace fryers with ovens or steamers. In FY 2009, FNS solicited requests from SFAs for food service equipment grants. In response to its solicitation, FNS received a total of approximately $600 million in grant requests from SFAs. FNS awarded grants for such purposes totaling $125 million, using $100 million from funds provided by the 2009 American Recovery and Reinvestment Act (ARRA) and $25 million provided by the FY 2010 Agriculture Appropriations Act. The strong response to these grant programs indicates that schools could make productive use of an even greater investment in kitchen equipment. FNS awarded grants for such purposes totaling $125 million, using $100 million from funds provided by the 2009 American Recovery and Reinvestment Act (ARRA) and $25 million provided by the FY 2010 Agriculture Appropriations Act. However, much of that demand is associated with the routine need to replace equipment that is nearing the end of its useful life—a cost that is appropriately covered by USDA meal reimbursements and other sources of food service revenue. Although some schools may need additional upgrades to prepare meals that meet the new standards, we do not have the data necessary to assess that need or to estimate the associated cost. The $125 million in kitchen equipment grants distributed to schools through ARRA funds and the FY 2010 appropriation should have addressed much of the most pressing need. For these reasons, we do not include additional incremental equipment costs in our final rule estimate.

Our decision not to include an additional equipment cost in our proposed rule estimate generated comments from school officials and foodservice industry representatives. Those comments do not provide enough information on which to base a reliable estimate of the need for additional kitchen equipment as a result of the rule. The comments confirm that the need, where it exists, will vary significantly. Although we cannot reliably estimate the aggregate cost of meeting the need for additional equipment, we provide one estimate in the Section F below. Additional detail on the comments received from schools and the foodservice industry on this point is discussed in Section E.

E. Comments on Proposed Rule

As noted in the preamble to the final rule, USDA received more than 130,000 comments on the proposed rule. Comments on the content of the rule itself are discussed in the preamble. Other comments, addressed specifically to the proposed rule's impact analysis, are discussed here.

a. Proposed Rule is Too Costly

Many commenters expressed concern that the proposed rule was too costly. Schools and school districts would not be able to meet the proposed rule's meal standards without additional resources from Federal, State, or local governments. Some of these commenters noted that the cost of the proposed rule exceeded the 6 cents per lunch that would follow adoption of the new meal requirements. Many also noted that State and local governments were not in a position to provide school districts with additional funding. The result, some commenters warned, was that schools might stop serving reimbursable breakfasts under the SBP. Other commenters suggested that schools might even stop serving reimbursable NSLP lunches.

In response to these comments, the final rule modifies the proposed rule's meal pattern requirements. The effect of those modifications is to reduce the cost to schools and SFAs of implementing the rule. The modifications are discussed in detail in the rule, and summarized in Section II of this impact analysis. The modifications offer schools short term savings, relative to the proposed rule, by phasing in the rule's breakfast fruit and grain requirements. As a result of elimination of the proposed rule's breakfast meat requirement, the ongoing cost of the final rule after full implementation is also reduced.

Eliminating the proposed limit on the amount of starchy vegetables that schools may offer at lunch has little effect on the cost of the final rule relative to the proposed rule. Significant savings are realized through a reduction in the lunch pattern's grain requirement.

Part of the difference in the estimated 5-year costs of the proposed and final rules is due to lower projected food cost inflation and increased student participation since preparation of the proposed rule estimate. To facilitate comparison of the estimated costs of the proposed and final rules, we prepared two estimates of the final rule's provisions. The first uses the most current food inflation and student participation figures; this is our primary estimate summarized in Table 6. The second applies the same food inflation and student participation estimates that we used in our proposed rule cost estimate. That is, we use the projections of food inflation for years after FY 2009 that we developed for the proposed rule. (Our primary estimate for the final rule uses actual inflation through August 2011, and an updated projection for years after FY 2011.) The difference between this second estimate and the estimated cost of the proposed rule provides a more direct measure of the reduction in cost due to changes in the content of the proposed and final rules. Using that difference as our basis of comparison, the final rule reduces costs over the first 5 years by almost $3 billion, or 44 percent, as compared to the proposed rule.

TABLE 12—REDUCTION IN ESTIMATED COST OF FINAL RULE RELATIVE TO PROPOSED RULE

	Fiscal year					
	2012	2013	2014	2015	2016	Total
Proposed rule	$181.5	$1,246.8	$1,401.9	$1,923.8	$2,041.3	$6,795.2
Final rule—primary estimate	41.6	286.2	362.1	1,220.2	1,279.7	3,189.9
Difference	−139.8	−960.6	−1,039.7	−703.6	−761.6	−3,605.3
Proposed rule	$181.5	$1,246.8	$1,401.9	$1,923.8	$2,041.3	$6,795.2
Final rule—with proposed rule inflation and participation estimates	53.5	376.0	474.8	1,419.0	1,511.1	3,834.5
Difference	−127.9	−870.6	− 927.0	−504.8	−530.2	−2,960.7

In response to comments that an additional 6 cents per reimbursable lunch [42] falls short of our estimated per meal cost of the proposed rule, we point out that the HHFKA contains a comprehensive package of school lunch and breakfast reforms. These reforms are intended to both increase the quality of school meals and competitive school foods offered to students, and to address financial and funding issues. These latter provisions are expected to increase the amount of revenue generated by SFAs while eliminating the subsidization of paid lunches and non-program foods with Federal funds meant to support reimbursable meals generally, and meals served to free and reduced-price eligible children in particular. The impact analysis contained in the interim final rule prepared for Sections 205 and 206 of HHFKA estimates that those provisions will increase SFA revenues by $7.5 billion through FY 2015.[43] HHFKA section 205 is designed to gradually reduce the disparity in per-meal school revenue from reimbursable paid lunches relative to the per-meal Federal reimbursement for free lunches. Section 206 requires schools to increase the share of SFA revenue generated by nonprogram foods to a level at least as great as nonprogram food's contribution to total SFA food costs.

b. Costs Are Understated

Some commenters felt that the cost estimate presented in the proposed rule is understated. As we describe in Section III.B.2., our methodology relies primarily on data collected by USDA in SNDA–III to estimate the types and quantities of food offered by schools to program participants. SNDA–III collected information from schools in SY 2004–2005. We believe that our use of the data from that study, which is several years old, presents a greater risk of overstatement than understatement of the cost of the rule, holding other factors constant. The Dietary Guidelines Advisory Committee completed its 2005 report in August 2004, just as SY 2004–2005 began. The 2005 Dietary Guidelines policy document was released by the U.S. Department of Health and Human Services and USDA in January 2005. These documents were released as SNDA–III data was being collected—too soon for substantial changes prompted by the Dietary Guidelines to be reflected in meals offered to students.

In the years since data was collected for SNDA–III, schools and USDA have taken steps to bring school meals into closer compliance with the 2005 Dietary Guidelines. One example, cited by IOM, is the recent improvement in USDA Foods offered to schools through the USDA's commodity programs.[44] These changes provide schools with an increased variety of whole grain, low fat, and low sodium products for use in healthier school meals. Other changes have been initiated by schools. The School Nutrition Association's 2010 ''Back to School Trends Report'' highlights some of the most recent changes that schools are making in anticipation of new Federal standards: [45]

95% of schools districts are increasing offerings of whole grain products.

90.5% are increasing availability of fresh fruits/vegetables.

69% of districts are reducing or eliminating sodium in foods.

66% of districts are reducing or limiting added sugar.

51% of districts are increasing vegetarian options.[46]

Our use of SNDA–III data means that our cost estimate does not reflect the most recent progress that schools have made toward adoption of Dietary Guidelines recommendations. At least one non-profit organization offered a comment on the proposed rule that concurs with that assessment. The commenter's primary point was that we overstate the savings from replacing more expensive high fat milk with less expensive low fat and fat free varieties; the commenter notes that many schools have already made that transition. We acknowledge that the potential savings of the final rule's milk provision may be overstated in our cost estimate. But that savings is potentially overstated for the same reason that the costs of meeting the rule's other food group requirements may be overstated. Schools have taken recent steps to adopt Dietary Guidelines recommendations on vegetables, fruit, whole grains, and sodium; schools' gradual adoption of Dietary Guidelines recommendations has not been limited to milk. Because our projected savings from the rule's milk provision is much lower than our projected cost of the rule's vegetable, fruit, and whole grains provisions, we believe that the risk that we overstate the cost of the rule exceeds the risk that we understate its cost.

c. Analysis Does Not Capture Full Effect of Recent Food Inflation

Some commenters argued that we understated or did not adequately account for food inflation in our proposed rule cost estimate. Both our proposed and final rule cost estimates use food group specific inflation figures from the BLS to estimate current year prices (FY 2011 prices for the final rule analysis) from a set of baseline prices paid by schools in SY 2005–2006 (taken from the SLBCS–II). Both analyses use

[42] Section 201 of HHFKA provides an additional 6 cents to schools for each NSLP lunch that meets this rule's meal pattern requirements.

[43] **Federal Register,** Vol. 76, No. 117, pp. 35301–35318.

[44] ''The [USDA] Commodity Program has made substantial improvements in its offerings in recent years to become better aligned with *Dietary Guidelines for Americans* and to be more responsive to its 'customers.' '' (IOM 2009, p. 188)

[45] This is just a summary of recent changes adopted by schools. Schools have been moving toward 2005 *Dietary Guidelines* standards over several years.

[46] Figures taken from the SNA's Web site (*http://www.schoolnutrition.org/Content.aspx?id=6926,* accessed 10/10/11).

those current year estimates to project prices through FY 2016.

In our final rule estimate we use a 7-year historic average of food inflation, by food group, to project prices. Our proposed rule estimate used a 5-year historic average to inflate food costs. In developing our final rule estimate we recognized that actual food price inflation since we prepared our proposed rule estimate was substantially lower than inflation over the previous 5 years. We adopted a 7-year historic average in our final rule cost projections in order to temper the effects of relatively low recent food price inflation. This yields a slightly higher estimate for our final rule than we would have gotten had we used an updated 5-year average projection factor. We do this to avoid the risk of understating the cost of the final rule.

d. Analysis Does Not Account for Higher Costs of Healthier Foods

Some commenters referred specifically to the higher costs of whole grains and vegetables emphasized by the rule. Others referred to the additional costs necessary to produce low-sodium school meals. We address these separately.

Higher Prices for Food Groups Emphasized by the Rule

Our proposed rule and final rule cost estimates develop separate prices for each of the food subgroups with specific standards in the rule. For example, we estimate separate prices for whole grains and refined grains, for whole fruit and fruit juice, and for the dark green, red-orange, starchy, and ''other'' vegetable subgroups. In each of these cases, we estimate higher unit prices for the food subgroups emphasized by the rule. In some cases the price premium for these food subgroups may reflect lower supply in the school food marketplace. As industry increases the supply of these products in response to higher school demand, economies of scale may reduce their cost. Our cost estimates for both the proposed and final rules discount the possibility that prices for these foods may moderate over time. Again, we do this to avoid understating the cost of the rule.

Added Cost of Producing Meals With Less Sodium

The proposed rule's first intermediate sodium targets were designed to be met by schools through menu and recipe changes using currently available foods. The proposed rule's second intermediate target was designed to be met with the help of the food industry through changes that can be met with current food processing technology. The proposed rule analysis stated that ''a reduction in sodium can be achieved at minimal cost, at least over the short term, when sodium requirements are only partially phased-in.'' But the analysis also noted that meeting the rule's sodium targets would likely require replacing some packaged foods with foods prepared from scratch. To clarify, we recognize that meeting even the first sodium target has some cost; however, we do not estimate that as a separate component cost in either the proposed or final rule analyses. Much of the cost of meeting the proposed and final rules' short term sodium targets is contained in the cost of substituting prepared foods for foods cooked from scratch in schools or central kitchens. We account for this in our labor cost estimate. Our proposed and final rule analyses estimate that labor costs will rise nearly dollar for dollar with food costs. Over 5 years, the final rule estimates that labor costs will increase by $1.6 billion.

Our cost estimate extends only through FY 2016, two years before the final rule's second sodium target takes effect. As a result, we do not estimate the cost of meeting that target in SY 2017–2018, or the rule's final sodium target in SY 2022–2023. However, two provisions in the final rule respond to the challenge of meeting those targets. The first is a delay in the second intermediate target from 4 years post-implementation in the proposed rule to 5 years in the final rule. Lengthening the transition to lower sodium foods is intended, in part, to facilitate student acceptance. But it also gives industry more time to develop products that meet the rule's standards. To the extent that limited supply is a school cost issue, delaying the second intermediate target to 5 years should help reduce costs. The final rule also promises USDA review of schools' progress toward the rule's final sodium target, and allows for modifications to the sodium targets if necessary.

e. Analysis Understates Need for Additional Equipment and Infrastructure

School officials and others commented that our proposed rule analysis understated the need for additional investment in food preparation and storage equipment as schools move away from a ''heat and hold'' foodservice model, to a model that relies more on on-site preparation. Our proposed rule analysis discussed the $125 million for school foodservice equipment provided to schools through the 2009 American Recovery and Reinvestment Act (ARRA) and the FY 2010 Agriculture Appropriations Act. Although the proposed rule analysis recognized that the demand for ARRA grants greatly exceeded the amount available, the analysis noted that much of that demand was driven by the routine need to replace aging equipment, costs that are appropriately covered by USDA meal reimbursements and other sources of food service revenue. The proposed rule analysis did not include an additional cost tied specifically to meeting the proposed rule meal patterns.

Some commenters offered estimates of the cost required to equip schools to produce more foods on site. These costs ranged from $4,000 per school for new equipment, to $500,000 or more for a full kitchen and serving site renovation (an estimate given by a foodservice industry representative). Commenters indicated that preparing more meals on-site would require investment in additional refrigeration equipment, microwaves and combination ovens, storage space, sinks, cutting boards and knives. What these comments cannot tell us is the percent of schools in need of new equipment, or the average per-school cost to meet that need. If fully half of all schools require investments averaging $5,000, then the total cost of new equipment necessary to prepare meals that meet the final rule standards would be $250 million. In the end, we do not have the data necessary to develop a reliable estimate of need in excess of the routine costs of replacing outdated equipment. In Section F we present an alternate cost estimate of the final rule under a different assumption about the need for additional investment in school kitchen equipment.

F. Uncertainties

We made several simplifying assumptions in developing this cost estimate, reflecting gaps in available data and evidence. The most significant simplifications are discussed in Table 13. In most cases, our primary estimate reflects conservative assumptions, to avoid understating the costs of the rule. In this section, we describe the impact of several alternative assumptions on the estimate. The cost impacts of these alternatives are presented in Table 14.

TABLE 13—SIMPLIFYING ASSUMPTIONS

Item	Explanation and Implications of Simplifying Assumptions
Take Rates	For each of several food groups, we used SNDA–III data to compute average ''take rates'' equal to the percentage of food servings taken by students for each serving offered to them. Take rates under current program rules vary by school, grade level, and menu planning system. They are, at best, a rough predictor of student behavior under the new rule, which imposes a single food-based meal planning system across all schools, and requires schools to offer a mix of foods somewhat different than many students are accustomed to. We apply these take rates to generate our final rule cost estimate. Different take rate assumptions could produce higher or lower cost estimates. Take rates higher than the ones used in our estimate imply that students will select more foods from menus that meet final rule standards than they now select from more familiar current school menus; we believe that risk is reasonably low, at least in the short term. It may be more likely that actual take rates will fall below our estimates. However, the possibility of lower take rates is constrained by the requirement that students select enough components to constitute a reimbursable meal.
Student Participation	The cost estimate assumes no change in student participation following introduction of the rule's new meal pattern requirements. However, we recognize that participation may increase due to better meals or decrease when favorite school foods are replaced with unfamiliar or less appealing options. We chose not to estimate a participation effect given the uncertainty about how schools will incorporate new foods into their menus, and what changes schools will make to a la carte and other non-NSLP/SBP ''competitive'' foods, factors known to affect NSLP/SBP participation. Schools have a financial interest in preserving the revenue stream that comes with serving Federally-reimbursable school meals. It is also unclear whether participation effects, if any, may prove temporary or permanent. We estimate the cost of the rule under an assumption of increased and reduced student participation in the uncertainties section.
USDA Foods	We include USDA Foods (formerly USDA commodities) in both the quantity and value of food served in its baseline and final rule cost estimates. This treatment of USDA Foods is consistent with the SLBCS–II which includes the value of USDA Foods in its computation of the cost of producing a school meal. We assume that USDA Foods will contribute comparably to the overall cost of preparing school meals under current rules and under the new rule. We believe it is reasonable to ignore the value of USDA Foods in computing the estimated cost increase of the rule.
Whole Grains	We apply a single take rate to both whole grain rich and refined grain products. A less conservative approach would have applied a lower take rate to whole grain foods, at least when offered singly, rather than as part of a combination entree. Further, this take rate is the same take rate observed in SNDA–III where the relative share of whole grain rich products is lower than the 50 percent share that schools must offer in the first two years of implementation, and much lower than the 100 percent share that must be offered thereafter. Testimony before the IOM expert committee by University of Minnesota Professor Leonard Marquart documented steps SFAs can take to phase in whole grains in a manner that promotes high take rates.
Labor Rates	We assume that the relative contributions of food and labor to the total cost of preparing reimbursable school meals will remain fixed at the levels observed in the SLBCS–II study. The study found that the cost of purchasing food accounted for 45.6 percent of SFA reported costs on average, while labor accounted for 44.5 percent of reported costs. We therefore estimate that labor costs will increase on a nearly dollar for dollar basis with estimated food costs. Our assumption leads to a substantial increase in estimated labor costs, one that assumes schools may rely less on prepared foods and more on on-site preparation. Nevertheless, USDA received comments from some individuals and organizations indicating that our proposed rule understates the likely increase in labor costs. To respond to these comments, we re-estimate the cost of the proposed rule assuming a bigger increase in labor costs in Section F. The cost estimate developed in this impact analysis is based entirely on the cost of adding or deleting foods from particular food groups.
	The cost estimate accounts for current price differences in whole grains compared to refined grain products, fat free and low fat milk compared to 2 percent or whole milk, whole fruit compared to fruit juice, and vegetables by subgroup. But it does not account directly for differences in the costs of comparable combination entrees with different levels of sodium, fat, or calories. SNDA–III found that school lunches offered to students in SY 2004–2005 provided, on average, about 11 percent of calories from saturated fat. The final rule would limit this to 10 percent—a relatively modest reduction.
Macronutrient Requirements and Calories.	Our cost estimate does take into account the added cost of more fruits and vegetables. It also takes into account the cost of shifting to a wider variety of vegetables.
	Finally, the estimate accounts for the replacement of higher fat content milk with low fat and skim milk. All of these steps implicitly incorporate the cost of offering lower calorie and lower fat content meals into our estimate. We mention above that that the first intermediate sodium target can be achieved with changes to school menus and preparation methods using foods already available in the marketplace. To the extent that the rule's first sodium target *requires more on-site preparation of meals, we account for that in our labor cost estimate. We estimate that the additional cost of acquiring lower sodium versions of processed foods to meet the rule's initial sodium target will be minimal. This is one of the very few assumptions that, if wrong, tends to understate the cost of the rule. But, given the decision to err on the side of overstating costs when making most other assumptions, we believe that the upside risk to an error on this assumption is small.*

a. Change in Participation—2 Percent Increase

As discussed in Table 13 above, we assumed that student participation would not change following the introduction of new meal requirements. Table 14 Sections A and B model the effects of altering that assumption.

Section A estimates the effect of a two percent increase in student participation on the cost of the rule relative to our primary cost estimate in Table 6. The dollar figures in Section A are the estimated cost to schools of preparing all meals served under our baseline assumption plus an additional 2 percent; the costs are not just limited to the incremental per-meal costs of the final rule. The additional meals are eligible for USDA reimbursement at the appropriate free, reduced price, or paid rates. However, the figures shown in

Section A are not offset by these increased Federal reimbursements. The net cost to schools, after accounting for Federal reimbursements, would be lower. Because these costs reflect the provision of improved meals to additional children, we would expect a commensurate increase in the benefits resulting from addition of more fruits, vegetables, and whole grains to the diets of participating children. This participation assumption would result in a $1.3 billion increase over the cost of our primary estimate.

b. Change in Participation—2 Percent Decrease

Table 14, Section B models the effect of a two percent decrease in participation upon implementation of the new rule. A reduction in participation reduces the cost of compliance with the rule, relative to the primary cost estimate in Table 6.[47] Again, because the cost reduction reflects the provision of improved meals to fewer children, we would expect a proportionate decrease in the rule's benefits for participating children. This reduction in cost is a reduction in the entire cost of serving 2 percent fewer meals, not just the incremental per-meal cost of complying with the final rule. Schools would realize a partially offsetting decrease in Federal meal reimbursements; that offset is not shown in Table 14. The effect of a 2 percent decrease in student participation would be to decrease the cost of implementing the final rule by $1.3 billion.

c. Higher Rate of Increase in Labor Costs than Food Costs

Our primary cost estimate assumes that the ratio of labor to food costs will remain fixed at the ratio observed in the SLBCS–II. Because we estimate a substantial increase in school food costs, our fixed labor to food cost assumption leads to a substantial increase in labor costs.

Some increase in labor costs is likely. Schools may find it necessary to prepare more meals on site to incorporate added vegetables and whole grains, and to reduce levels of sodium and fat. In addition, schools are likely to incur additional expense to train foodservice workers on the new meal requirements. However, commercial suppliers can be expected to develop and introduce healthier products for the school market ahead of implementation of a final rule; other products may be introduced after implementation. Schools may find that new training replaces some training planned in existing budgets.

At least one change reflected in the final rule is intended, in part, to help reduce labor costs relative to the proposed rule. The proposed rule included a separate meat standard for breakfast. The final rule drops that requirement, preserving schools' ability to serve meat as a substitute for grains at breakfast, but not requiring schools to offer meat. USDA expects that this change will support schools that serve breakfast in the classroom, a model that may require less labor cost than breakfast served in the school cafeteria.

Although we believe that the risk that we overstate the labor costs necessary to implement the rule is as likely as the risk that we understate labor costs, comments received from school officials and foodservice and nutrition professionals argue that our labor cost estimate may be too low. Commenters cited the need to hire new kitchen staff to prepare more meals from scratch as a factor that might change the current ratio of labor to food costs.

Our primary labor cost estimate relies on the observation that the ratio of labor to food costs was about the same at two points measured 13 years apart. We acknowledge the uncertainty inherent in the assumption that this ratio will remain unchanged even as substantial changes to the meal patterns are implemented by schools. And we therefore recognize the risk that the absolute dollar cost for labor in our final rule estimate is too low. If the cost of labor needed to implement the final rule exceeds the amount in our primary estimate by 10 percent, then the cost of the final rule would rise by $160 million.

d. Higher Food Inflation

The final rule estimate's food inflation methodology in described section III.B.1. That discussion notes that inflation over the most recent 2 years was lower for most food subgroups than inflation over the five years prior to those two. Our proposed rule estimate used a 5-year historic average to project food costs through FY 2016. In an effort to limit the effects of low recent inflation on our cost estimate, our final rule methodology uses a 7-year average to project food costs, rather than a revised 5-year estimate using only the most recent food inflation figures. This methodology retains all of the 5 years of relatively high food inflation that we used in our proposed rule methodology. We took this step to minimize the risk of understating the cost of the final rule. It is possible, nevertheless, that food inflation will accelerate in the short term. If food prices from fiscal years 2012 through 2016 match the rate of inflation over the five years that ended in FY 2009, then the cost of the final rule would increase by $240 million.[48]

e. Additional Need for Foodservice Equipment

The cost estimate in our proposed rule (and the primary estimate in this final rule analysis) does not include an additional cost for new foodservice equipment. As we discuss in section E above, commenters offer much different estimates of the need for new kitchen equipment to prepare more foods on site as a means of complying with the rule. These figures do not allow us to estimate the dollar value of that need with any certainty. Table 14 includes a revised final rule estimate that assumes half of all schools will need to invest $5,000 in new kitchen equipment soon after implementation of the rule. We show half of this $250 million cost as an upfront expense, and the other half as an expense incurred in the first full year of implementation of the rule.

Table 14 below assumes that State administrative costs are not impacted by any of the alternate assumptions (a–e) listed above.

[47] This reduction in cost comes at the expense of reduced federal meal reimbursements.

[48] This estimate includes a proportionate increase in labor costs to remain consistent with our labor cost methodology.

Table 14: Cost of Final Rule under Alternate Assumptions

	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Section A. Change in Participation - 2 Percent Increase						
Food Costs	$42.9	$283.1	$333.4	$782.1	$818.8	**$2,260.3**
Labor Costs	41.9	276.3	325.3	763.2	799.1	**2,205.8**
State Admin	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$84.9**	**$568.3**	**$667.7**	**$1,554.7**	**$1,627.5**	**$4,503.2**
Section B. Change in Participation – 2 Percent Decrease						
Food Costs	-$1.3	-$12.3	$24.0	$443.5	$466.7	**$920.7**
Labor Costs	3.8	29.2	52.2	432.8	455.4	**973.5**
State Admin	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$2.6**	**$25.8**	**$85.3**	**$885.8**	**$931.8**	**$1,931.4**
Section C. Higher Rate of Increase in Labor Costs than Food Costs						
Food Costs	$20.8	$135.4	$178.7	$612.8	$642.8	**$1,590.5**
Labor Costs	22.8	156.1	191.8	657.9	690.0	**1,718.5**
State Admin	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$43.7**	**$300.4**	**$379.6**	**$1,280.0**	**$1,342.4**	**$3,346.1**
Section D. Food Inflators from Proposed Rule for 2012-2016 Food Cost projections						
Food Costs	$21.5	$144.8	$195.0	$652.9	$695.4	**$1,709.5**
Labor Costs	21.4	151.2	190.3	637.1	678.6	**1,678.5**
State Admin	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$43.0**	**$304.9**	**$394.3**	**$1,299.3**	**$1,383.6**	**$3,425.1**
Section E. Increased Equipment Cost						
Food Costs	$20.8	$135.4	$178.7	$612.8	$642.8	**$1,590.5**
Labor Costs	20.7	141.9	174.4	598.0	627.2	**1,562.3**
State Admin	0.1	8.9	9.1	9.4	9.7	**37.1**
Equip Costs	125	125	0	0	0	**250.0**
Total	**$166.6**	**$411.2**	**$362.1**	**$1,220.2**	**$1,279.7**	**$3,439.9**

G. Comparison of Proposed Rule and Final Rule Costs

The key differences between our proposed rule and final rule cost estimates are discussed in previous sections of this RIA. Most of the estimated reduction in cost is due to policy changes, but a significant reduction is also realized by lower food inflation since preparation of the proposed rule cost estimate.

Inflation and Other Economic Assumptions

The proposed rule used actual food price inflation through the end of FY 2009. The final rule incorporates nearly two additional years of actual food price inflation. Inflation over the two years ending in August 2011 was lower for most of the food groups affected by the rule than it was in the five previous years. This reduces our baseline cost of food as well as our projection of food prices through the RIA's forecast period. The final rule also uses USDA projections of school meal participation contained in the 2012 President's budget. The proposed rule relied on data in the 2011 President's budget. The more recent participation projections slightly increase the cost of the breakfast meal patterns and reduce the cost of the lunch meal patterns relative to the proposed rule. The net effect of changes to our food inflation and student participation projections is a 5-year $730 million reduction in the cost of the final rule relative to the proposal.

Breakfast Meal Patterns

The most significant reduction in the estimated cost of the final rule relative to the proposed rule is due to changes in the final rule's breakfast provisions. The final rule's phased implementation of the meal pattern's fruit and grain requirements, and elimination of the proposed rule's separate meat and meat alternate requirement reduce the cost of the rule by $2.7 billion over 5 years.

Lunch Meal Patterns

Additional savings are realized through a reduction in the final rule's lunch meal pattern grain requirement relative to the proposed rule. The final

rule also includes changes to the vegetable component of the proposed rule's lunch meal pattern. The final rule eliminates the proposed rule's 1 cup per week limit on starchy vegetables, and it replaces the proposed rule's orange vegetable subgroup with a red/orange group that now includes tomatoes. Replacement of the orange vegetable subgroup with a red/orange subgroup was prompted by the 2010 Dietary Guidelines. The final rule reduces the weekly requirement for ''other'' vegetables, which previously included tomatoes, and increases the requirement for red/orange vegetables relative to the proposed rule requirement for orange vegetables. The net effect of changes to the vegetable and grain requirements at lunch is a relatively modest $150 million reduction in cost over 5 years.

TABLE 15—CHANGES IN COST OF THE FINAL RULE RELATIVE TO THE PROPOSED RULE

	Fiscal year					
	2012	2013	2014	2015	2016	Total
Proposed rule	$181.5	$1,246.8	$1,401.9	$1,923.8	$2,041.3	$6,795.2
Updated economic and participation projections	−15.9	−114.8	−141.1	−211.3	−248.2	−731.2
Changes to breakfast meal pattern requirements	−120.5	−822.7	−871.4	−446.4	−465.6	−2,726.7
Changes to lunch meal pattern requirements	−3.4	−23.0	−27.1	−45.8	−47.8	−147.3
Final rule	41.6	286.2	362.1	1,220.2	1,279.7	3,189.9

H. Implementation of Final Rule—SFA Resources

We estimate that the new meal patterns may raise the average cost of producing and serving school lunches by about 5 cents on initial implementation of the rule. By FY 2015, when the food group components are fully phased in, the cost per lunch may be 10 cents higher than our baseline estimate; the cost per breakfast may be 27 cents higher than our baseline.

As we discuss in Section E, the Healthy, Hunger-Free Kids Act contains a comprehensive package of school meal reforms that call for an update to the meal patterns and provide for increased SFA revenue. USDA estimates that the $3.2 billion 5-year cost of this rule is more than offset by the impact of other HHFKA provisions on SFA revenues.

HHFKA's meal pattern and revenue raising provisions are linked directly in the performance-based increase in Federal financing for school lunches. Schools that successfully implement the final rule standards will receive an additional 6 cent reimbursement for each lunch served. The Congressional Budget Office estimates that an additional 6 cents per lunch would raise $1.5 billion for SFAs in the first 5 years after implementation of the rule.[49]

HHFKA contains two additional provisions to ensure that Federal reimbursements are used as intended to provide quality meals to program participants. The first requires schools to gradually raise the per-meal revenue generated from paid lunches to an amount equal to the Federal reimbursement for free lunches. That revenue could come from student payments or State or local sources. The second requires that the revenue generated from non-program foods as a percent of food costs match the revenue to food cost ratio of program meals. USDA estimates that these two provisions will raise a combined $7.5 billion in the 5 years following their July 1, 2011 effective date.[50]

Schools will face different costs to implement this final rule. Schools with menus that already emphasize fruits, a variety of vegetables, and whole grains may need to make fewer changes, and the costs of implementation in those schools may be lower than average. Because the per-meal costs of complying with the new requirements are much higher for breakfast than for lunch, the overall costs of implementation in schools that serve more school breakfasts relative to lunches may be higher than the costs faced by schools that do not serve breakfast.

Schools will also benefit differently from HHFKA's revenue provisions. Schools with relatively few students who pay full price for program meals stand to gain little from HHFKA's paid lunch provision. Similarly, schools that sell few à la carte items will realize little revenue from an increase in à la carte prices. At the same time, schools that serve mostly free and reduced-price students and sell little à la carte can rely on significant Federal funding for each SFA dollar spent to purchase and prepare school foods.

The experience of some schools suggests that substantial progress toward implementation of the rule can even be achieved with existing resources. USDA's HealthierUS Schools Challenge (HUSSC) recognizes elementary schools that meet voluntary school meal and physical activity standards. HUSSC school meal standards exceed NSLP requirements on several levels, including requirements for a variety of vegetables each week, including dark green and orange vegetables and legumes; a variety of whole fruits, and limits on fruit juice; and whole grain and low fat milk requirements. USDA has certified more than 2,161 HUSSC schools since 2004. HUSSC schools have demonstrated an ability to operate cost-effective school meals programs that emphasize many of the same foods required by the final rule. These schools receive no financial assistance from USDA beyond the meal reimbursements and USDA Foods available to other schools that participate in the Federal school lunch and breakfast programs. Like other service businesses, schools may need to consider changes to their operations to increase efficiency and meet the requirements of the rule. HUSSC schools have demonstrated an ability to operate cost-effective school meals programs that meet many of the final rule's requirements. These schools may offer models for others as implementation moves forward.

I. Impact on Participation

As noted in Table 13, the cost estimate in this analysis assumes no net change in student participation following introduction of the rule's new meal pattern requirements. This assumption reflects uncertainties in a number of areas, including how schools will reflect the new requirements in menus, the acceptance of those changes by students, and potential changes in

[49] $1.5 billion is CBO's estimate of additional budget authority for HHFKA's ''Performance-Based Rate Increase'' through FY 2016, less $100 million ($50 million for administrative expenses in fiscal years 2012 and 2013) . See Table 2 in CBO's April 20, 2010 cost estimate for HHFKA. *http://www.cbo.gov/ftpdocs/114xx/doc11451/HealthyHungerFreeKidsAct.pdf* (accessed 11/06/11).

[50] See the interim final rule and regulatory impact analysis for ''School Food Service Account Revenue Amendments Related to the Healthy, Hunger-Free Kids Act of 2010'', **Federal Register**, Vol. 76, No. 117, pp. 35301–35318.

prices for reimbursable paid meals to provide additional revenue. These factors are discussed below.

1. Acceptance of Meals

Any revision to the content of school meals or the method of preparation may have an effect on the acceptance of school meals. Concerns are often raised that students may react negatively to changes designed to improve nutrition. USDA launched the School Meals Initiative for Healthy Children (SMI) in 1995 to help schools improve the nutritional quality of NSLP and SBP meals. The SMI offers an opportunity to examine how students react to substantial changes in school meal patterns.

As a result of the SMI many school food service directors reported making changes in procurement and preparation practices (Abraham, 2002). For example, they reported increased purchases of low-fat/reduced-fat foods (81 percent) and fresh fruits and vegetables (75 percent). The majority reported no change in food waste. However, to the extent that there was change in the amount of food wasted, more respondents reported a reduction rather than an increase in food waste (with the exception of cooked vegetables). School food service directors report that the SMI has generally had a neutral-to-positive impact on program performance.

SNDA–III found that ''[c]haracteristics of NSLP lunches offered, including percent of calories from fat, whether dessert or French fries were frequently offered, and average number of fresh fruits and vegetables offered per day, were generally not significantly associated with NSLP participation.'' [51] This suggests that changes in meal patterns that enhance nutrition can be well received by students. Furthermore, the increased emphasis on a healthy school nutrition environment in recent years, and greater awareness of the importance of healthy eating habits in schools, may help to support student acceptance of changes in program meals.

There is also a strong and growing school nutrition effort and infrastructure already in place.

For example, Team Nutrition is an FNS initiative to support healthier meals through training and technical assistance for food service, nutrition education for children and their caregivers, and school and community support for healthy eating and physical activity. Similarly, in 2004 Congress required all school districts to establish local wellness policies. Through these policies schools have made changes to their school nutrition environments and improved the quality of foods offered to students. In the context of these initiatives, implementation of the final rule is only the next step in a process of ongoing local, State, and Federal efforts to promote children's nutrition and health.

2. Impact of Price on Participation

FNS estimates that the average cost of preparing and serving school meals may increase by 8 percent by FY 2015. Some SFAs may raise student prices for paid meals (above the paid lunch revenue target required by HHFKA) to compensate for some of this increase in cost. We recognize that increased paid meal prices may reduce NSLP paid meal participation. Mathematica®, Inc. modeled the effect of paid meal prices on student participation as part of the SNDA–III study.[52] All else equal, students who were not income-eligible for free or reduced-price meals were less likely to participate in the program when the full price of the meals was higher. For lunch, the model estimates a 0.11 percent decrease in participation for each 1 cent increase in paid lunch prices.[53] For breakfast, the model estimates a 0.12 percent decrease in participation per 1 cent increase in price.

The model's predicted student participation rate was 54 percent in schools that charged $2.00 for an NSLP lunch, compared to 59 percent in schools that charged $1.50. The study also predicts lower breakfast participation in schools that charged higher prices. Predicted participation was 10.3 percent in schools that charged $0.70 for an SBP breakfast versus 7.2 percent in schools that charged $1.00. Since meals meeting the new requirements will be improved in nutritional content it is not clear how this factor would balance against the effects of higher meal prices. Although price changes may be a necessary option for some SFAs, FNS expects that efforts designed to maintain participation would be concurrently implemented.

J. Benefits

As noted in the preamble to this final rule, NSLA requires that schools serving lunches and breakfasts under its program authority ensure that those meals are consistent with the goals of the most recent Dietary Guidelines for Americans and the Dietary Reference Intakes. The final rule, by updating program regulations consistent with Dietary Guidelines goals and aligning the regulations with the requirements placed on schools under the statute, will ensure that school meal nutrition requirements reflect current nutrition science, increase the availability of key food groups, better meet the nutritional needs of children, and foster healthy eating habits.

In so doing, it also provides a clear means of meeting the statutory requirements through a food-based meal pattern designed with the particular circumstances and challenges of school food service in mind, to ensure that it is feasible for school foodservice operators and does not jeopardize student and school participation in the meal programs. A related benefit of the rule is that it simplifies meal requirements to create a single, food-based approach to meal planning. This approach helps to simplify menu planning and monitoring, and streamline training and technical assistance needs.

Once implemented by schools, USDA projects that this rule will change the types and quantities of foods prepared, offered and served through the school meals programs (the sources of the costs described in this analysis). The rule is expected to result in (1) increased servings of fruits and vegetables, (2) replacement of refined-grain foods with whole-grain rich foods, and (3) replacement of higher-fat dairy products with low-fat varieties. As documented in the IOM recommendations, each of these changes corresponds to an inconsistency between the typical diets of school-aged children in the United States and the Dietary Guidelines/*MyPyramid* recommendations. In particular, the report cited an analysis of NHANES 1999–2002 data that showed that:

- *Total vegetable intake was only about 40 percent of the MyPyramid levels, with intake of dark green and orange vegetables less than 20 percent of MyPyramid levels.*
- *Total fruit intake was about 80 percent of the MyPyramid levels for children ages 5–8, with far lower levels for older children.*
- *Intake of whole grains was less than one-quarter of MyPyramid levels,*

[51] For breakfast, the study estimated that projected participation rates ''were higher in schools that offered a greater percentage of calories from fat in the SBP breakfast; however, these differences were not statistically significant at conventional levels.'' USDA 2007, vol. II, pp. 113 and 127.

[52] USDA 2007, vol. II, pp. 116–117, 123–124.

[53] This relationship between price and participation applies to prices in the range of $1.50 to $2.00 in SY 2004–2005 dollars. A much bigger price increase might trigger a bigger reduction in participation.

although total grain intake was at or above MyPyramid levels.

• *Intake of dairy products varied by age, with the intakes of the youngest children exceeding MyPyramid levels, while those of older children were below those levels. However, most dairy consumed contained 2 percent or more milk fat, while the Dietary Guidelines recommend fat-free or low-fat dairy products.*[54]

In addition, the rule would make significant changes to the level of sodium in school meals over time. Research suggests that modest population-wide reductions in dietary salt could substantially reduce cardiovascular events and medical costs.[55] More specifically, a forthcoming study suggests that reducing dietary salt in adolescents could yield substantial health benefits by decreasing the number of teenagers with hypertension and the rates of cardiovascular disease and death as these teenagers reach young and middle age adulthood.[56]

The rule also makes substantial changes in the calorie targets for meals that are designed to promote healthful energy balance for the children served by these programs. For the first time, the rule sets maximum as well as minimum calorie targets, and creates a finer gradation of calorie levels by age. As a result, minimum calorie requirements for some groups are reduced by as much as 225 calories per lunch.[57] Implemented consistent with other requirements that ensure that lunches provide appropriate nutrient content, these changes in calorie levels can help to reduce the energy imbalance that contributes to obesity among the Nation's children, without compromising nutrition to support healthy growth and development.

This approach is fully consistent with the recommendations of the Dietary Guidelines for Americans. Recognizing that the Dietary Guidelines apply to a total diet, rather than a specific meal or portion of an individual's consumption, the intention of the rule is to make changes to school meals nutrition requirements to promote diets more consistent with the *Guidelines* among program participants. Such diets, in turn, are useful behavioral contributors to health and well-being. As the report of the 2010 Dietary Guidelines Advisory Committee notes, ''evidence is accumulating that selecting diets that comply with the Guidelines reduces the risk of chronic disease and promotes health.'' [58] The report describes and synthesizes the evidence linking diet and different chronic disease risks, including cardiovascular disease and blood pressure, as well as the effects of dietary patterns on total mortality. Children are a subpopulation of particular focus for the Committee; the report emphasizes the increasing common evidence of chronic disease risk factors, such as glucose intolerance and hypertension, among children, and explains that ''[e]vidence documents the importance of optimal nutrition starting during the fetal period through childhood and adolescence because this has a substantial influence on the risk of chronic disease with age.'' [59]

In response, the report notes improvements in food at schools as a critical strategy to prevent obesity, and related health risks, among children. Indeed, the Committee recommends ''[i]mprov[ing] foods sold and served in schools, including school breakfast, lunch, and after-school meals and competitive foods so that they meet the recommendations of the IOM report on school meals (IOM, 2009) and the key findings of the 2010 DGAC. This includes all age groups of children, from preschool through high school.'' [60]

The linkage between poor diets and health problems such as childhood obesity are also a matter of particular policy concern, given their significant social costs. One in every three children (31.7 percent) ages 2–19 is overweight or obese.[61] Along with the effects on our children's health, childhood overweight and obesity imposes substantial economic costs, and the epidemic is associated with an estimated $3 billion in direct medical costs.[62] Perhaps more significantly, obese children and adolescents are more likely to become obese as adults.[63] In 2008, medical spending on adults that was attributed to obesity increased to an estimated $147 billion.[64]

Because of the complexity of factors that contribute both to overall food consumption and to obesity, we are not able to define a level of disease or cost reduction that is attributable to the changes in meals expected to result from implementation of the rule. As the rule is projected to make substantial improvements in meals served to more than half of all school-aged children on an average school day, we judge that the likelihood is reasonable that the benefits of the rule exceed the costs, and that the final rule thus represents a cost-effective means of conforming NSLP and SBP regulations to the statutory requirements for school meals.

There are other, corollary benefits to improvement in school meals that are worthy of note. The changes could increase confidence by parents and families in the nutritional quality of school meals, which may encourage more families to opt for them as a reliable source of nutritious food for their children. Improved school meals can reinforce school-based nutrition education and promotion efforts and contribute significantly to the overall effectiveness of the school nutrition environment in promoting healthful food and physical activity choices. Finally, the new requirements provide a clearer alignment between Federal program benefits and national nutrition policy, which can help to reinforce overall understanding of the linkages between diet and health.

IV. Alternatives

1. Make No Changes to Proposed Rule

The proposed rule closely followed the recommendations contained in the 2010 report of the IOM committee commissioned by USDA to propose changes to the NSLP and SBP meal patterns. Those recommendations were designed to reflect current nutrition science, the Dietary Guidelines, and IOM's Dietary Reference Intakes. The reforms contained in the proposed rule were well received by health and nutrition professionals, child advocates, academics, and parents. But, as summarized in the preamble to the final rule and in this analysis, school and SFA officials, other public sector officials, and the food industry expressed concern about the cost and feasibility of the proposed rule. The final rule reflects those concerns by scaling back the quantity of food contained in the proposal, especially at breakfast, eliminating the proposed rule's limitations on starchy vegetables, phasing in some provisions, and extending target dates for meeting the proposed rule's sodium standards. Those changes result in a significantly less costly final rule.

One alternative to the final rule is to retain the proposed rule without change. The proposed rule closely

[54] IOM 2009, pp. 49–53.

[55] See, for example, Smith-Spangler, 2010; Bibbins-Domingo, 2010.

[56] Bibbins-Domingo, 2010b.

[57] The minimum calorie level for a lunch served to Grade 7 students is 825 calories under current standards (Grades 7–12); this would change to a range of 600 calories minimum, 700 calories maximum under the new standards (Grades 6–8).

[58] *Dietary Guidelines* Advisory Committee, p. B1–2.

[59] *Dietary Guidelines* Advisory Committee, pp. B1–2, B1–3.

[60] *Dietary Guidelines* Advisory Committee, p. B3–6.

[61] Ogden *et al.,* 2010.

[62] Trasande *et al.,* 2009.

[63] Whitaker *et al.,* 1997; Serdula *et al.,* May 1993.

[64] Finkelstein *et al.,* 2009

followed IOM's recommendations. IOM developed its recommendations to encourage student consumption of foods recommended by the Dietary Guidelines in quantities designed to provide necessary nutrients without excess calories. The final rule still achieves that goal. Students will still be presented with choices from the food groups and vegetable subgroups recommended by the Dietary Guidelines. In that way, the final rule, like the proposed rule, will help children recognize and choose foods consistent with a healthy diet.

The most significant differences between the proposed and final rules are in the breakfast meal patterns, and those differences are largely a matter of timing. The final rule allows schools more time to phase-in key IOM recommendations on fruit and grains at breakfast. Once fully implemented, the most important difference between the final and proposed rule breakfast meal patterns is the elimination of a separate meat/meat alternate requirement. That change preserves current rules that allow the substitution of meat for grains at breakfast. It also responds to general public comments on cost, and on the need to preserve schools' flexibility to serve breakfast outside of a traditional cafeteria setting.

Even with these changes, and with the less significant changes to the proposed lunch standards, the final rule remains consistent with Dietary Guidelines recommendations. The added flexibility and reduced cost of the final rule relative to the proposed rule should increase schools' ability to comply with the new meal patterns. The final rule's less costly breakfast patterns will make it easier for schools to maintain or expand current breakfast programs, and may encourage other schools to adopt a breakfast program.

Table 16 estimates the cost of the proposed rule using updated projections of student participation and food inflation. The estimated 5-year cost of the final rule, from Table 6, is $2.9 billion lower than this updated cost estimate of the proposed rule.

[Note that the estimate in Table 16 is about 10 percent lower than our cost estimate for the same set of provisions in the proposed rule Regulatory Impact Analysis. The difference between the two estimates reflects lower food inflation for most food groups since preparation of the proposed rule estimate.[65] As we discuss in Section III.B.1., lower recent inflation also reduces our projection of future price increases.]

Table 16: Alternative 1
Estimated Cost of Proposed Rule

	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Food Costs	$84.3	$572.1	$637.4	$866.1	$906.9	**$3,066.7**
Labor Costs	82.3	558.3	622.0	845.2	885.0	**2,992.8**
State Agency Administrative Costs	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$166.7**	**$1,139.3**	**$1,268.4**	**$1,720.6**	**$1,801.6**	**$6,096.6**

2. Adopt Final Rule Lunch Meal Pattern Changes; Retain Proposed Rule Breakfast Patterns

From Alternative 1, above, we estimate that cost of the final rule is $2.9 billion lower than the cost of the proposed rule. Table 17 makes clear that most of this reduction is due to the final rule's breakfast meal pattern changes. Adopting all of the lunch provisions contained in the final rule,[66] but retaining the proposed rule's breakfast provisions, would cost an estimated $5.9 billion over 5 years, or $2.7 billion more than final rule. This alternative responds less effectively than the final rule to comments received by USDA from SFA and school administrators who expressed concerns about the cost of the proposed rule.

Table 17: Alternative 2
Adopt Final Rule Lunch Meal Patterns; Retain Proposed Rule Breakfast Meal Patterns

	Fiscal Year					
	2012	2013	2014	2015	2016	Total
Food Costs	$82.0	$556.7	$619.7	$838.8	$878.4	**$2,975.6**
Labor Costs	80.0	543.3	604.8	818.5	857.2	**2,903.8**
State Agency Administrative Costs	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$162.1**	**$1,108.9**	**$1,233.6**	**$1,666.7**	**$1,745.3**	**$5,916.6**

[65] Table 16 also includes the effect of reclassifying tomatoes as a ''red/orange'' vegetable. Tomatoes were included in the ''other'' vegetable subgroup in our proposed rule cost estimate. Moving tomatoes from the ''other'' vegetable subgroup to the new ''red/orange'' subgroup is one of the changes contained in the 2010 *Dietary Guidelines.* Moving tomatoes back to the ''other'' vegetable subgroup for school meals was not considered by USDA and is therefore not reflected in this alternative to the final rule.

[66] For purposes of this estimate, reclassifying tomatoes as a ''red/orange'' vegetable is considered to be one of the final rule's lunch meal pattern changes.

3. Adopt Final Rule Breakfast Meal Pattern Changes; Retain Proposed Rule Lunch Patterns

This alternative highlights the relatively small difference in the cost of the proposed and final rule lunch provisions. The two key differences in the proposed and final rule lunch provisions have largely offsetting costs. The combined effect of moving tomatoes to the new red/orange vegetable subgroup, and the associated changes in the minimum cup requirements of the red/orange, starchy, and ''other'' vegetable subgroups have the effect of increasing the cost of the final rule relative to the proposed rule. The final rule's reduction in the lunch meal pattern's grain ounce equivalent requirement reduces the cost of the final rule relative to the proposed rule.

Table 18: Alternative 3

Adopt Final Rule Breakfast Meal Patterns; Retain Proposed Rule Lunch Meal Patterns

	Fiscal Year					
	2012	**2013**	**2014**	**2015**	**2016**	**Total**
Food Costs	$23.1	$150.8	$196.3	$640.1	$671.3	**$1,681.6**
Labor Costs	22.9	156.9	191.6	624.7	655.1	**1,651.2**
State Agency Administrative Costs	0.1	8.9	9.1	9.4	9.7	**37.1**
Total	**$46.1**	**$316.6**	**$397.0**	**$1,274.2**	**$1,336.0**	**$3,369.9**

V. Accounting Statement

As required by OMB Circular A–4 (available at *http://www.whitehouse.gov/sites/default/files/omb/assets/regulatory_matters_pdf/a-4.pdf*), we have prepared an accounting statement showing the annualized estimates of benefits, costs and transfers associated with the provisions of this final rule.

	Primary Estimate	Year Dollar	Discount Rate	Period Covered
Benefits				
Qualitative: The primary benefit of this rule is to align the regulations with the requirements placed on schools under NSLA to ensure that meals are consistent with the goals of the most recent Dietary Guidelines and the Dietary Reference Intakes. In increasing access to children for such meals it will address key inconsistencies between the diets of school children and Dietary Guidelines by 1) increasing servings of fruits and vegetables, 2) replacing refined-grain foods with whole-grain rich foods, and 3) replacing higher-fat dairy products with low-fat varieties.				
Costs				
Annualized Monetized ($millions/year)	$592.1	2012	7%	FY2012-2016
	$617.9	2012	3%	
Notes: Local School Food Authorities will incur food, labor, and administrative costs to comply with new NSLP and SBP meal requirements. State education agencies will incur additional training, technical assistance, and SFA monitoring and compliance costs. No direct regulation of small business.				
Transfers				
Annualized Monetized ($millions/year)	$0	2012	7%	FY2012-2016
	$0	2012	3%	

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VII. Appendix A

The following tables detail the major steps in the computation of food cost estimates described in the main body of the impact analysis. The tables develop both a baseline food cost estimate and an estimate under the proposed rule.

Table A–1 contains total food and labor cost estimates for the baseline and under the proposed rule. The difference is summarized in the shaded panel at the bottom of the table. That difference is the estimated cost of the rule, as presented in Table 6 in section III.A.1.

Table A–2 shows each of the major inputs into our baseline cost estimate. The first 5 columns give the estimated food cost per school meal served. We inflate each of the meal components by historic and projected changes in food group specific prices to estimate per meal costs through FY 2016. Inflation factors, not shown in Table A–2, are weighted averages, computed from CPI–U data from the Bureau of Labor Statistics. The next set of columns contains projections of meals served through FY 2016. Total baseline costs, in the five rightmost columns of Table A–2, are the product of the estimated costs per meal and FNS projections of the number of meals served.

Our estimate of total cost under the proposed rule is developed in Table A–3. Table A–3 summarizes the steps that we took to estimate a per-meal food cost in FY 2012, the year in which the rule is expected to take effect, and shows our projection of total costs through FY 2016.

Table A–3 resembles Table A–2. It takes the weighted average prices per meal by meal component for FY 2012, projects them through FY 2016 using food group specific inflation factors, then multiplies those inflated per meal figures by FNS projections of meals served. The final estimated cost of meals served under the proposed rule is displayed in the last five columns of the table.

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Table A-1: Cost of Proposed Rule – Summary

Cost Effect Summary

	Cost Category		Fiscal Year Costs (millions)					
			2012[1]	2013	2014	2015	2016	2012 - 2016
Current Rule	Breakfast	Food	$240.0	$1,620.8	$1,694.0	$1,761.9	$1,832.5	$7,149.1
		Labor[2]	234.2	1,581.7	1,653.1	1,719.4	1,788.3	6,976.7
	Lunch	Food	843.5	5,629.5	5,860.6	6,089.4	6,327.5	24,750.5
		Labor[2]	823.1	5,493.7	5,719.2	5,942.5	6,174.8	24,153.4
	Total		**$2,140.9**	**$14,325.6**	**$14,926.9**	**$15,513.2**	**$16,123.0**	**$63,029.6**
Final Rule	Breakfast	Food	$239.6	$1,610.8	$1,698.5	$2,083.3	$2,167.0	$7,799.2
		Labor[2]	234.2	1,581.7	1,657.5	2,033.0	2,114.7	7,621.2
	Lunch	Food	864.7	5,774.9	6,034.8	6,380.8	6,635.7	25,690.9
		Labor[2]	843.8	5,635.6	5,889.2	6,226.9	6,475.6	25,071.1
	Total		**$2,182.4**	**$14,602.9**	**$15,280.0**	**$16,724.0**	**$17,393.0**	**$66,182.4**
Difference	Food :		$20.8	$135.4	$178.7	$612.8	$642.8	$1,590.5
	Labor :		20.7	141.9	174.4	598.0	627.2	1,562.3
	State Agency Administration[3] :		0.1	8.9	9.1	9.4	9.7	37.1
	Total :		**$41.6**	**$286.2**	**$362.1**	**$1,220.2**	**$1,279.7**	**$3,189.9**

notes:

1. FY 2012 is a 3 month figure. The rule is assumed to take effect at the beginning of SY 2012-2013

2. The SLBCS II estimated that labor costs are 44.5% of total reported SFA costs; food costs are 45.6% of the total. The labor costs shown here are equal to food costs multiplied by (.445/.456) for all cells ezcept breakfast in fiscal years 2012 and 2013. Although we estimate a minimal reduction in food costs for breakfast in FY 2012 and FY 2013, we do not assume a reduction in breakfast labor costs; instead we assume that breakfast labor costs will remain unchanged from the baseline in those years.

3. State agency administrative costs include training and technical assistance to SFAs, monitoring and compliance, and associated reporting and recordkeeping.

Table A-2: Detail of Baseline (Current Rule) Food Cost Estimate – Prices per Meal, Participation, and Total Projected Food Cost

Current Rule

Meal	Food Item	Weighted Average Price (inflated to)					Participation					Total Food Cost ($ millions) for number of months				
		dollar cost per meal					meals served (millions)					3	12	12	12	12
		FY2012	FY2013	FY2014	FY2015	FY2016	FY2012	FY2013	FY2014	FY2015	FY2016	FY2012	FY2013	FY2014	FY2015	FY2016
Breakfast																
	Grades K-12															
	Milk	$0.1830	$0.1867	$0.1905	$0.1944	$0.1983	342	2,253	2,298	2,332	2,367	$62.6	$420.7	$437.8	$453.4	$469.5
	Fruit	0.0353	0.0362	0.0372	0.0382	0.0392	342	2,253	2,298	2,332	2,367	12.1	81.6	85.4	89.0	92.8
	Fruit Juice	0.1110	0.1141	0.1173	0.1206	0.1240	342	2,253	2,298	2,332	2,367	37.9	257.0	269.6	281.3	293.6
	Refined Grain	0.1920	0.1968	0.2017	0.2068	0.2119	342	2,253	2,298	2,332	2,367	65.6	443.3	463.5	482.2	501.6
	Whole Grain	0.0853	0.0874	0.0896	0.0918	0.0941	342	2,253	2,298	2,332	2,367	29.1	196.9	205.8	214.2	222.8
	Meat/Meat Alternate	0.0910	0.0934	0.0959	0.0984	0.1010	342	2,253	2,298	2,332	2,367	31.1	210.4	220.3	229.4	239.0
	Vegetable	0.0046	0.0048	0.0051	0.0053	0.0056	342	2,253	2,298	2,332	2,367	1.6	10.9	11.6	12.4	13.2
	Total K-12	**$0.7022**	**$0.7195**	**$0.7373**	**$0.7555**	**$0.7741**						**$240.0**	**$1,620.8**	**$1,694.0**	**$1,761.9**	**$1,832.5**
Lunch																
	Grades K-12															
	Milk	$0.1841	$0.1878	$0.1916	$0.1955	$0.1995	854	5,531	5,586	5,631	5,676	$157.2	$1,038.8	$1,070.5	$1,101.0	$1,132.4
	Fruit	0.0970	0.0998	0.1026	0.1055	0.1085	854	5,531	5,586	5,631	5,676	82.9	551.9	573.1	594.0	615.6
	Fruit Juice	0.0224	0.0230	0.0237	0.0244	0.0250	854	5,531	5,586	5,631	5,676	19.1	127.4	132.3	137.1	142.1
	Refined Grain	0.1724	0.1790	0.1859	0.1930	0.2005	854	5,531	5,586	5,631	5,676	147.2	990.0	1,038.4	1,087.0	1,137.8
	Whole Grain	0.0173	0.0179	0.0186	0.0194	0.0201	854	5,531	5,586	5,631	5,676	14.8	99.3	104.1	109.0	114.1
	Meat/Meat Alternate	0.3049	0.3133	0.3219	0.3308	0.3399	854	5,531	5,586	5,631	5,676	260.4	1,732.7	1,798.2	1,862.5	1,929.1
	Vegetable	0.1894	0.1970	0.2048	0.2129	0.2213	854	5,531	5,586	5,631	5,676	161.8	1,089.3	1,143.9	1,198.8	1,256.3
	Total K-12	**$0.9875**	**$1.0178**	**$1.0491**	**$1.0814**	**$1.1148**						**$843.5**	**$5,629.5**	**$5,860.6**	**$6,089.4**	**$6,327.5**

notes:

1. Average grams per meal served is calculated using SNDA-III (SY 2004-2005)
2. Price is calculated using SLBCS II data (SY 2005-2006) and inflated to FY 2012 using the Bureau of Labor Statistics CPI-U.

Table A-3: Detail of Proposed Rule Food Cost Estimate – Prices per Meal, Participation, and Total Projected Food Cost

Final Rule

Meal	Food Item	Weighted Average Price (inflated to) dollar cost per meal					Participation meals served (thousands)					Total Food Cost ($ millions) for number of months				
												3	12	12	12	12
		FY2012	FY2013	FY2014	FY2015	FY2016	FY2012	FY2013	FY2014	FY2015	FY2016	FY2012	FY2013	FY2014	FY2015	FY2016
Breakfast																
	Grades K-12															
	Milk	$0.1819	$0.1856	$0.1893	$0.1932	$0.1971	342	2,253	2,298	2,332	2,367	$62.2	$418.0	$435.0	$450.5	$466.6
	Fruit	0.0353	0.0362	0.0562	0.1632	0.1675	342	2,253	2,298	2,332	2,367	12.1	81.6	129.2	380.6	396.5
	Fruit Juice	0.1110	0.1141	0.1173	0.1206	0.1240	342	2,253	2,298	2,332	2,367	37.9	257.0	269.6	281.3	293.6
	Refined Grains	0.1920	0.1828	0.0927	0.0000	0.0000	342	2,253	2,298	2,332	2,367	65.6	411.8	213.0	-	-
	Whole Grains	0.0853	0.0981	0.1836	0.3189	0.3269	342	2,253	2,298	2,332	2,367	29.1	221.1	422.0	743.8	773.8
	Meat/Meat Alternate	0.0910	0.0934	0.0959	0.0984	0.1010	342	2,253	2,298	2,332	2,367	31.1	210.4	220.3	229.4	239.0
	Vegetable	0.0046	0.0048	0.0041	-0.0010	-0.0011	342	2,253	2,298	2,332	2,367	1.6	10.9	9.5	(2.4)	(2.5)
	Total K-12	**$0.7010**	**$0.7151**	**$0.7392**	**$0.8933**	**$0.9154**						**$239.6**	**$1,610.8**	**$1,698.5**	**$2,083.3**	**$2,167.0**
Lunch																
	Grades K-12															
	Milk	$0.1792	$0.1829	$0.1866	$0.1904	$0.1943	854	5,531	5,586	5,631	5,676	$153.1	$1,011.5	$1,042.4	$1,072.0	$1,102.6
	Fruit	0.0976	0.1003	0.1032	0.1061	0.1091	854	5,531	5,586	5,631	5,676	83.4	555.0	576.3	597.3	619.1
	Fruit Juice	0.0224	0.0230	0.0237	0.0244	0.0250	854	5,531	5,586	5,631	5,676	19.1	127.4	132.3	137.1	142.1
	Refined Grains	0.0787	0.0817	0.0716	0.0000	0.0000	854	5,531	5,586	5,631	5,676	67.2	452.0	400.0	-	-
	Whole Grains	0.0810	0.0842	0.1040	0.2012	0.2089	854	5,531	5,586	5,631	5,676	69.2	465.5	581.1	1,132.9	1,185.9
	Meat/Meat Alternate	0.2752	0.2827	0.2905	0.2985	0.3067	854	5,531	5,586	5,631	5,676	235.0	1,563.7	1,622.9	1,680.9	1,741.0
	Vegetable	0.2782	0.2892	0.3007	0.3127	0.3251	854	5,531	5,586	5,631	5,676	237.6	1,599.8	1,679.9	1,760.5	1,845.0
	Total K-12	**$1.0123**	**$1.0441**	**$1.0803**	**$1.1332**	**$1.1691**						**$864.7**	**$5,774.9**	**$6,034.8**	**$6,380.8**	**$6,635.7**

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Final Regulatory Flexibility Analysis

Final rule: Nutrition Standards in the National School Lunch and School Breakfast Programs

[RIN 0584–AD59]

AGENCY: Food and Nutrition Service, USDA.

Background: The Regulatory Flexibility Act (RFA) requires agencies to consider the impact of their rules on small entities and to evaluate alternatives that would accomplish the objectives of the rules without unduly burdening small entities when the rules impose a significant economic impact on a substantial number of small entities. Inherent in the RFA is Congress' desire to remove barriers to competition and encourage agencies to consider ways of tailoring regulations to the size of the regulated entities.

The RFA does not require that agencies necessarily minimize a rule's impact on small entities if there are significant legal, policy, factual, or other reasons for the rule's having such an impact. The RFA requires only that agencies determine, to the extent feasible, the rule's economic impact on small entities, explore regulatory alternatives for reducing any significant economic impact on a substantial number of such entities, and explain the reasons for their regulatory choices.

Reasons That Action Is Being Considered

Section 103 of the Child Nutrition and WIC Reauthorization Act of 2004 inserted Section 9(a)(4) into the National School Lunch Act requiring the Secretary to promulgate rules revising nutrition requirements, based on the most recent *Dietary Guidelines for Americans,* that reflect specific recommendations for increased consumption of foods and food ingredients offered in school meal programs. In addition, Section 201 of the Healthy, Hunger-Free Kids Act of 2010 (HHFKA) requires the Secretary to issue regulations to update the school meal patterns based on recommendations of the Institute of Medicine. This final rule amends Sections 210 and 220 of the regulations that govern the National School Lunch Program (NSLP) and the School Breakfast Program (SBP). USDA published a proposed rule in the **Federal Register** on January 13, 2011 (76 FR 2494) that closely followed IOM's recommendations. USDA received and processed more than 130,000 comments on the proposed rule. USDA considered those comments in developing a final rule that continues to advance the goals of the IOM while responding to concerns about the cost of implementation, and the need for flexibility in administration at the school district level.

Objectives of, and Legal Basis for, the Final Rule

Under Section 9(a)(4) and Section 9(f)(1) of the NSLA, schools that participate in the NSLP or SBP must offer lunches and breakfasts that are consistent with the goals of the most recent *Dietary Guidelines for Americans.* Current nutrition requirements for school lunches and breakfasts are based on the 1995 *Dietary Guidelines* and the 1989 RDAs. (School lunches and breakfasts were not updated when the 2000 Dietary Guidelines were issued because those recommendations did not require significant changes to the school meal patterns.) The 2005 and 2010 Dietary Guidelines provide more prescriptive and specific nutrition guidance than earlier releases and require significant changes to school meal requirements.

Number of Small Entities To Which the Final Rule Will Apply

This rule directly regulates the 55 State education agencies and 2 State Departments of Agriculture (SAs) that operate the NSLP and SBP pursuant to agreements with USDA's Food and Nutrition Service (FNS); in turn, its provisions apply to entities that prepare and provide NSLP and SBP meals to students. While SAs are not small entities under the RFA as State populations exceed the 50,000 threshold for a small government jurisdiction, many of the service-providing institutions that work with them to implement the program do meet definitions of small entities:

- There are currently about 19,000 School Food Authorities (SFAs) participating in NSLP and SBP. More than 99 percent of these have fewer than 50,000 students.[67] About 26 percent of SFAs with fewer than 50,000 students are private. However, private school SFAs account for only 3 percent of all students in SFAs with enrollments under 50,000.[68]
- Nearly 102,000 schools and residential child care institutions participate in the NSLP. These include more than 90,000 public schools, 6,000 private schools, and about 5,000 residential child care institutions (RCCIs).[69] We focus on the impact at the SFA level in this document, rather than the school level, because SFAs are responsible for the administration of the NSLP and the SBP.
- Food service management companies (FSMCs) that prepare school meals or menus under contract to SFAs are affected indirectly by the proposed rule. Thirteen percent of public school SFAs contracted with FSMCs in school year (SY) 2004–2005.[70] Of the 2,460 firms categorized as ''food service contractors'' under NAICS code 72231, 96 percent employ fewer than 500 workers.[71]

Response to Public Comments on Initial Regulatory Flexibility Analysis

USDA received comments on the Initial Regulatory Flexibility Analysis from school, SFA, and State education officials, advocacy organizations, and foodservice industry representatives. Most of those individuals were concerned with the cost of complying with the rule. Commenters pointed to the particular cost challenges faced by small schools with few foodservice employees, limited space for storage and on-site meal preparation, and the inability to purchase food in quantities necessary to get the lowest prices. These comments are discussed in the relevant sections below.

Projected Reporting, Recordkeeping and Other Compliance Requirements

The analysis below covers only those organizations impacted by the final rule that were determined to be small entities.

School Food Authorities (SFA)/Schools

Increased Cost To Produce School Meals

USDA estimates that the proposed rule will raise the average cost of producing and serving school lunches by 5 cents on initial implementation. Phased implementation of the rule's breakfast meal patterns results in no first year costs. By FY 2015, when all of the lunch and breakfast food group requirements are in place, the cost per lunch will be about 10 cents higher than our baseline estimate; the cost per breakfast will be about 27 cents higher. Across all SFAs we estimate that the total cost of compliance will be $3.2 billion over five years. Although about 99 percent of SFAs enroll fewer than

[67] FNS 742 School Food Verification Survey, School Year 2009–2010. This number is approximate, not all SFAs are required to submit the 742 form.

[68] Ibid. RCCIs include but are not limited to juvenile detention centers, orphanages, and medical institutions. We do not have information on the number of children enrolled in these institutions.

[69] FNS program data for FY 2010.

[70] U.S. Department of Agriculture, Food and Nutrition Service, Office of Research, Nutrition and Analysis, *School Nutrition Dietary Assessment Study-III, Vol. I,* 2007, p. 34 *http://www.fns.usda.gov/ora/MENU/Published/CNP/FILES/SNDAIII-Vol1.pdf.*

[71] Ibid.

50,000 students, they enroll only about 80 percent of all students. If they serve about 80 percent of all meals (we do not have data on meals served by SFA size) then these small entities would incur roughly 80 percent of estimated costs.

With exceptions for individual schools, USDA expects that the cost of the rule will increase with meals served and will not be proportionately higher for small schools. Small schools that face average labor and food costs, and have menus typical of the average school are expected to incur per-meal costs comparable to larger schools. We expect that those costs will equal our estimated cost per meal multiplied by the number of meals served.

The most important factors that separate schools with higher than average per-meal costs from those with lower than average costs are not necessarily associated with the size of the SFA. For instance, schools with menus that already emphasize fruits, non-starchy vegetables, and whole grains will need to make fewer changes, and the costs of implementation in those schools should be lower than average. Also, because the per-meal cost of complying with the proposed requirements is much higher for breakfast than for lunch, the overall costs of implementation in schools that serve the most school breakfasts relative to lunches will be higher than the costs faced by schools that do not serve breakfast.

Some commenters note that small districts pay more for food than larger districts that benefit from volume discounts. Others suggest that prices for whole grain and reduced fat products are higher in small, rural communities. USDA's School Lunch and Breakfast Cost Study II (SLBCS) finds that the per-meal costs of producing school breakfasts are higher in small districts than in large districts.[72] But the study finds no statistically significant difference by SFA size in the cost of producing a school lunch.

SLBCS finds that at least some of the higher cost incurred by small districts to produce a school breakfast is due to the fixed costs of operating a small program. The study does not, however, address how much might be due to higher food prices. USDA's School Food Purchase Study (SFPS) found that large districts do tend to pay less than small districts for food on a per-unit basis.[73] But the study also found that ''the relationship [between small SFA size and higher food costs] is weak for districts of less than 5,000 enrollment.'' Although SFPS found that small districts tend to pay more for food, it also found that small districts charge students the least for full-price school meals.[74]

Increased Cost of Administering School Meals Programs

USDA expects that SFAs will incur additional administrative costs for staff training during implementation of the new standards. The final rule replaces the Coordinated Review Effort (CRE) and School Meals Initiative (SMI) with a combined State Agency administrative review. The new review will be held once every 3 years, instead of once every 5 years. The increased frequency of the combined review will increase administrative costs for many SFAs. However, SFAs that previously had separate CREs and SMIs may experience a decrease in burden, because they will undergo just one CRE every three years, rather than two reviews (one CRE and one SMI) every five years.

USDA estimates that the proposed rule will result in an average 8.2 hour net increase in the annual reporting and recordkeeping burden for each of 7,000 SFAs. That increase appears to fall below the threshold for recognition as a significant impact for RFA purposes.[75]

Increased Equipment Costs

SFAs may need to purchase new equipment to prepare and serve meals that comply with the proposed standards. For example, some SFAs may need to replace fryers with ovens or steamers. In FY 2009, FNS solicited requests from SFAs for food service equipment grants, awarding $100 million in 2009 American Recovery and Reinvestment Act (ARRA) Equipment Grants and an additional $25 million in one-time funds included in the FY 2010 Appropriations Act. In response to their solicitations for these funds, State agencies received a total of approximately $600 million in grant requests from SFAs. The strong response to these grant programs indicates a substantial demand for investment in kitchen equipment.

We do not have the data necessary to measure the remaining unmet demand in smaller SFAs or in SFAs that did not receive grants. However, much of that demand is driven by the routine need to replace equipment that is nearing the end of its useful life—a cost that is appropriately covered by USDA meal reimbursements and other sources of food service revenue. For recipient SFAs, the grants temporarily freed some of those revenue sources for other priorities. In the absence of additional Congressional action, SFAs must again turn to those sources to meet their ongoing equipment needs.

Data from the SLBCS confirm that small SFAs spend more, on average, to produce a school breakfast than do large SFAs.[76] SLBCS found that higher per-meal breakfast costs in small SFAs are due, in part, to the fixed costs of operating a breakfast program. For example, schools that choose to offer breakfast must pay staff to serve meals, no matter how few students participate. As schools serve more breakfasts, SLBCS data show that the cost per unit decreases; this is the case for both small and large SFAs.[77]

If the fixed costs of starting up a breakfast program were the only factors responsible for higher average breakfast costs in small school districts, then we would not expect the final rule to have a disproportionate effect on those districts. The main costs of the rule are variable rather than fixed: Schools must offer a greater variety and additional quantities of certain foods to each student. Some commenters point out, though, that the rule might require additional investment in food preparation and storage equipment, and that this imposes a special burden on smaller districts. But these costs are variable too; larger districts will spend more than smaller districts on similar types of equipment to handle a greater volume of food. Of course, kitchen equipment is not variable in the same sense as food. Small districts may have to purchase new equipment as a result of the final rule that they may not use

[72] U.S. Department of Agriculture, Food and Nutrition Service, Office of Research, Nutrition and Analysis, *School Lunch and Breakfast Cost Study-II, Final Report,* by Susan Bartlett, *et al.,* 2008, pp. 3–2—3–5. *http://www.fns.usda.gov/ora/MENU/Published/CNP/FILES/MealCostStudy.pdf.*

[73] The study could not conclude whether the price advantage of large districts was a result of ''an economy of scale based on the volume of food they are purchasing, the use of highly centralized procurement systems or formal procurement and pricing methods typically found in large school districts, the accessibility to more vendors leading to a more competitive marketplace, or a combination of factors.'' U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation, *School Food Purchase Study Final Report* (Executive Summary), by Lynn Daft, *et al.,* 1998 *http://www.fns.usda.gov/ora/MENU/Published/CNP/FILES/SFPS–Execsum.pdf.*

[74] School Food Purchase Study Final Report, pp. III–14—III–15.

[75] SBA's ''A Guide for Government Agencies'' identifies several examples of significant impact: A rule that provides a strong disincentive to seek capital; 175 staff hours per year for recordkeeping; impacts greater than the $500 fine (in 1980 dollars) imposed for noncompliance; new capital requirements beyond the reach of the entity; and any impact less cost-efficient than another reasonable regulatory alternative.

[76] *School Food Purchase Study Final Report,* p. VII–1.

[77] Ibid.

as intensively as districts that prepare more meals. In that way, expenditures on kitchen equipment may add more to per-meal costs in small districts than in bigger districts.

USDA Response to Public Comments on the Cost of the Proposed Rule

USDA considered all comments submitted by the public on the proposed rule. Comments from school district and school officials, foodservice industry professionals, and others concerned with the cost of the proposed rule were instrumental in guiding USDA's development of a less costly final rule. The modifications offer schools short term savings, relative to the proposed rule, by phasing in the rule's breakfast fruit and grain requirements. As a result of elimination of the proposed rule's breakfast meat requirement, the ongoing cost of the final rule after full implementation is also reduced. Eliminating the proposed limit on the amount of starchy vegetables that schools may offer at lunch has little effect on the cost of the final rule relative to the proposed rule. Significant savings are realized through a reduction in the lunch pattern's grain requirement.

USDA estimated that the proposed rule would increase the costs of preparing and serving school meals by $6.8 billion over 5 years. With the changes discussed above, the 5-year cost of the rule is reduced to $3.2 billion.[78] The reduction in cost will benefit SFAs of any size that might have had difficulty implementing the proposed rule standards.

Options for Addressing Increased Costs

Although changes to the final rule significantly reduce the implementation costs faced by SFAs, the rule still requires a substantial investment by schools and school districts to improve the nutritional quality of school meals.

The Healthy, Hunger-Free Kids Act of 2010 (HHFKA), which is one of the 2 statutory directives behind this rulemaking, also contains provisions intended to reform school meal financing. USDA estimates that those provisions will increase SFA revenues enough to fully offset the cost of this rule.

HHFKA's meal pattern and revenue raising provisions are linked directly in the performance-based increase in Federal financing for school lunches. Schools and SFAs that successfully implement the final rule standards will receive an additional 6 cent reimbursement for each lunch served. The Congressional Budget Office estimates that an additional 6 cents per lunch would raise $1.5 billion for SFAs in the first 5 years after implementation of the rule.[79]

HHFKA contains two additional provisions to ensure that Federal reimbursements are used as intended to provide quality meals to program participants. The first requires SFAs to gradually raise the per-meal revenue generated from paid lunches to an amount equal to the Federal reimbursement for free lunches. That revenue could come from student payments or State or local sources. The second requires that the revenue generated from non-program foods as a percent of food costs match the revenue to food cost ratio of program meals. USDA estimates that these two provisions will raise a combined $7.5 billion in the 5 years following their July 1, 2011 effective date.[80]

SFAs will benefit differently from HHFKA's revenue provisions. SFAs with relatively few students who pay full price for program meals stand to gain little from HHFKA's paid lunch provision. Similarly, schools that sell few à la carte items will realize little revenue from an increase in à la carte prices. At the same time, schools that serve mostly free and reduced-price students and sell little à la carte can rely on significant Federal funding for each SFA dollar spent to purchase and prepare school foods.

The experience of some schools suggests that substantial progress toward implementation of the rule can even be achieved with existing resources. USDA's HealthierUS Schools Challenge (HUSSC) recognizes elementary schools that meet voluntary school meal and physical activity standards. HUSSC school meal standards exceed NSLP requirements on several levels, including requirements for a variety of vegetables each week, including dark green and orange vegetables and legumes; a variety of whole fruits, and limits on fruit juice; and whole grain and low fat milk requirements. USDA has certified more than 1,600 HUSSC schools since 2004. HUSSC schools have demonstrated an ability to operate cost-effective school meals programs that emphasize many of the same foods required by the final rule. These schools receive no financial assistance from USDA beyond the meal reimbursements and USDA Foods available to other schools that participate in the Federal school lunch and breakfast programs. Like other service businesses, schools may need to consider changes to their operations to increase efficiency and meet the requirements of the rule. HUSSC schools have demonstrated an ability to operate cost-effective school meals programs that meet many of the final rule's requirements. These schools may offer models for others as implementation moves forward.

We recognize that small SFAs, like others, will face substantial costs and potential challenges in implementing the proposed rule. These costs should not be significantly greater for small SFAs than for larger ones, as implementation costs are driven primarily by factors other than SFA size. Nevertheless, we do not discount the special challenges that may face some smaller SFAs. As a group, small SFAs may have less flexibility to adjust resources in response to immediate budgetary needs. Phased implementation of the final rule's breakfast provisions, which will reduce up-front costs of implementation, may be particularly valuable to small SFAs.

Food Service Management Companies

FSMCs are potentially indirectly affected by the proposed rule. FSMCs that provide school meals under contract to SFAs will need to alter those products to conform to the proposed changes in meal requirements. In addition, FSMCs may find new opportunities to work with SFAs that currently do not contract for food service assistance. Consistent with SBA guidance, which notes that ''[t]he courts have held that the RFA requires an agency to perform a regulatory flexibility analysis of small entity impacts only when a rule directly regulates them'',[81] we do not attempt to quantify the economic effect of the proposed rule on FSMCs.

Federal Rules That May Duplicate, Overlap or Conflict With the Final Rule

FNS is unaware of any such Federal rules or laws.

Significant Alternatives

One alternative to the final rule is to retain the proposed rule without change. The proposed rule closely

[78] Part of the reduction in cost is due to a recent reduction in food inflation. See the Regulatory Impact Analysis for additional detail.

[79] See Table 2 in CBO's April 20, 2010 cost estimate for HHFKA. *http://www.cbo.gov/ftpdocs/114xx/doc11451/HealthyHungerFreeKidsAct.pdf.* The total increase in budget authority through FY 2016 includes $100 million for administrative expenses ($50 million in each of the first 2 years).

[80] See the interim final rule and regulatory impact analysis for ''School Food Service Account Revenue Amendments Related to the Healthy, Hunger-Free Kids Act of 2010'', **Federal Register,** Vol. 76, No. 117, pp. 35301–35318.

[81] SBA, ''A Guide for Government Agencies'', p. 20.

followed IOM's recommendations. IOM developed its recommendations to encourage student consumption of foods recommended by the *Dietary Guidelines* in quantities designed to provide necessary nutrients without excess calories. The final rule still achieves that goal. Students will still be presented with choices from the food groups and vegetable subgroups recommended by the *Dietary Guidelines.* In that way, the final rule, like the proposed rule, will help children recognize and choose foods consistent with a healthy diet.

The most significant differences between the proposed and final rules are in the breakfast meal patterns, and those differences are largely a matter of timing. The final rule allows schools more time to phase-in key IOM recommendations on fruit and grains at breakfast. Once fully implemented, the most important difference between the final and proposed rule breakfast meal patterns is the elimination of a separate meat/meat alternate requirement. That change preserves current rules that allow the substitution of meat for grains at breakfast. It also responds to general public comments on cost, and on the need to preserve schools' flexibility to serve breakfast outside of a traditional cafeteria setting.

Even with these changes, and with the less significant changes to the proposed lunch standards, the final rule remains consistent with *Dietary Guidelines* recommendations. The added flexibility and reduced cost of the final rule relative to the proposed rule should increase schools' ability to comply with the new meal patterns. The final rule's less costly breakfast patterns will make it easier for schools to maintain or expand current breakfast programs, and may encourage other schools to adopt a breakfast program.

Implementing the proposed rule, without changes, would increase the cost to SFAs of implementing the new meal patterns, relative to the final rule, by an estimated $2.9 billion over 5 years.

List of Subjects

7 CFR Part 210

Grant programs—education, Grant programs—health, Infants and children, Nutrition, Penalties, Reporting and recordkeeping requirements, School breakfast and lunch programs, Surplus agricultural commodities.

7 CFR Part 220

Grant programs—education, Grant programs—health, Infants and children, Nutrition, Reporting and recordkeeping requirements, School breakfast and lunch programs.

Accordingly, 7 CFR parts 210 and 220 are amended as follows:

PART 210—NATIONAL SCHOOL LUNCH PROGRAM

■ 1. The authority citation for 7 CFR part 210 continues to read as follows:

Authority: 42 U.S.C. 1751–1760, 1779.

■ 2. In § 210.2:
■ a. Revise the definition of *Food component;*
■ b. Revise the definition of *Food item;*
■ c. Amend the definition of *Lunch* by removing the words ''applicable nutrition standards and portion sizes'' and adding in their place the words ''meal requirements'';
■ d. Remove the definition of *Menu item;*
■ e. Remove the definition of *Nutrient Standard Menu Planning/Assisted Nutrient Standard Menu Planning;*
■ f. Revise the definition of *School week;* and
■ g. Add definitions of *Tofu* and *Whole grains.*

The revisions and additions read as follows:

§ 210.2 Definitions.

* * * * *

Food component means one of the five food groups which comprise reimbursable meals. The five food components to be offered to students in grades K–5 are: Meats/meat alternates, grains, vegetables, fruits, and fluid milk. Meals offered to preschoolers must consist of four food components: Meats/meat alternates, grains, vegetables/fruits, and fluid milk.

Food item means a specific food offered within the five food components: Meats/meat alternates, grains, vegetables, fruits, and fluid milk.

* * * * *

School week means the period of time used to determine compliance with the meal requirements in § 210.10. The period shall be a normal school week of five consecutive days; however, to accommodate shortened weeks resulting from holidays and other scheduling needs, the period shall be a minimum of three consecutive days and a maximum of seven consecutive days. Weeks in which school lunches are offered less than three times shall be combined with either the previous or the coming week.

* * * * *

Tofu means a soybean-derived food, made by a process in which soybeans are soaked, ground, mixed with water, heated, filtered, coagulated, and formed into cakes. Basic ingredients are whole soybeans, one or more food-grade coagulants (typically a salt or an acid), and water. Tofu products must conform to FNS guidance to count toward the meats/meat alternates component.

Whole grains means grains that consist of the intact, ground, cracked, or flaked grain seed whose principal anatomical components—the starchy endosperm, germ and bran—are present in the same relative proportions as they exist in the intact grain seed. Whole grain-rich products must conform to FNS guidance to count toward the grains component.

* * * * *

■ 3. Revise § 210.10 to read as follows:

§ 210.10 Meal requirements for lunches and requirements for afterschool snacks.

(a) *General requirements.* (1) *General nutrition requirements.* Schools must offer nutritious, well-balanced, and age-appropriate meals to all the children they serve to improve their diets and safeguard their health.

(i) *Requirements for lunch.* School lunches offered to children age 5 or older must meet, at a minimum, the meal requirements in paragraph (b) of this section. Schools must follow a food-based menu planning approach and produce enough food to offer each child the quantities specified in the meal pattern established in paragraph (c) of this section for each age/grade group served in the school. In addition, school lunches must meet the dietary specifications in paragraph (f) of this section. Schools offering lunches to children ages 1 to 4 and infants must meet the meal pattern requirements in paragraph (p) of this section.

(ii) *Requirements for afterschool snacks.* Schools offering afterschool snacks in afterschool care programs must meet the meal pattern requirements in paragraph (o) of this section. Schools must plan and produce enough food to offer each child the minimum quantities under the meal pattern in paragraph (o) of this section. The component requirements for meal supplements served under the Child and Adult Care Food Program authorized under part 226 of this chapter also apply to afterschool snacks served in accordance with paragraph (o) of this section.

(2) *Unit pricing.* Schools must price each meal as a unit. Schools need to consider participation trends in an effort to provide one reimbursable lunch and, if applicable, one reimbursable afterschool snack for each child every school day. If there are leftover meals, schools may offer them to the students but cannot get Federal reimbursement

for them. Schools must identify, near or at the beginning of the serving line(s), the food items that constitute the unit-priced reimbursable school meal(s). The price of a reimbursable lunch does not change if the student does not take a food item or requests smaller portions.

(3) *Production and menu records.* Schools or school food authorities, as applicable, must keep production and menu records for the meals they produce. These records must show how the meals offered contribute to the required food components and food quantities for each age/grade group every day. Labels or manufacturer specifications for food products and ingredients used to prepare school meals must indicate zero grams of *trans* fat per serving (less than 0.5 grams). Schools or school food authorities must maintain records of the latest nutritional analysis of the school menus conducted by the State agency. Production and menu records must be maintained in accordance with FNS guidance.

(b) *Meal requirements for school lunches.* School lunches for children ages 5 and older must reflect food and nutrition requirements specified by the Secretary. Compliance with these requirements is measured as follows:

(1) *On a daily basis:* (i) Meals offered to each age/grade group must include the food components and food quantities specified in the meal pattern in paragraph (c) of this section;

(ii) Food products or ingredients used to prepare meals must contain zero grams of *trans* fat per serving or a minimal amount of naturally occurring *trans* fat; and

(iii) The meal selected by each student must have the number of food components required for a reimbursable meal and include at least one fruit or vegetable.

(2) *Over a 5-day school week:* (i) Average calorie content of meals offered to each age/grade group must be within the minimum and maximum calorie levels specified in paragraph (f) of this section;

(ii) Average saturated fat content of the meals offered to each age/grade group must be less than 10 percent of total calories; and

(iii) Average sodium content of the meals offered to each age/grade group must not exceed the maximum level specified in paragraph (f) of this section.

(c) *Meal pattern for school lunches.* Schools must offer the food components and quantities required in the lunch meal pattern established in the following table:

Meal pattern	Lunch meal pattern		
	Grades K–5	Grades 6–8	Grades 9–12
	Amount of food [a] per week (minimum per day)		
Fruits (cups) [b]	2½ (½)	2½ (½)	5 (1)
Vegetables (cups) [b]	3¾ (¾)	3¾ (¾)	5 (1)
Dark green [c]	½	½	½
Red/Orange [c]	¾	¾	1¼
Beans and peas (legumes) [c]	½	½	½
Starchy [c]	½	½	½
Other [c d]	½	½	¾
Additional Veg to Reach Total [e]	1 [e]	1 [e]	1½ [e]
Grains (oz eq) [f]	8–9 (1)	8–10 (1)	10–12 (2)
Meats/Meat Alternates (oz eq)	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups) [g]	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week			
Min-max calories (kcal) [h]	550–650	600–700	750–850
Saturated fat (% of total calories) [h]	< 10	< 10	< 10
Sodium (mg) [h i]	≤ 640	≤ 710	≤ 740
Trans fat [h]	Nutrition label or manufacturer specifications must indicate zero grams of *trans* fat per serving.		

[a] Food items included in each group and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.

[b] One quarter-cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.

[c] Larger amounts of these vegetables may be served.

[d] This category consists of ''Other vegetables'' as defined in § 210.10(c)(2)(iii)(E). For the purposes of the NSLP, the ''Other vegetables'' requirement may be met with any additional amounts from the dark green, red/orange, and beans/peas (legumes) vegetable subgroups as defined in § 210.10(c)(2)(iii).

[e] Any vegetable subgroup may be offered to meet the total weekly vegetable requirement.

[f] Beginning July 1, 2012 (SY 2012–2013), at least half of grains offered must be whole grain-rich. Beginning July 1, 2014 (SY 2014–15), all grains must be whole grain-rich.

[g] Beginning July 1, 2012 (SY 2012–2013), all fluid milk must be low-fat (1 percent or less, unflavored) or fat-free (unflavored or flavored).

[h] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent are not allowed.

[i] Final sodium targets must be met no later than July 1, 2022 (SY 2022–2023). The first intermediate target must be met no later than SY 2014–2015 and the second intermediate target must be met no later than SY 2017–2018. See required intermediate specifications in § 210.10(f)(3).

(1) *Age/grade groups.* Schools must plan menus for students using the following age/grade groups: Grades K–5 (ages 5–10), grades 6–8 (ages 11–13), and grades 9–12 (ages 14–18). If an unusual grade configuration in a school prevents the use of these established age/grade groups, students in grades K–5 and grades 6–8 may be offered the same food quantities at lunch provided that the calorie and sodium standards for each age/grade group are met. No customization of the established age/grade groups is allowed.

(2) *Food components.* Schools must offer students in each age/grade group the food components specified in paragraph (c) of this section.

(i) *Meats/meat alternates component.* Schools must offer meats/meat alternates daily as part of the lunch meal pattern. The quantity of meats/meat alternates must be the edible portion as served. This component must be served in a main dish or in a main dish and only one other food item. Schools without daily choices in this component should not serve any one meat alternate or form of meat (for example, ground, diced, pieces) more than three times in the same week. If a portion size of this component does not meet the daily requirement for a particular age/grade group, schools may supplement it with another meats/meat alternates to meet the full requirement. Schools may adjust the daily quantities of this component provided that a minimum of one ounce is offered daily to students in grades K–8 and a minimum of two ounces is offered daily to students in grades 9–12, and the total weekly requirement is met over a five-day period.

(A) *Enriched macaroni.* Enriched macaroni with fortified protein as defined in Appendix A to this part may be used to meet part of the meats/meat alternates requirement when used as specified in Appendix A to this part. An enriched macaroni product with fortified protein as defined in Appendix A to this part may be used to meet part of the meats/meat alternates component or the grains component but may not meet both food components in the same lunch.

(B) *Nuts and seeds.* Nuts and seeds and their butters are allowed as meat alternates in accordance with FNS guidance. Acorns, chestnuts, and coconuts may not be used because of their low protein and iron content. Nut and seed meals or flours may be used only if they meet the requirements for Alternate Protein Products established in Appendix A to this part. Nuts or seeds may be used to meet no more than one-half (50 percent) of the meats/meat alternates component with another meats/meat alternates to meet the full requirement.

(C) *Yogurt.* Yogurt may be used to meet all or part of the meats/meat alternates component. Yogurt may be plain or flavored, unsweetened or sweetened. Noncommercial and/or non-standardized yogurt products, such as frozen yogurt, drinkable yogurt products, homemade yogurt, yogurt flavored products, yogurt bars, yogurt covered fruits and/or nuts or similar products are not creditable. Four ounces (weight) or ½ cup (volume) of yogurt equals one ounce of the meats/meat alternates requirement.

(D) *Tofu and soy products.* Commercial tofu and soy products may be used to meet all or part of the meats/meat alternates component in accordance with FNS guidance. Noncommercial and/or non-standardized tofu and soy products are not creditable.

(E) *Beans and Peas (legumes).* Cooked dry beans and peas (legumes) may be used to meet all or part of the meats/meat alternates component. Beans and peas (legumes) are identified in this section and include foods such as black beans, garbanzo beans, lentils, kidney beans, mature lima beans, navy beans, pinto beans, and split peas.

(F) *Other Meat Alternates.* Other meat alternates, such as cheese and eggs, may be used to meet all or part of the meats/meat alternates component in accordance with FNS guidance.

(ii) *Fruits component.* Schools must offer fruits daily as part of the lunch menu. Fruits that are fresh; frozen without added sugar; canned in light syrup, water or fruit juice; or dried may be offered to meet the requirements of this paragraph. All fruits are credited based on their volume as served, except that ¼ cup of dried fruit counts as ½ cup of fruit. Only pasteurized, full-strength fruit juice may be used, and may be credited to meet no more than one-half of the fruits component.

(iii) *Vegetables component.* Schools must offer vegetables daily as part of the lunch menu. Fresh, frozen, or canned vegetables and dry beans and peas (legumes) may be offered to meet this requirement. All vegetables are credited based on their volume as served, except that 1 cup of leafy greens counts as ½ cup of vegetables and tomato paste and puree are credited based on calculated volume of the whole food equivalency. Pasteurized, full-strength vegetable juice may be used to meet no more than one-half of the vegetables component. Cooked dry beans or peas (legumes) may be counted as either a vegetable or as a meat alternate but not as both in the same meal. Vegetable offerings at lunch over the course of the week must include the following vegetable subgroups, as defined in this section in the quantities specified in the meal pattern in paragraph (c) of this section:

(A) *Dark green vegetables.* This subgroup includes vegetables such as bok choy, broccoli, collard greens, dark green leafy lettuce, kale, mesclun, mustard greens, romaine lettuce, spinach, turnip greens, and watercress;

(B) *Red-orange vegetables.* This subgroup includes vegetables such as acorn squash, butternut squash, carrots, pumpkin, tomatoes, tomato juice, and sweet potatoes;

(C) *Beans and peas (legumes).* This subgroup includes vegetables such as black beans, black-eyed peas (mature, dry), garbanzo beans (chickpeas), kidney beans, lentils, navy beans pinto beans, soy beans, split peas, and white beans;

(D) *Starchy vegetables.* This subgroup includes vegetables such as black-eyed peas (not dry), corn, cassava, green bananas, green peas, green lima beans, plantains, taro, water chestnuts, and white potatoes; and

(E) *Other vegetables.* This subgroup includes all other fresh, frozen, and canned vegetables, cooked or raw, such as artichokes, asparagus, avocado, bean sprouts, beets, Brussels sprouts, cabbage, cauliflower, celery, cucumbers, eggplant, green beans, green peppers, iceberg lettuce, mushrooms, okra, onions, parsnips, turnips, wax beans, and zucchini.

(iv) *Grains component.* (A) *Enriched and whole grains.* All grains must be made with enriched and whole grain meal or flour, in accordance with the most recent grains FNS guidance. Whole grain-rich products must contain at least 51 percent whole grains and the remaining grains in the product must be enriched.

(B) *Daily and weekly servings.* The grains component is based on minimum daily servings plus total servings over a five-day school week. Beginning July 1, 2012 (SY 2012–2013), half of the grains offered during the school week must meet the whole grain-rich criteria specified in FNS guidance. Beginning July 1, 2014 (SY 2014–2015), all grains must meet the whole grain-rich criteria specified in FNS guidance. The whole grain-rich criteria provided in FNS guidance may be updated to reflect additional information provided voluntarily by industry on the food label or a whole grains definition by the Food and Drug Administration. Schools serving lunch 6 or 7 days per week must increase the weekly grains quantity by approximately 20 percent (1/5) for each additional day. When schools operate less than 5 days per week, they may decrease the weekly quantity by approximately 20 percent (1/5) for each day less than five. The servings for biscuits, rolls, muffins, and other grain/bread varieties are specified in FNS guidance.

(C) *Desserts.* Schools may count up to two grain-based desserts per week towards meeting the grains requirement as specified in FNS guidance.

(v) *Fluid milk component.* Fluid milk must be offered daily in accordance with paragraph (d) of this section.

(3) *Food components in outlying areas.* Schools in American Samoa, Puerto Rico and the Virgin Islands may

serve vegetables such as yams, plantains, or sweet potatoes to meet the grains component.

(4) *Adjustments to the school menus.* Schools must adjust future menu cycles to reflect production and how often the food items are offered. Schools may need to change the foods offerings given students' selections and may need to modify recipes and other specifications to make sure that meal requirements are met.

(5) *Standardized recipes.* All schools must develop and follow standardized recipes. A standardized recipe is a recipe that was tested to provide an established yield and quantity using the same ingredients for both measurement and preparation methods. Standardized recipes developed by USDA/FNS are in the Child Nutrition Database. If a school has its own recipes, they may seek assistance from the State agency or school food authority to standardize the recipes. Schools must add any local recipes to their local database as outlined in FNS guidance.

(6) *Processed foods.* The Child Nutrition Database includes a number of processed foods. Schools may use purchased processed foods that are not in the Child Nutrition Database. Schools or the State agency must add any locally purchased processed foods to their local database as outlined in FNS guidance. The State agencies must obtain the levels of calories, saturated fat, and sodium in the processed foods.

(7) *Menu substitutions.* Schools should always try to substitute nutritionally similar foods.

(d) *Fluid milk requirement.* (1) *Types of fluid milk.* (i) Schools must offer students a variety (at least two different options) of fluid milk. All milk must be fat-free or low-fat. Milk with higher fat content is not allowed. Fat-free fluid milk may be flavored or unflavored, and low-fat fluid milk must be unflavored. Low fat or fat-free lactose-free and reduced-lactose fluid milk may also be offered.

(ii) All fluid milk served in the Program must be pasteurized fluid milk which meets State and local standards for such milk. All fluid milk must have vitamins A and D at levels specified by the Food and Drug Administration and must be consistent with State and local standards for such milk.

(2) *Inadequate fluid milk supply.* If a school cannot get a supply of fluid milk, it can still participate in the Program under the following conditions:

(i) If emergency conditions temporarily prevent a school that normally has a supply of fluid milk from obtaining delivery of such milk, the State agency may allow the school to serve meals during the emergency period with an alternate form of fluid milk or without fluid milk.

(ii) If a school is unable to obtain a supply of any type of fluid milk on a continuing basis, the State agency may approve the service of meals without fluid milk if the school uses an equivalent amount of canned milk or dry milk in the preparation of the meals. In Alaska, Hawaii, American Samoa, Guam, Puerto Rico, and the Virgin Islands, if a sufficient supply of fluid milk cannot be obtained, ''fluid milk'' includes reconstituted or recombined fluid milk, or as otherwise allowed by FNS through a written exception.

(3) *Fluid milk substitutes.* If a school chooses to offer one or more substitutes for fluid milk for non-disabled students with medical or special dietary needs, the nondairy beverage(s) must provide the nutrients listed in the following table. Fluid milk substitutes must be fortified in accordance with fortification guidelines issued by the Food and Drug Administration. A school need only offer the nondairy beverage(s) that it has identified as allowable fluid milk substitutes according to the following chart.

Nutrient	Per cup (8 fl oz)
Calcium	276 mg.
Protein	8 g.
Vitamin A	500 IU.
Vitamin D	100 IU.
Magnesium	24 mg.
Phosphorus	222 mg.
Potassium	349 mg.
Riboflavin	0.44 mg.
Vitamin B–12	1.1 mcg.

(4) *Restrictions on the sale of fluid milk.* A school participating in the Program, or a person approved by a school participating in the Program, must not directly or indirectly restrict the sale or marketing of fluid milk (as identified in paragraph (d)(1) of this section) at any time or in any place on school premises or at any school-sponsored event.

(e) *Offer versus serve.* School lunches must offer daily the five food components specified in the meal pattern in paragraph (c) of this section. Under offer versus serve, students must be allowed to decline two items at lunch, *except that* the students must select at least ½ cup of either the fruit or vegetable component. Senior high schools (as defined by the State educational agency) must participate in offer versus serve. Schools below the senior high level may participate in offer versus serve at the discretion of the school food authority.

(f) *Dietary specifications.* (1) *Calories.* School lunches offered to each age/grade group must meet, on average over the school week, the minimum and maximum calorie levels specified in the following table:

	Calorie ranges for lunch		
	Grades K–5	Grades 6–8	Grades 9–12
Min-max calories (kcal) [ab]	550–650	600–700	750–850

[a] The average daily amount for a 5-day school week must fall within the minimum and maximum levels.

[b] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium.

(2) *Saturated fat.* School lunches offered to all age/grade groups must, on average over the school week, provide less than 10 percent of total calories from saturated fat.

(3) *Sodium.* Schools lunches offered to each age/grade group must meet, on average over the school week, the levels of sodium specified in the following table within the established deadlines:

National school lunch program		Sodium reduction: Timeline & amount		
Age/grade group	Baseline: Average current sodium levels in meals as offered [1] (mg)	Target 1: July 1, 2014 (SY 2014–2015) (mg)	Target 2: July 1, 2017 (SY 2017–2018) (mg)	Final Target: July 1, 2022 (SY 2022–2023) (mg)
K–5	1,377 (elementary)	≤ 1,230	≤ 935	≤ 640
6–8	1,520 (middle)	≤ 1,360	≤ 1,035	≤ 710
9–12	1,588 (high)	≤ 1,420	≤ 1,080	≤ 740

[1] SNDA–III.

(4) *Trans fat.* Food products and ingredients used to prepare school meals must contain zero grams of *trans* fat (less than 0.5 grams) per serving. Schools must add the *trans* fat specification and request the required documentation (nutrition label or manufacturer specifications) in their procurement contracts. Documentation for food products and food ingredients must indicate zero grams of *trans* fat per serving. Meats that contain a minimal amount of naturally-occurring *trans* fats are allowed in the school meal programs.

(g) *Compliance assistance.* The State agency and school food authority must provide technical assistance and training to assist schools in planning lunches that meet the meal pattern in paragraph (c) of this section and the calorie, saturated fat, sodium, and *trans* fat specifications established in paragraph (f) of this section. Compliance assistance may be offered during trainings, onsite visits, and/or administrative reviews.

(h) *State agency responsibilities for monitoring dietary specifications.* (1) *Calories, saturated fat and sodium.* As part of the administrative review authorized under § 210.18 of this chapter, State agencies must conduct a weighted nutrient analysis for the school(s) selected for review to evaluate the average levels of calories, saturated fat, and sodium of the lunches offered to students in grades K and above during one week of the review period. The nutrient analysis must be conducted in accordance with the procedures established in paragraph (i)(3) of this section. If the results of the nutrient analysis indicate that the school lunches are not meeting the specifications for calories, saturated fat, and sodium specified in paragraph (f) of this section, the State agency or school food authority must provide technical assistance and require the reviewed school to take corrective action to meet the requirements.

(2) *Trans* fat. State agencies must review product labels or manufacturer specifications to verify that the food products or ingredients used by the reviewed school(s) contain zero grams of *trans* fat (less than 0.5 grams) per serving.

(i) *State agency's responsibilities for nutrient analyses.* (1) *Conducting the nutrient analyses.* State agencies must conduct a weighted nutrient analysis of the reimbursable meals offered to children in grades K and above by a school selected for administrative review under § 210.18 of this chapter. The nutrient analysis must be conducted in accordance with the procedures established in paragraph (i)(3) of this section. The purpose of the nutrient analysis is to determine the average levels of calories, saturated fat, and sodium in the meals offered over a school week within the review period. Unless offered as part of a reimbursable meal, foods of minimal nutritional value (see appendix B to part 210) are not included in the nutrient analysis.

(2) *Software elements.* (i) *The Child Nutrition Database.* The nutrient analysis is based on the USDA Child Nutrition Database. This database is part of the software used to do a nutrient analysis. Software companies or others developing systems for schools may contact FNS for more information about the database.

(ii) *Software evaluation.* FNS or an FNS designee evaluates any nutrient analysis software before it may be used in schools. FNS or its designee determines if the software, as submitted, meets the minimum requirements. The approval of software does not mean that FNS or USDA endorses it. The software must be able to perform a weighted average analysis after the basic data is entered. The combined analysis of the lunch and breakfast programs is not allowed.

(3) *Nutrient analysis procedures.* (i) *Weighted averages.* State agencies must include in the nutrient analysis all foods offered as part of the reimbursable meals during one week within the review period. Foods items are included based on the portion sizes and projected serving amounts. They are also weighted based on their proportionate contribution to the meals offered. This means that food items offered more frequently are weighted more heavily than those not offered as frequently. State agencies conduct the nutrient analysis and calculate weighting as indicated by FNS guidance.

(ii) *Analyzed nutrients.* The analysis determines the average levels of calories, saturated fat, and sodium in the meals offered over a school week. It includes all food items offered by the reviewed school over a one-week period.

(4) *Comparing the results of the nutrient analysis.* Once the procedures in paragraph (i)(3) of this section are completed, State agencies must compare the results of the analysis to the calorie, saturated fat, and sodium levels established in § 210.10 or § 220.8, as appropriate, for each age/grade group to evaluate the school's compliance with the dietary specifications.

(j) *State agency's responsibilities for compliance monitoring.* Compliance with the meal requirements in paragraph (b) of this section, including dietary specifications for calories, saturated fat, sodium and *trans* fat, will be monitored by the State agency through administrative reviews authorized in § 210.18 of this chapter.

(k) *Menu choices at lunch.* (1) *Availability of choices.* Schools may offer children a selection of nutritious foods within a reimbursable lunch to encourage the consumption of a variety of foods. Children who are eligible for free or reduced price lunches must be allowed to take any reimbursable lunch or any choices offered as part of a reimbursable lunch. Schools may establish different unit prices for each reimbursable lunch offered provided that the benefits made available to children eligible for free or reduced price lunches are not affected.

(2) *Opportunity to select.* Schools that choose to offer a variety of reimbursable lunches, or provide multiple serving lines, must make all required food components available to all students, on every lunch line, in at least the minimum required amounts.

(l) *Requirements for lunch periods.* (1) *Timing.* Schools must offer lunches meeting the requirements of this section during the period the school has designated as the lunch period. Schools must offer lunches between 10 a.m. and

2 p.m. Schools may request an exemption from these times from the State agency.

(2) *Adequate lunch periods.* FNS encourages schools to provide sufficient lunch periods that are long enough to give all students adequate time to be served and to eat their lunches.

(m) *Exceptions and variations allowed in reimbursable meals.* (1) *Exceptions for disability reasons.* Schools must make substitutions in lunches and afterschool snacks for students who are considered to have a disability under 7 CFR 15b.3 and whose disability restricts their diet. Substitutions must be made on a case by case basis only when supported by a written statement of the need for substitution(s) that includes recommended alternate foods, unless otherwise exempted by FNS. Such statement must be signed by a licensed physician.

(2) *Exceptions for non-disability reasons.* Schools may make substitutions for students without disabilities who cannot consume the regular lunch or afterschool snack because of medical or other special dietary needs. Substitutions must be made on a case by case basis only when supported by a written statement of the need for substitutions that includes recommended alternate foods, unless otherwise exempted by FNS. Except with respect to substitutions for fluid milk, such a statement must be signed by a recognized medical authority.

(i) *Fluid milk substitutions for non-disability reasons.* Schools may make substitutions for fluid milk for non-disabled students who cannot consume fluid milk due to medical or special dietary needs. A school that selects this option may offer the nondairy beverage(s) of its choice, provided the beverage(s) meets the nutritional standards established under paragraph (d) of this section. Expenses incurred when providing substitutions for fluid milk that exceed program reimbursements must be paid by the school food authority.

(ii) *Requisites for fluid milk substitutions.* (A) A school food authority must inform the State agency if any of its schools choose to offer fluid milk substitutes other than for students with disabilities; and

(B) A medical authority or the student's parent or legal guardian must submit a written request for a fluid milk substitute identifying the medical or other special dietary need that restricts the student's diet.

(iii) *Substitution approval.* The approval for fluid milk substitution must remain in effect until the medical authority or the student's parent or legal guardian revokes such request in writing, or until such time as the school changes its substitution policy for non-disabled students.

(3) *Variations for ethnic, religious, or economic reasons.* Schools should consider ethnic and religious preferences when planning and preparing meals. Variations on an experimental or continuing basis in the food components for the meal pattern in paragraph (c) of this section may be allowed by FNS. Any variations must be consistent with the food and nutrition requirements specified under this section and needed to meet ethnic, religious, or economic needs.

(4) *Exceptions for natural disasters.* If there is a natural disaster or other catastrophe, FNS may temporarily allow schools to serve meals for reimbursement that do not meet the requirements in this section.

(n) *Nutrition disclosure.* To the extent that school food authorities identify foods in a menu, or on the serving line or through other communications with program participants, school food authorities must identify products or dishes containing more than 30 parts fully hydrated alternate protein products (as specified in appendix A of this part) to less than 70 parts beef, pork, poultry or seafood on an uncooked basis, in a manner which does not characterize the product or dish solely as beef, pork, poultry or seafood. Additionally, FNS encourages schools to inform the students, parents, and the public about efforts they are making to meet the meal requirements for school lunches.

(o) *Afterschool snacks.* Eligible schools operating afterschool care programs may be reimbursed for one afterschool snack served to a child (as defined in § 210.2) per day.

(1) ''Eligible schools'' means schools that:

(i) Operate school lunch programs under the Richard B. Russell National School Lunch Act; and

(ii) Sponsor afterschool care programs as defined in § 210.2.

(2) Afterschool snacks shall contain two different components from the following four:

(i) A serving of fluid milk as a beverage, or on cereal, or used in part for each purpose;

(ii) A serving of meat or meat alternate. Nuts and seeds and their butters listed in FNS guidance are nutritionally comparable to meat or other meat alternates based on available nutritional data. Acorns, chestnuts, and coconuts are excluded and shall not be used as meat alternates due to their low protein content. Nut or seed meals or flours shall not be used as a meat alternate except as allowed under appendix A of this part;

(iii) A serving of vegetable(s) or fruit(s) or full-strength vegetable or fruit juice, or an equivalent quantity of any combination of these foods. Juice may not be served when fluid milk is served as the only other component;

(iv) A serving of whole-grain or enriched bread; or an equivalent serving of a bread product, such as cornbread, biscuits, rolls, or muffins made with whole-grain or enriched meal or flour; or a serving of cooked whole-grain or enriched pasta or noodle products such as macaroni, or cereal grains such as enriched rice, bulgur, or enriched corn grits; or an equivalent quantity of any combination of these foods.

(3) Afterschool snacks served to infants ages birth through 11 months must meet the requirements in paragraph (o)(3)(iv) of this section. Foods offered as meal supplements must be of a texture and a consistency that are appropriate for the age of the infant being served. The foods must be served during a span of time consistent with the infant's eating habits. For those infants whose dietary needs are more individualized, exceptions to the meal pattern must be made in accordance with the requirements found in paragraph (m) of this section.

(i) *Breastmilk and iron-fortified formula.* Either breastmilk or iron-fortified infant formula, or portions of both, must be served for the entire first year. Snacks containing breastmilk and snacks containing iron-fortified infant formula served by the school are eligible for reimbursement. However, infant formula provided by a parent (or guardian) and breastmilk fed directly by the infant's mother, during a visit to the school, contribute to a reimbursable snack only when the school supplies at least one component of the infant's snack.

(ii) *Fruit juice.* Juice should not be offered to infants until they are 6 months of age and ready to drink from a cup. Fruit juice served as part of the meal pattern for infants 8 through 11 months must be full-strength and pasteurized.

(iii) *Solid foods.* Solid foods of an appropriate texture and consistency are required only when the infant is developmentally ready to accept them. The school should consult with the infant's parent (or guardian) in making the decision to introduce solid foods. Solid foods should be introduced one at a time, on a gradual basis, with the intent of ensuring the infant's health and nutritional well-being.

(iv) *Infant meal pattern.* Meal supplements for infants must include, at a minimum, breastmilk or iron-fortified infant formula, or portions of both, in the appropriate amount indicated for the infant's age. For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered. In these situations, additional breastmilk must be offered if the infant is still hungry. Some infants may be developmentally ready to accept an additional food component. Meal supplements are reimbursable when schools provide all of the components in the Supplements for Infants table that the infant is developmentally ready to accept.

(4) The minimum amounts of food components to be served as meal supplements follow. Select two different components from the four listed in the Supplements for Infants table (Juice may not be served when fluid milk is served as the only other component). A serving of bread/bread alternate must be made from whole-grain or enriched meal or flour. It is required only when the infant is developmentally ready to accept it.

SUPPLEMENTS FOR INFANTS

	Birth through 3 months	4 through 7 months	8 through 11 months
Supplement (snack)	4–6 fl. oz. breastmilk [1 2] or formula [3].	4–6 fl. oz. breastmilk [1 2] or formula [3].	2–4 fl. oz. breastmilk [1 2], formula [3], or fruit juice [4]; 0–1/2 bread [5] or 0–2 crackers [5].

[1] It is recommended that breastmilk be served in place of formula from birth through 11 months.
[2] For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered with additional breast milk offered if the infant is still hungry.
[3] Infant formula must be iron-fortified.
[4] Fruit juice must be full-strength and pasteurized.
[5] Bread and bread alternates must be made from whole grain or enriched meal or flour. A serving of this component must be optional.

(p) *Lunches for preschoolers and infants.* (1) *Requirements for preschooler's lunch pattern.* (i) *General.* Until otherwise instructed by the Secretary, lunches for children ages 1 to 4 must meet the nutrition standards in paragraph (p)(2) of this section, the nutrient and calorie levels in paragraph (p)(3) of this section, and meal pattern in paragraph (p)(4) of this section.

(ii) *Unit pricing.* Schools must price each meal as a unit. Schools need to consider participation trends in an effort to provide one reimbursable lunch for each child every day. If there are leftover meals, schools may offer them to the students but cannot receive Federal reimbursement for them.

(iii) *Production and menu records.* Schools must keep production and menu records for the meals they produce. These records must show how the meals contribute to the required food components and quantities every day. In addition, these records must show how the lunches contribute to the nutrition standards in paragraph (p)(2) of this section and the appropriate calorie and nutrient requirements for the children served. Schools or school food authorities must maintain records of the latest nutritional analysis of the school menus conducted by the State agency.

(2) *Nutrition standards for preschoolers' lunches.* Children ages 1 to 4 must be offered lunches that meet the following nutrition standards for their age group:

(i) Provision of one-third of the Recommended Dietary Allowances (RDAs) for protein, calcium, iron, vitamin A, and vitamin C in the appropriate levels for the ages/grades (see paragraph (p)(3) of this section).

(ii) Provision of the lunchtime energy allowances (calories) in the appropriate levels (see paragraph (p)(3) of this section);

(iii) The following dietary recommendations:

(A) Eat a variety of foods;

(B) Limit total fat to 30 percent of total calories;

(C) Limit saturated fat to less than 10 percent of total calories;

(D) Choose a diet low in cholesterol;

(E) Choose a diet with plenty of grain products, vegetables, and fruits; and

(F) Choose a diet moderate in salt and sodium.

(iv) The following measures of compliance:

(A) Limit the percent of calories from total fat to 30 percent of the actual number of calories offered;

(B) Limit the percent of calories from saturated fat to less than 10 percent of the actual number of calories offered;

(C) Reduce sodium and cholesterol levels; and

(D) Increase the level of dietary fiber.

(v) Compliance with the nutrition standards and the appropriate nutrient and calorie levels is determined by the State agency in accordance with the procedures in paragraph (p)(10) of this section.

(3) *Nutrient and calorie levels.* The minimum levels of nutrients and calories that lunches for preschoolers must offer are specified in the following table:

MINIMUM NUTRIENT AND CALORIE LEVELS FOR LUNCHES—TRADITIONAL FOOD-BASED MENU PLANNING APPROACH [1]

Nutrients and energy allowances	Group II preschool ages 3–4
	School week averages
Energy allowances (calories)	517
Total fat (as a percentage of actual total food energy)	(2)
Saturated fat (as a percentage of actual total food energy)	(2)
RDA for protein (g)	7
RDA for calcium (mg)	267
RDA for iron (mg)	3.3
RDA for Vitamin A (RE)	150

MINIMUM NUTRIENT AND CALORIE LEVELS FOR LUNCHES—TRADITIONAL FOOD-BASED MENU PLANNING APPROACH [1]—Continued

Nutrients and energy allowances	Group II preschool ages 3–4
	School week averages
RDA for Vitamin C (mg)	14

[1] Current regulations only specify minimum nutrient and calorie levels for lunches for children ages 3–4.
[2] The 1995 Dietary Guidelines recommend that after 2 years of age "* * * children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat."

(4) *Meal pattern for preschoolers' lunches.* Schools must follow the traditional food-based menu planning approach to plan lunches for children ages 1–2 and ages 3–4.

(i) *Food components and quantities.* Lunches must offer the food components and quantities specified in the following meal pattern:

TRADITIONAL FOOD-BASED MENU PLANNING APPROACH—MEAL PLAN FOR LUNCHES

	Group I ages 1–2 preschool	Group II ages 3–4 preschool
Food components and food items	Minimum quantities	
Fluid milk (as a beverage)	6 fluid ounces	6 fluid ounces.[1]
Meat or Meat Alternates:		
Lean meat, poultry, or fish	1 ounce	1½ ounces.
Alternate Protein Products [2]	1 ounce	1½ ounces.
Cheese	1 ounce	1½ ounces.
Large egg	½	¾.
Cooked dry beans and peas	¼ cup	⅜ cup.
Peanut butter or other nut or seed butters	2 tablespoons	3 tablespoons.
Yogurt, plain or flavored, unsweetened or sweetened	4 ounces or ½ cup	6 ounces or ¾ cup.
The following may be used to meet no more than 50% of the requirement and must be used in combination with any of the above:		
Peanuts, soy nuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternate (1 ounce of nuts/seeds = 1 ounce of cooked lean meat, poultry or fish).	½ ounce = 50%	¾ ounce = 50%.
Vegetable or Fruit: 2 or more servings of vegetables, fruits or both	½ cup	½ cup.
Grains/Breads (servings per week): Must be enriched or whole grain. A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or ½ cup of cooked rice, macaroni, noodles, other pasta products or cereal grains.	5 servings per week [3]—minimum of ½ serving per day.	8 servings per week [3]—minimum of 1 serving per day.

[1] Beginning July 1, 2012 (SY 2012–2013), fluid milk for children Ages 3–4 must be fat-free (unflavored or flavored) or low-fat (unflavored only).
[2] Must meet the requirements in Appendix A of this part.
[3] For the purposes of this table, a week equals five days.

(ii) *Meat/meat alternate component.*—The quantity of the meat/meat alternate component must be the edible portion as served. If the portion size of a food item for this component is excessive, the school must reduce that portion and supplement it with another meat/meat alternate to meet the full requirement. This component must be served in a main dish or in a main dish and only one other food item. Schools without daily choices in this component should not serve any one meat alternate or form of meat (for example, ground, diced, pieces) more than three times in the same week. Schools may adjust the daily quantities of this component provided that a minimum of one ounce is offered daily and the total weekly requirement is met over a five-day period.

(A) *Enriched macaroni.*—Enriched macaroni with fortified protein as defined in appendix A to this part may be used to meet part of the meat/meat alternate requirement when used as specified in appendix A to this part. An enriched macaroni product with fortified protein as defined in appendix A to this part may be used to meet part of the meat/meat alternate component or the grains/breads component but not as both food components in the same lunch.

(B) *Nuts and seeds.* Nuts and seeds and their butters are allowed as meat alternates in accordance with FNS guidance. Acorns, chestnuts, and coconuts must not be used because of their low protein and iron content. Nut and seed meals or flours may be used only as allowed under appendix A to this part. Nuts or seeds may be used to meet no more than one-half of the meat/meat alternate component with another meat/meat alternate to meet the full requirement.

(C) *Yogurt.* Yogurt may be used to meet all or part of the meat/meat alternate requirement. Yogurt may be plain or flavored, and unsweetened or sweetened. Noncommercial and/or non-standardized yogurt products, such as frozen yogurt, homemade yogurt, yogurt flavored products, yogurt bars, yogurt covered fruit and/or nuts or similar products are not creditable. Four ounces (weight) or ½ cup (volume) of yogurt equals one ounce of the meat/meat alternate requirement.

(iii) *Vegetable/fruit component.* Full strength vegetable or fruit juice may be used to meet no more than one-half of the vegetable/fruit requirement. Cooked dry beans or peas may be counted as

either a vegetable or as a meat alternate but not as both in the same meal.

(iv) *Grains/breads component.* (A) *Enriched or whole grains.* All grains/breads must be enriched or whole grain or made with enriched or whole grain meal or flour.

(B) *Daily and weekly servings.* The requirement for the grain/bread component is based on minimum daily servings plus total servings over a five day period. Schools serving lunch 6 or 7 days per week should increase the weekly quantity by approximately 20 percent (1/5th) for each additional day. When schools operate less than 5 days per week, they may decrease the weekly quantity by approximately 20 percent (1/5th) for each day less than five. The servings for biscuits, rolls, muffins, and other grain/bread varieties are specified in FNS guidance.

(C) *Minimums under the traditional food-based menu planning approach.* Schools must offer daily at least one-half serving of the grain/bread component to children in Group I and at least one serving to children in Group II. Schools which serve lunch at least 5 days a week shall serve a total of at least five servings of grains/breads to children in Group I and eight servings per week to children in Group II.

(D) *Offer versus serve.* Schools must offer all five required food items. At the school food authority's option, students in preschool may decline one or two of the five food items. The price of a reimbursable lunch does not change if the student does not take a food item or requests smaller portions.

(E) *Meal pattern exceptions for outlying areas.* Schools in American Samoa, Puerto Rico and the Virgin Islands may serve vegetables such as yams, plantains, or sweet potatoes to meet the grain/bread requirement.

(5) *Fluid milk requirement.* Schools must offer students in age group 1–2 fluid milk in a variety of fat contents, flavored or unflavored. Schools may also offer this age group lactose-free or reduced-lactose fluid milk. For students in age group 3–4, schools must offer fat-free milk (unflavored or flavored) and low-fat milk (unflavored only). Schools may also offer this age group lactose-free and reduced-lactose milk that is fat-free or low-fat. Students in age group 3–4 must be offered a variety (at least two different options) of fluid milk. All fluid milk served must be pasteurized fluid milk which meets State and local standards for such milk. All fluid milk must have vitamins A and D at levels specified by the Food and Drug Administration and must be consistent with State and local standards for such milk. Schools must also comply with other applicable milk requirements in § 210.10(d)(2) through (4) of this part.

(6) *Menu choices.* FNS encourages schools to offer children a selection of foods at lunch. Choices provide variety and encourage consumption. Schools may offer choices of reimbursable lunches or foods within a reimbursable lunch. Children who are eligible for free or reduced price lunches must be allowed to take any reimbursable lunch or any choices offered as part of a reimbursable lunch. Schools may establish different unit prices for each lunch offered provided that the benefits made available to children eligible for free or reduced price lunches are not affected.

(7) *Requirements for lunch periods.* (i) *Timing.* Schools must offer lunches meeting the requirements of this section during the period the school has designated as the lunch period. Schools must offer lunches between 10 a.m. and 2 p.m. Schools may request an exemption from these times only from FNS.

(ii) *Lunch periods for young children.* With State agency approval, schools are encouraged to serve children ages 1 through 4 over two service periods. Schools may divide the quantities and/or the menu items, foods, or food items offered each time any way they wish.

(iii) *Adequate lunch periods.* FNS encourages schools to provide sufficient lunch periods that are long enough to give all students enough time to be served and to eat their lunches.

(8) *Exceptions and variations allowed in reimbursable meals.* Schools must comply with the requirements in § 210.10(m) of this part.

(9) *Nutrition disclosure.* If applicable, schools must follow the provisions on disclosure of Alternate Protein Products in § 210.10(n) of this part.

(10) *State agency's responsibilities for monitoring lunches.* As part of the administrative review authorized under § 210.18(g)(2) of this part, State agencies must evaluate compliance with the meal pattern requirements (food components and quantities) in paragraph (d) of this section. If the meals for preschoolers do not meet the requirements of this section, the State agency or school food authority must provide technical assistance and require the reviewed school to take corrective action. In addition, the State agency may take fiscal action as authorized in §§ 210.18(m) and 210.19(c) of this part.

(11) *Requirements for the infant lunch pattern.* (i) *Definitions.* (A) *Infant cereal* means any iron-fortified dry cereal, specially formulated and generally recognized as cereal for infants, that is routinely mixed with breastmilk or iron-fortified infant formula prior to consumption.

(B) *Infant formula* means any iron-fortified formula intended for dietary use solely as a food for normal, healthy infants. Formulas specifically formulated for infants with inborn errors of metabolism or digestive or absorptive problems are not included in this definition. Infant formula, when served, must be in liquid state at recommended dilution.

(ii) *Feeding lunches to infants.* Lunches served to infants ages birth through 11 months must meet the requirements in paragraph (k)(5) of this section. Foods included in the lunch must be of a texture and a consistency that are appropriate for the age of the infant being served. The foods must be served during a span of time consistent with the infant's eating habits. For those infants whose dietary needs are more individualized, exceptions to the meal pattern must be made in accordance with the requirements found in § 210.10(m) of this part.

(iii) *Breastmilk and iron-fortified formula.* Either breastmilk or iron-fortified infant formula, or portions of both, must be served for the entire first year. Meals containing breastmilk and meals containing iron-fortified infant formula served by the school are eligible for reimbursement. However, infant formula provided by a parent (or guardian) and breastmilk fed directly by the infant's mother, during a visit to the school, contribute to a reimbursable lunch only when the school supplies at least one component of the infant's meal.

(iv) *Solid foods.* For infants ages 4 through 7 months, solid foods of an appropriate texture and consistency are required only when the infant is developmentally ready to accept them. The school should consult with the infant's parent (or guardian) in making the decision to introduce solid foods. Solid foods should be introduced one at a time, on a gradual basis, with the intent of ensuring the infant's health and nutritional well-being.

(v) *Infant meal pattern.* Infant lunches must include, at a minimum, each of the food components indicated in Lunch Pattern for Infants table in the amount that is appropriate for the infant's age. For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered. In these situations, additional breastmilk must be offered if the infant is still hungry. Lunches may include portions of breastmilk and iron-fortified infant formula as long as the total

number of ounces meets, or exceeds, the minimum amount required of this food component. Similarly, to meet the component requirements for vegetables and fruits, portions of both may be served. Infant lunches are reimbursable when schools provide all of the components in the Lunch Pattern for Infants table that the infant is developmentally ready to accept.

LUNCH PATTERN FOR INFANTS

Birth through 3 months	4 through 7 months	8 through 11 months
4–6 fluid ounces of formula [1] or breastmilk [2 3]	4–8 fluid ounces of formula [1] or breastmilk [2 3]; and 0–3 tablespoons of infant cereal [1 4]; and 0–3 tablespoons of fruits or vegetables or both [4].	6–8 fluid ounces of formula [1] or breastmilk [2 3]; and 2–4 tablespoons of infant cereal [1]; and/or 1–4 tablespoons of meat, fish, poultry, egg yolk, cooked dry beans or peas; or ½–2 ounces of cheese, or 1–4 ounces (volume) of cottage cheese; or 1–4 ounces (weight) of cheese food or cheese spread; and 1–4 tablespoons of fruits or vegetables or both.

[1] Infant formula and dry infant cereal must be iron-fortified.
[2] Breastmilk or formula, or portions of both, may be served; however, it is recommended that breastmilk be served from birth through 11 months.
[3] For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered, with additional breastmilk offered if the infant is still hungry.
[4] A serving of this component is required only when the infant is developmentally ready to accept it.

■ 4. In § 210.18:
■ a. Revise paragraphs (a), (b)(2)(ii), (c), (g)(2), (i)(3)(ii), and (m); and
■ b. Remove paragraph (h)(2) and redesignate paragraph (h)(3) through (6) as paragraphs (h)(2) through (5), respectively.
■ c. Amend paragraph (i)(4)(iv) by removing the words ''the School Breakfast Program (7 CFR part 220) and/or''.

The revisions read as follows:

§ 210.18 Administrative reviews.

(a) *General.* Each State agency must follow the requirements of this section to conduct administrative reviews of school food authorities serving meals under parts 210 and 220 of this chapter.

(b) * * *

(2) * * *

(ii) *Performance Standard 2—Meal Requirements.* Reimbursable lunches meet the meal requirements in § 210.10 of this chapter, as applicable to the age/grade group reviewed. Reimbursable breakfasts meet the meal requirements in §§ 220.8 and 220.23 of this chapter, as applicable to the age/grade group reviewed.

* * * * *

(c) *Timing of reviews.* State agencies must conduct administrative reviews of all school food authorities participating in the National School Lunch Program and/or School Breakfast Program at least once during a 3-year review cycle. For each State agency, the first 3-year review cycle will start the school year that begins on July 1, 2013 and ends on June 30, 2014. Administrative reviews and follow-up reviews must be conducted as follows:

(1) *Administrative reviews.* At a minimum, State agencies must conduct administrative reviews of all school food authorities at least once during each 3-year review cycle, provided that each school food authority is reviewed at least once every 4 years. The on-site portion of the administrative review must be completed during the school year in which the review was begun.

(2) *Exceptions.* FNS may, on an individual school food authority basis, approve written requests for 1-year extensions to the 3-year review cycle specified in paragraph (c)(1) of this section if FNS determines this 3-year cycle requirement conflicts with efficient State agency management of the Programs.

(3) *Follow-up reviews.* The State agency is encouraged to conduct first follow-up reviews in the same school year as the administrative review. The first follow-up review must be conducted no later than December 31 of the school year following the administrative review. Subsequent follow-up reviews must be scheduled in accordance with paragraph (i)(5) of this section.

* * * * *

(g) * * *

(2) *Performance Standard 2 (Reimbursable lunches meet the meal requirements in § 210.10 of this chapter, as applicable to the age/grade group reviewed. Reimbursable breakfasts meet the meal requirements in § 220.8 and § 220.23 of this chapter, as applicable to the age/grade group reviewed.* When reviewing meals, the State agency must:

(i) For the day of the review, observe the serving line(s) to determine whether all food components and food quantities required under § 210.10, as applicable, and § 220.8 and § 220.23, as applicable, are offered.

(ii) For the day of the review, observe a significant number of the Program meals counted at the point of service for each type of serving line to determine whether the meals selected by the students contain the food components and food quantities required for a reimbursable meal under § 210.10, as applicable, and § § 220.8 and 220.23, as applicable. If visual observation suggests that quantities offered are insufficient or excessive, the State agency must require the reviewed school(s) to provide documentation demonstrating that the required amounts of each food component were available for service for each day of the review period.

(iii) Review menu and production records for a minimum of five operating days (specified by the State agency); such review must determine whether all food components and food quantities required under § 210.10, as applicable, and §§ 220.8 and 220.23, as applicable, of this chapter have been offered.

(iv) Conduct a weighted nutrient analysis of the meals for students in age/grade groups K and above to determine whether the meals offered meet the calorie, sodium, and saturated fat requirements in § 210.10 and §§ 220.8 and 220.23 of this chapter, as applicable. The State agency must conduct the nutrient analysis in accordance with the procedures established in § 210.10(i) of this part. Until instructed by the Secretary, a nutrient analysis for the meals offered to

preschoolers is not required. The State agency must also review nutrition labeling or manufacturer specifications for products or ingredients used to prepare school meals to verify they contain zero grams (less than 0.5 grams) of *trans* fat per serving.

* * * * *

(i) * * *

(3) * * *

(ii) For Performance Standard 2—10 percent or more of the total number of Program lunches or Program breakfasts observed in a school food authority are missing one or more of the food components required under parts 210 and 220.

* * * * *

(m) *Fiscal action.* Fiscal action for violations identified during an administrative review or any follow-up reviews must be taken in accordance with the provisions in § 210.19(c) of this part.

(1) *Performance Standard 1 violations.* A State agency is required to take fiscal action for all violations of Performance Standard 1. The State agency may limit fiscal action from the point corrective action occurs back through the beginning of the review period for errors identified under paragraphs (g)(1)(i)(A) through (C) of this section, provided corrective action occurs.

(2) *Performance Standard 2 violations.* A State agency is required to take fiscal action for violations of Performance Standard 2 as follows:

(i) For food component violations cited under paragraph (g)(2) of this section, the State agency must take fiscal action and require the school food authority and/or school reviewed to take corrective action for the missing component. If a corrective action plan is in place, the State agency may limit fiscal action from the point corrective action occurs back through the beginning of the review period for errors identified under paragraph (g)(2) of this section.

(ii) For repeated violations involving vegetable subgroups and milk type cited under paragraph (g)(2) of this section, the State agency must take fiscal action provided that:

(A) Technical assistance has been given by the State agency;

(B) Corrective action has been previously required and monitored by the State agency; and

(C) The school food authority remains in noncompliance with the meal requirements established in parts 210 and 220 of this chapter.

(iii) For violations involving food quantities and whole grain-rich foods cited under paragraph (g)(2) of this section and for violations of calorie, saturated fat, sodium, and *trans* fat requirements cited under paragraph (g)(2)(iv) of this section, the State agency has discretion to apply fiscal action provided that:

(A) Technical assistance has been given by the State agency;

(B) Corrective action has been previously required and monitored by the State agency; and

(C) The school food authority remains in noncompliance with the meal requirements established in parts 210 and 220 of this chapter.

* * * * *

■ 5. In § 210.19:

■ a. Remove paragraph (a)(1) and redesignate paragraphs (a)(2) through (6) as paragraph (a)(1) through (5); and

■ b. Revise paragraphs (c) introductory text, (c)(1), and (c)(6) to read as follows:

§ 210.19 Additional responsibilities.

* * * * *

(c) *Fiscal action.* State agencies are responsible for ensuring Program integrity at the school food authority level. State agencies must take fiscal action against school food authorities for Claims for Reimbursement that are not properly payable, including, if warranted, the disallowance of funds for failure to take corrective action to comply with the meal requirements in Parts 210 and 220 of this chapter. In taking fiscal action, State agencies must use their own procedures within the constraints of this Part and must maintain all records pertaining to action taken under this section. The State agency may refer to FNS for assistance in making a claim determination under this part.

(1) *Definition.* Fiscal action includes, but is not limited to, the recovery of overpayment through direct assessment or offset of future claims, disallowance of overclaims as reflected in unpaid Claims for Reimbursement, submission of a revised Claim for Reimbursement, and correction of records to ensure that unfiled Claims for Reimbursement are corrected when filed. Fiscal action also includes disallowance of funds for failure to take corrective action to meet the meal requirements in Parts 210 and 220 of this chapter.

* * * * *

(6) *Exceptions.* The State agency need not disallow payment or collect an overpayment when any review or audit reveals that a school food authority is approving applications which indicate that the households' incomes are within the Income Eligibility Guidelines issued by the Department or the applications contain Supplemental Nutrition Assistance Program or TANF case numbers or FDPIR case numbers or other FDPIR identifiers but the applications are missing the information specified in paragraph (1)(ii) of the definition of *Documentation* in § 245.2 of this chapter.

* * * * *

§ 210.21 [Amended]

■ 6. In § 210.21, amend paragraph (e) by removing the phrase ''paragraph (m)(1)(ii) of this section'' and adding in its place the phrase ''§ 210.10(d)(4) of this chapter.''

■ 7. Revise § 210.30 to read as follows:

§ 210.30 State agency and Regional office addresses.

School food authorities and schools desiring information about the Program should contact their State educational agency or the appropriate FNS Regional Office at the address or telephone number listed on the FNS Web site (*www.fns.usda.gov/cnd*).

■ 8. In Appendix B to part 210:

■ a. Amend paragraph (b)(1) by removing from the fourth sentence the words

'', and the public by notice in the **Federal Register** as indicated below under paragraph (b)(3) of this section;''

■ b. Amend paragraph (b)(2) by removing the words ''as indicated under paragraph (b)(3) of this section'' from the last sentence.

■ c. Remove paragraph (b)(3) and redesignate paragraph (b)(4) as paragraph (b)(3); and

■ d. Revise the first sentence of newly redesignated paragraph (b)(3) to read as follows:

* * * * *

Appendix B to Part 210—Categories of Foods of Minimal Nutritional Value

* * * * *

(b) * * *

(3) Written petitions should be sent to the Chief, Nutrition Promotion and Technical Assistance Branch, Child Nutrition Division, FNS, USDA, 3101 Park Center Drive, Room 632, Alexandria, Virginia 22302. * * *

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PART 220—SCHOOL BREAKFAST PROGRAM

■ 9. The authority citation for 7 CFR part 220 continues to read as follows:

Authority: 42 U.S.C. 1773, 1779.

■ 10. In § 220.2:

■ a. Amend the definition of *Breakfast* by removing the phrase ''nutritional requirements set out in § 220.8'' and adding in its place the phrase ''meal

requirements set out in §§ 220.8 and 220.23'',

■ b. Amend the definition of *Menu item* by removing the citation ''§ 220.8'' and adding in its place the citation ''§ 220.23'',

■ c. Remove the definition of *Milk;*

■ d. Amend the definition of *Nutrient Standard Menu Planning/Assisted Nutrient Standard Menu Planning* by removing the citations ''§ 220.8(e)(5)'' and ''§ 220.8(f)'' and adding in their place the citations ''§ 220.23(e)(5)'' and ''§ 220.23(f)'', respectively;

■ e. Revise the definition of *School week;* and

■ f. Add definitions for *Tofu* and *Whole grains.*

The revisions and additions read as follows:

§ 220.2 Definitions.

* * * * *

School week means the period of time used to determine compliance with the meal requirements in § 220.8 and § 220.23. The period must be a normal school week of five consecutive days; however, to accommodate shortened weeks resulting from holidays and other scheduling needs, the period must be a minimum of three consecutive days and a maximum of seven consecutive days. Weeks in which school breakfasts are offered less than three times must be combined with either the previous or the coming week.

* * * * *

Tofu means a soybean-derived food, made by a process in which soybeans are soaked, ground, mixed with water, heated, filtered, coagulated, and formed into cakes. Basic ingredients are whole soybeans, one or more food-grade coagulants (typically a salt or an acid), and water. Tofu products must conform to FNS guidance to count toward the meats/meat alternates component.

Whole grains means grains that consist of the intact, ground, cracked, or flaked grain seed whose principal anatomical components—the starchy endosperm, germ and bran—are present in the same relative proportions as they exist in the intact grain seed. Whole grain-rich products must conform to FNS guidance to count toward the grains component.

* * * * *

■ 11. Revise § 220.8 to read as follows:

§ 220.8 Meal requirements for breakfasts.

(a) *General requirements.* This section contains the meal requirements applicable to school breakfasts for students in grades K to 12. With the exception of the milk component, the meal requirements must be implemented beginning July 1, 2013 or as otherwise specified. School food authorities wishing to adopt the provisions of this section prior to the required date of compliance may do so with the approval of the State agency. In general, school food authorities must ensure that participating schools provide nutritious, well-balanced, and age-appropriate breakfasts to all the children they serve to improve their diet and safeguard their health.

(1) *General nutrition requirements.* School breakfasts offered to children age 5 and older must meet, at a minimum, the meal requirements in paragraph (b) of this section. Schools must follow a food-based menu planning approach and produce enough food to offer each child the quantities specified in the meal pattern established in paragraph (c) of this section for each age/grade group served in the school. In addition, school breakfasts must meet the dietary specifications in paragraph (f) of this section. Schools offering breakfasts to children ages 1 to 4 and infants must meet the meal pattern requirements in paragraph (o) of this section.

(2) *Unit pricing.* Schools must price each meal as a unit. The price of a reimbursable lunch does not change if the student does not take a food item or requests smaller portions. Schools must identify, near or at the beginning of the serving line(s), the food items that constitute the unit-priced reimbursable school meal(s).

(3) *Production and menu records.* Schools or school food authorities, as applicable, must keep production and menu records for the meals they produce. These records must show how the meals offered contribute to the required food components and food quantities for each age/grade group every day. Labels or manufacturer specifications for food products and ingredients used to prepare school meals must indicate zero grams of *trans* fat per serving (less than 0.5 grams). Schools or school food authorities must maintain records of the latest nutritional analysis of the school menus conducted by the State agency. Production and menu records must be maintained in accordance with FNS guidance.

(b) *Meal requirements for school breakfasts.* School breakfasts for children ages 5 and older must reflect food and nutrition requirements specified by the Secretary. Compliance with these requirements, once fully implemented as specified in paragraphs (c), (d), (e), (f), (h), (i), and (j) of this section, is measured as follows:

(1) On a daily basis:

(i) Meals offered to each age/grade group must include the food components and food quantities specified in the meal pattern in paragraph (c) of this section;

(ii) Food products or ingredients used to prepare meals must contain zero grams of *trans* fat per serving or a minimal amount of naturally occurring *trans* fat as specified in paragraph (f) of this section; and

(iii) Meal selected by each student must have the number of food components required for a reimbursable meal and include at least one fruit or vegetable.

(2) Over a 5-day school week:

(i) Average calorie content of the meals offered to each age/grade group must be within the minimum and maximum calorie levels specified in paragraph (f) of this section;

(ii) Average saturated fat content of the meals offered to each age/grade group must be less than 10 percent of total calories as specified in paragraph (f) of this section;

(iii) Average sodium content of the meals offered to each age/grade group must not exceed the maximum level specified in paragraph (f) of this section;

(c) *Meal pattern for school breakfasts.* A school must offer the food components and quantities required in the breakfast meal pattern established in the following table:

	Breakfast meal pattern		
	Grades K–5	Grades 6–8	Grades 9–12
Meal pattern	Amount of food [a] per week (Minimum per day)		
Fruits (cups) [b c]	5 (1)	5 (1)	5 (1)
Vegetables (cups) [b c]	0	0	0
Dark green	0	0	0
Red/Orange	0	0	0

	Breakfast meal pattern		
	Grades K–5	Grades 6–8	Grades 9–12
Beans and peas (legumes)	0	0	0
Starchy	0	0	0
Other	0	0	0
Grains (oz eq) [d]	7–10 (1)	8–10 (1)	9–10 (1)
Meats/Meat Alternates (oz eq) [e]	0	0	0
Fluid milk [f] (cups)	5 (1)	5 (1)	5 (1)
Other Specifications: Daily Amount Based on the Average for a 5-Day Week			
Min-max calories (kcal) [g h]	350–500	400–550	450–600
Saturated fat (% of total calories) [h]	< 10	< 10	< 10
Sodium (mg) [h i]	≤ 430	≤ 470	≤ 500
Trans fat [h j]	Nutrition label or manufacturer specifications must indicate zero grams of *trans* fat per serving.		

[a] Food items included in each group and subgroup and amount equivalents. Minimum creditable serving is ⅛ cup.

[b] One quarter cup of dried fruit counts as ½ cup of fruit; 1 cup of leafy greens counts as ½ cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100% full-strength.

[c] Beginning July 1, 2014 (SY 2014–2015) schools must offer 1 cup of fruit daily and 5 cups of fruit weekly. Vegetables may be substituted for fruits, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or ''Other vegetables'' subgroups, as defined in 210.10(c)(2)(iii).

[d] Beginning July 1, 2013 (SY 2013–2014), at least half of grains offered must be whole-grain-rich and schools must meet the grain ranges. Schools may substitute 1 oz. eq. of meat/meat alternate for 1 oz. eq. of grains after the minimum daily grains requirement is met. By July 1, 2014 (SY 2014–15) all grains must be whole-grain-rich.

[e] There is no meat/meat alternate requirement.

[f] Beginning July 1, 2012 (SY 2012–2013) all fluid milk must be low-fat (1 percent milk fat or less, unflavored) or fat-free (unflavored or flavored).

[g] Beginning July 1, 2013 (SY 2013–2014), the average daily calories for a 5-day school week must be within the range (at least the minimum and no more than the maximum values).

[h] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium. Foods of minimal nutritional value and fluid milk with fat content greater than 1 percent milk fat are not allowed.

[i] Final sodium targets must be met no later than July 1, 2022 (SY 2022–2023). The first intermediate targets must be met no later than July 1, 2014 (SY 2014–2015) and the second intermediate targets must be met no later than July 1, 2017 (SY 2017–2018).

[j] *Trans* fat restrictions must be implemented on July 1, 2013 (SY 2013–14).

(1) *Age/grade groups.* Effective July 1, 2013 (SY 2013–2014), schools must plan menus for students using the following age/grade groups: Grades K–5 (ages 5–10), grades 6–8 (ages 11–13), and grades 9–12 (ages 14–18). If an unusual grade configuration in a school prevents the use of the established age/grade groups, students in grades K–5 and grades 6–8 may be offered the same food quantities at breakfast provided that the calorie and sodium standards for each age/grade group are met. No customization of the established age/grade groups is allowed.

(2) *Food components.* Schools must offer students in each age/grade group the food components specified in meal pattern in paragraph (c). Food component descriptions in § 210.10 of this chapter apply to this Program.

(i) *Meats/meat alternates component.* Schools are not required to offer meats/meat alternates as part of the breakfast menu. Effective July 1, 2013 (SY 2013–2014), schools may substitute meats/meat alternates for grains, after the daily grains requirement is met, to meet the weekly grains requirement. One ounce equivalent of meat/meat alternate is equivalent to one ounce equivalent of grains.

(A) *Enriched macaroni.* Enriched macaroni with fortified protein as defined in Appendix A to Part 210 may be used to meet part of the meats/meat alternates requirement when used as specified in Appendix A to Part 210. An enriched macaroni product with fortified protein as defined in Appendix A to Part 210 may be used to meet part of the meats/meat alternates component or the grains component but may not meet both food components in the same lunch.

(B) *Nuts and seeds.* Nuts and seeds and their butters are allowed as meat alternates in accordance with program guidance. Acorns, chestnuts, and coconuts may not be used because of their low protein and iron content. Nut and seed meals or flours may be used only if they meet the requirements for Alternate Protein Products established in Appendix A to Part 220. Nuts or seeds may be used to meet no more than one-half (50 percent) of the meats/meat alternates component with another meats/meat alternates to meet the full requirement.

(C) *Yogurt.* Yogurt may be used to meet all or part of the meats/meat alternates component. Yogurt may be plain or flavored, unsweetened or sweetened. Noncommercial and/or non-standardized yogurt products, such as frozen yogurt, drinkable yogurt products, homemade yogurt, yogurt flavored products, yogurt bars, yogurt covered fruits and/or nuts or similar products are not creditable. Four ounces (weight) or ½ cup (volume) of yogurt equals one ounce of the meats/meat alternates requirement.

(D) *Tofu and soy products.* Commercial tofu and soy products may be used to meet all or part of the meats/meat alternates component in accordance with FNS guidance. Noncommercial and/or non-standardized tofu and products are not creditable.

(E) *Beans and peas (legumes).* Cooked dry beans and peas (legumes) may be used to meet all or part of the meats/meat alternates component. Beans and peas (legumes) are identified in this section and include foods such as black beans, garbanzo beans, lentils, kidney beans, mature lima beans, navy beans, pinto beans, and split peas.

(F) *Other meat alternates.* Other meat alternates, such as cheese and eggs, may be used to meet all or part of the meats/meat alternates component in accordance with FNS guidance.

(ii) *Fruits component.* Effective July 1, 2014 (SY 2014–2015), schools must

offer daily the fruit quantities specified in the breakfast meal pattern in paragraph (c) of this section. Fruits that are fresh; frozen without added sugar; canned in light syrup, water or fruit juice; or dried may be offered to meet the fruits component requirements. Vegetables may be offered in place of all or part of the required fruits at breakfast, but the first two cups per week of any such substitution must be from the dark green, red/orange, beans and peas (legumes) or other vegetable subgroups, as defined in this section. All fruits are credited based on their volume as served, except that ¼ cup of dried fruit counts as ½ cup of fruit. Only pasteurized, full-strength fruit juice may be used, and may be credited to meet no more than one-half of the fruit component.

(iii) *Vegetables component.* Schools are not required to offer vegetables as part of the breakfast menu but may, effective July 1, 2014 (SY 2014–2015), offer vegetables to meet part or all of the fruit requirement. Fresh, frozen, or canned vegetables and dry beans and peas (legumes) may be offered to meet the fruit requirement. All vegetables are credited based on their volume as served, except that 1 cup of leafy greens counts as ½ cup of vegetables and tomato paste and tomato puree are credited based on calculated volume of the whole food equivalency. Pasteurized, full-strength vegetable juice may be used to meet no more than one-half of the vegetable component. Cooked dry beans or peas (legumes) may be counted as either a vegetable or as a meat alternate but not as both in the same meal.

(iv) *Grains component.* (A) *Enriched and whole grains.* All grains must be made with enriched and whole grain meal or flour, in accordance with the most recent FNS guidance on grains. Whole grain-rich products must contain at least 50 percent whole grains and the remaining grains in the product must be enriched. Effective July 1, 2013 (SY 2013–2014), schools may substitute meats/meat alternates for grains, after the daily grains requirement is met, to meet the weekly grains requirement. One ounce equivalent of meat/meat alternate is equivalent to one ounce equivalent of grains.

(B) *Daily and weekly servings.* Effective July 1, 2013 (SY 2013–2014), the grains component is based on minimum daily servings plus total servings over a five-day school week. Beginning July 1, 2013 (SY 2013–2014), half of the grains offered during the school week must meet the whole grain-rich criteria specified in FNS guidance. Beginning July 1, 2014 (SY 2014–2015), all grains must meet the whole grain-rich criteria specified in FNS guidance. The whole grain-rich criteria provided in FNS guidance may be updated to reflect additional information provided voluntarily by industry on the food label or a whole grains definition by the Food and Drug Administration. Schools serving breakfast 6 or 7 days per week must increase the weekly grains quantity by approximately 20 percent (⅕) for each additional day. When schools operate less than 5 days per week, they may decrease the weekly quantity by approximately 20 percent (⅕) for each day less than five. The servings for biscuits, rolls, muffins, and other grain/bread varieties are specified in FNS guidance.

(3) *Food components in outlying areas.* Schools in American Samoa, Puerto Rico and the Virgin Islands may serve a vegetable such as yams, plantains, or sweet potatoes to meet the grains component.

(d) *Fluid milk requirement.* A serving of fluid milk as a beverage or on cereal or used in part for each purpose must be offered for breakfasts. Schools must offer students a variety (at least two different options) of fluid milk. Effective July 1, 2012 (SY 2012–2013), all milk must be fat-free or low-fat. Milk with higher fat content is not allowed. Fat-free fluid milk may be flavored or unflavored, and low-fat fluid milk must be unflavored. Low fat or fat-free lactose-free and reduced-lactose fluid milk may also be offered. Schools must also comply with other applicable fluid milk requirements in § 210.10(d)(1) through (4) of this chapter.

(e) *Offer versus serve.* School breakfast must offer daily at least the three food components required in the meal pattern in paragraph (c) of this section. To exercise the offer versus serve option at breakfast, a school food authority or school must offer a minimum of four food items daily as part of the required components. Under offer versus serve, students are allowed to decline one of the four food items, provided that students select at least ½ cup of the fruit component for a reimbursable meal beginning July 1, 2014 (SY 2014–2015). If only three food items are offered at breakfast, school food authorities or schools may not exercise the offer versus serve option.

(f) *Dietary specifications.* (1) *Calories.* Effective July 1, 2013 (SY 2013–2014), school breakfasts offered to each age/grade group must meet, on average over the school week, the minimum and maximum calorie levels specified in the following table:

CALORIE RANGES FOR BREAKFAST—EFFECTIVE SY 2013–2014

	Grades K–5	Grades 6–8	Grades 9–12
Minimum-maximum calories (kcal) [a] [b]	350–500	400–550	450–600

[a] The average daily amount for a 5-day school must fall within the minimum and maximum levels.
[b] Discretionary sources of calories (solid fats and added sugars) may be added to the meal pattern if within the specifications for calories, saturated fat, *trans* fat, and sodium.

(2) *Saturated fat.* Effective July 1, 2012 (SY 2012–2013), school breakfasts offered to all age/grade groups must, on average over the school week, provide less than 10 percent of total calories from saturated fat.

(3) *Sodium.* School breakfasts offered to each age/grade group must meet, on average over the school week, the levels of sodium specified in the following table within the specified deadlines:

SODIUM REDUCTION: TIMELINE & AMOUNT

Age/grade group	Baseline: average current sodium levels as offered [1] (mg)	Target 1: July 1, 2014 SY 2014–2015 (mg)	Target 2: July 1, 2017 SY 2017–2018 (mg)	Final Target: July 1, 2022 SY 2022–2023 (mg)
School Breakfast Program				
K–5	573 (elementary)	≤540	≤485	≤430
6–8	629 (middle)	≤600	≤535	≤470
9–12	686 (high)	≤640	≤570	≤500

[1] SNDA–III.

(4) *Trans fat.* Effective July 1, 2013 (SY 2013–2014), food products and ingredients used to prepare school meals must contain zero grams of *trans* fat (less than 0.5 grams) per serving. Schools must add the *trans* fat specification and request the required documentation (nutrition label or manufacturer specifications) in their procurement contracts. Documentation for food products and food ingredients must indicate zero grams of *trans* fat per serving. Meats that contain a minimal amount of naturally-occurring *trans* fats are allowed in the school meal programs.

(g) *Compliance assistance.* The State agency and school food authority must provide technical assistance and training to assist schools in planning breakfasts that meet the meal pattern in paragraph (c) of this section and the dietary specifications for calorie, saturated fat, sodium, and *trans* fat established in paragraph (f) of this section. Compliance assistance may be offered during training, onsite visits, and/or administrative reviews.

(h) *State agency responsibilities for monitoring dietary specifications.* (1) *Calories, saturated fat, and sodium.* Effective July 1, 2013 (SY 2013–2014), as part of the administrative review authorized under § 210.18 of this chapter, State agencies must conduct a weighted nutrient analysis for the school(s) selected for review to evaluate the average levels of calories, saturated fat, and sodium of the breakfasts offered during one week within the review period. The nutrient analysis must be conducted in accordance with the procedures established in § 210.10(i) of this chapter. If the results of the review indicate that the school breakfasts are not meeting the standards for calories, saturated fat, or sodium specified in paragraph (f) of this section, the State agency or school food authority must provide technical assistance and require the reviewed school to take corrective action to meet the requirements.

(2) *Trans fat.* Effective SY 2013–2014, State agencies conducting an administrative review must review product labels of manufacturer specifications to verify that the food products or ingredients used by the reviewed school(s) contain zero grams of *trans* fat (less than 0.5 grams) per serving.

(i) *State agency responsibilities for nutrient analysis.* State agencies must conduct a weighted nutrient analysis of all foods offered in a reimbursable breakfast by a school selected for administrative review to determine the average levels of calories, saturated fat, and sodium in the meals offered over a school week within the review period. The analysis must be conducted in accordance with the procedures established in § 210.10(i) of this chapter.

(j) *State agency's responsibilities for compliance monitoring.* Effective SY 2013–2014, compliance with the applicable meal requirements in paragraph (b) will be monitored by the State agency through administrative reviews authorized in § 210.18 of this chapter.

(k) *Menu choices at breakfast.* The requirements in § 210.10(k) of this chapter also apply to this Program.

(l) *Requirements for breakfast period.* (1) *Timing.* Schools must offer breakfasts meeting the requirements of this section at or near the beginning of the school day.

(2) [Reserved].

(m) *Exceptions and variations allowed in reimbursable meals.* The requirements in § 210.10(m) of this chapter also apply to this Program.

(n) *Nutrition disclosure.* The requirements in § 210.10(n) of this chapter also apply to this Program.

(o) *Breakfasts for preschoolers and infants.* (1) *Nutrition standards for breakfasts for children age 1 to 4.* Until otherwise instructed by the Secretary, breakfasts for preschoolers, when averaged over a school week, must meet the nutrition standards and the appropriate nutrient and calorie levels in this section. The nutrition standards are:

(i) Provision of one-fourth of the Recommended Dietary Allowances (RDA) for protein, calcium, iron, vitamin A and vitamin C in the appropriate levels (see paragraph (o)(2) of this section);

(ii) Provision of the breakfast energy allowances (calories) for children in the appropriate levels (see paragraph (o)(2) of this section);

(iii) The following dietary recommendations:

(A) Eat a variety of foods;

(B) Limit total fat to 30 percent of total calories;

(C) Limit saturated fat to less than 10 percent of total calories;

(D) Choose a diet low in cholesterol;

(E) Choose a diet with plenty of grain products, vegetables, and fruits; and

(F) Choose a diet moderate in salt and sodium.

(iv) The following measures of compliance:

(A) Limit the percent of calories from total fat to 30 percent of the actual number of calories offered;

(B) Limit the percent of calories from saturated fat to less than 10 percent of the actual number of calories offered;

(C) Reduce sodium and cholesterol levels; and

(D) Increase the level of dietary fiber.

(v) School food authorities must follow the traditional food-based menu planning approach to plan breakfasts for preschoolers and provide daily the food components and quantities specified in paragraph (o)(3) of this section.

(vi) Schools must keep production and menu records for the breakfasts they produce. These records must show how the breakfasts contribute to the required food components and food quantities every school day. In addition, these records must show how the breakfasts contribute to the nutrition standards in paragraph (o)(1) of this section and the appropriate calorie and nutrient levels in paragraph (o)(2) of this section over the school week. Schools or school food authorities must maintain records of the latest nutritional analysis of the school menus conducted by the State agency.

(2) *Nutrient and calorie levels for breakfasts for preschoolers.* Under the traditional food-based menu planning approach, the required levels are:

MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS

[Traditional Food-Based Menu Planning Approach]

	Age 2 [1]	Ages 3–4
Nutrients and energy allowances	School week averages	
Energy allowances (calories)	325	388
Total fat (as a percentage of actual total food energy)	(2)	(2)
Saturated fat (as a percentage of actual total food energy)	(2)	(2)
RDA for protein (g)	4	5
RDA for calcium (mg)	200	200
RDA for iron (mg)	2.5	2.5
RDA for Vitamin A (RE)	100	113
RDA for Vitamin C (mg)	10	11

[1] Nutrient and calorie levels start at age 2 because the ''Dietary Guidelines for Americans'' apply to ages 2 and older.
[2] The 1995 ''Dietary Guidelines for Americans'' recommend that after 2 years of age ''children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat.''

(3) *Meal pattern for preschoolers.* (i) *Food items.* Schools must offer these food items in at least the portions required for each age group:

(A) A serving of fluid milk as a beverage or on cereal or used partly for both;

(B) A serving of fruit or vegetable or both, or full-strength fruit or vegetable juice; and

(C) Two servings from one of the following components or one serving from each component:

(*1*) Grains/breads; and/or

(*2*) Meat/meat alternate.

(ii) *Quantities for the traditional food-based menu planning approach.* At a minimum, schools must offer the food items in the quantities specified for the appropriate age/grade group in the following table:

TRADITIONAL FOOD-BASED MENU PLANNING APPROACH MEAL PLAN FOR BREAKFASTS

	Ages 1–2	Ages 3–4
Food components and food items	School week averages	
Fluid milk (as a beverage, on cereal, or both)	4 fluid ounces	6 fluid ounces[1].
Juice/Fruit/Vegetable: Fruit and/or vegetable; or full-strength fruit or vegetable juice.	¼ cup	½ cup.
Select one serving from each of the following components, two from one component, or an equivalent combination:		
Grains/Breads:		
Whole grain or enriched bread	½ slice	½ slice.
Whole grain or enriched bread product, such as biscuit, roll, muffin.	½ serving	½ serving.
Whole grain, enriched or fortified cereal	¼ cup or ⅓ ounce	⅓ cup or ½ ounce.
Meat or Meat Alternates:		
Meat/poultry or fish	½ ounce	½ ounce.
Alternate protein products [2]	½ ounce	½ ounce
Cheese	½ ounce	½ ounce.
Large egg	½	½
Peanut butter or other nut or seed butters	1 tablespoon	1 tablespoon.
Cooked dry beans and peas	2 tablespoons	2 tablespoons.
Nuts and/or seeds (as listed in program guidance) [3]	½ ounce	½ ounce.
Yogurt, plain or flavored, unsweetened or sweetened	2 ounces or ¼ cup	2 ounces or ¼ cup.

[1] Fluild milk for children ages 3–4 must be fat-free (unflavored or flavored) or low-fat (unflavored only)
[2] Must meet the requirements in appendix A of this part.
[3] No more than 1 ounce of nuts and/or seeds may be served in any one breakfast.

(iii) *Offer versus serve.* Schools must offer all four required food items. At the school food authority's option, students in preschool may decline one of the four food items. The price of a reimbursable breakfast does not change if the student does not take a menu item or requests smaller portions.

(iv) *Exceptions and variations allowed in reimbursable breakfasts.* Schools must follow the requirements in § 210.10(m) of this chapter.

(4) *Fluid milk requirement.* A serving of fluid milk as a beverage or on cereal or used in part for each purpose must be offered for breakfasts. Schools must offer students in age group 1–2 fluid milk in a variety of fat contents, flavored or unflavored. Schools may also offer this age group lactose-free or reduced-lactose fluid milk. For students in age group 3–4, schools must offer fat-free milk (unflavored or flavored) and low-fat milk (unflavored only). Schools may also offer this age group lactose-free and reduced-lactose milk that is fat-free or low-fat. Students in age group 3–4 must be offered a variety (at least two different options) of fluid milk. All milk served in the Program must be pasteurized fluid milk which meets State and local standards for such milk. All fluid milk must have vitamins A and D at levels specified by the Food and Drug Administration and must be consistent with State and local standards for such milk. Schools must also comply with other applicable milk

requirements in § 210.10(d)(2), § 210.10(d)(3), and § 210.10(d)(4) of this chapter.

(5) *Additional foods.* Schools may offer additional foods with breakfasts to children over one year of age.

(6) *Menu choices at breakfast.* Schools must follow the requirements in § 210.10(l) of this chapter.

(7) *Exceptions and variations allowed in reimbursable meals.* Schools must follow the requirements in § 210.10(m) of this chapter.

(8) *Nutrition disclosure.* Schools must follow the requirements in § 210.10(n) of this chapter.

(9) *State agency's responsibilities for monitoring breakfasts.* As part of the administrative review authorized under § 210.18(g)(2) of this chapter, State agencies must evaluate compliance with the meal pattern requirements (food components and quantities) in paragraph (o)(3) of this section. If the meals do not meet the requirements of this section, the State agency or school food authority must provide technical assistance and require the reviewed school to take corrective action. In addition, the State agency must take fiscal action as authorized in § 210.18(m) and 210.19(c) of this chapter.

(10) *Requirements for the infant breakfast pattern.* (i) *Feeding breakfasts to infants.* Breakfasts served to infants ages birth through 11 months must meet the requirements described in paragraph (o)(11)(iv) of this section. Foods included in the breakfast must be of a texture and a consistency that are appropriate for the age of the infant being served. The foods must be served during a span of time consistent with the infant's eating habits. For those infants whose dietary needs are more individualized, exceptions to the meal pattern must be made in accordance with the requirements found in § 210.10(m) of this chapter.

(ii) *Breastmilk and iron-fortified formula.* Either breastmilk or iron-fortified infant formula, or portions of both, must be served for the entire first year. Meals containing breastmilk and meals containing iron-fortified infant formula supplied by the school are eligible for reimbursement. However, infant formula provided by a parent (or guardian) and breastmilk fed directly by the infant's mother, during a visit to the school, contribute to a reimbursable breakfast only when the school supplies at least one component of the infant's meal.

(iii) *Solid foods.* For infants ages 4 through 7 months, solid foods of an appropriate texture and consistency are required only when the infant is developmentally ready to accept them. The school should consult with the infant's parent (or guardian) in making the decision to introduce solid foods. Solid foods should be introduced one at a time, on a gradual basis, with the intent of ensuring the infant's health and nutritional well-being.

(iv) *Infant meal pattern.* Infant breakfasts must have, at a minimum, each of the food components indicated, in the amount that is appropriate for the infant's age. For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered. In these situations, additional breastmilk must be offered if the infant is still hungry. Breakfasts may include portions of breastmilk and iron-fortified infant formula as long as the total number of ounces meets, or exceeds, the minimum amount required of this food component. Similarly, to meet the component requirement for vegetables and fruit, portions of both may be served.

(A) *Birth through 3 months.* 4 to 6 fluid ounces of breastmilk or iron-fortified infant formula—only breastmilk or iron-fortified formula is required to meet the infant's nutritional needs.

(B) *4 through 7 months.* Breastmilk or iron-fortified formula is required. Some infants may be developmentally ready for solid foods of an appropriate texture and consistency. Breakfasts are reimbursable when schools provide all of the components in the meal pattern that the infant is developmentally ready to accept.

(*1*) 4 to 8 fluid ounces of breastmilk or iron-fortified infant formula; and

(*2*) 0 to 3 tablespoons of iron-fortified dry infant cereal.

(C) *8 through 11 months.* Breastmilk or iron-fortified formula and solid foods of an appropriate texture and consistency are required.

(*1*) 6 to 8 fluid ounces of breastmilk or iron-fortified infant formula; and

(*2*) 2 to 4 tablespoons of iron-fortified dry infant cereal; and

(*3*) 1 to 4 tablespoons of fruit or vegetable.

(v) *Infant meal pattern table.* The minimum amounts of food components to serve to infants, as described in paragraph (o)(11)(iv) of this section, are:

BREAKFAST PATTERN FOR INFANTS

Birth through 3 months	4 through 7 months	8 through 11 months
4–6 fluid ounces of formula [1] or breastmilk [2 3]	4–8 fluid ounces of formula[1] or breastmilk;[2 3] and 0–3 tablespoons of infant cereal [1 4]	6–8 fluid ounces of formula [1] or breastmilk;[2 3] and 2–4 tablespoons of infant cereal;[1] and 1–4 tablespoons of fruit or vegetable or both.

[1] Infant formula and dry infant cereal must be iron-fortified.
[2] Breastmilk or formula, or portions of both, may be served; however, it is recommended that breastmilk be served from birth through 11 months.
[3] For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered, with additional breastmilk offered if the infant is still hungry.
[4] A serving of this component is required only when the infant is developmentally ready to accept it.

■ 12. Paragraph 220.13(f) is amended as follows:

■ a. Amend paragraph (f)(2) by removing the words ''§ 210.30(d)'' wherever it appears and adding in its place the words ''§ 210.29''; and

■ b. Revise paragraph (f)(3) to read as follows:

§ 220.13 Special responsibilities of State agencies.

(f) * * *

(3) For the purposes of compliance with the meal requirements in § 220.8 and § 220.23, the State agency must follow the provisions specified in § 210.18(g)(2) of this chapter, as applicable.

* * * * *

■ 13. Add § 220.23 to read as follows:

§ 220.23 Nutrition standards and menu planning approaches for breakfasts.

(a) *What are the nutrition standards for breakfasts for children age 2 and*

over? This section contains the requirements applicable to school breakfasts for children age 2 and over in school years 2012–2013 through 2013–14. All of the requirements of this section will be superseded by the requirements in § 220.8 beginning July 1, 2013 (school year 2013–14), with the exceptions noted in paragraph (n) of this section. School food authorities must ensure that participating schools provide nutritious and well-balanced breakfasts. For children age 2 and over, breakfasts, when averaged over a school week, must meet the nutrition standards and the appropriate nutrient and calorie levels in this section. The nutrition standards are:

(1) Provision of one-fourth of the Recommended Dietary Allowances (RDA) for protein, calcium, iron, vitamin A and vitamin C in the appropriate levels (see paragraphs (b), (c), (e)(1), or (h) of this section);

(2) Provision of the breakfast energy allowances (calories) for children in the appropriate levels (see paragraphs (b), (c), (e)(1), or (h) of this section);

(3) These applicable recommendations of the 1995 Dietary Guidelines for Americans:

(i) Eat a variety of foods;

(ii) Limit total fat to 30 percent of total calories;

(iii) Limit saturated fat to less than 10 percent of total calories;

(iv) Choose a diet low in cholesterol;

(v) Choose a diet with plenty of grain products, vegetables, and fruits; and

(vi) Choose a diet moderate in salt and sodium.

(4) These measures of compliance with the applicable recommendations of the 1995 Dietary Guidelines for Americans:

(i) Limit the percent of calories from total fat to 30 percent of the actual number of calories offered;

(ii) Limit the percent of calories from saturated fat to less than 10 percent of the actual number of calories offered;

(iii) Reduce sodium and cholesterol levels; and

(iv) Increase the level of dietary fiber.

(5) School food authorities have several ways to plan menus. The minimum levels of nutrients and calories that breakfasts must offer depends on the menu planning approach used and the age/grades served. The menu planning approaches are:

(i) Nutrient standard menu planning (see paragraphs (b) and (e) of this section);

(ii) Assisted nutrient standard menu planning (see paragraphs (b) and (f) of this section);

(iii) Traditional food-based menu planning (see paragraphs (c) and (g)(1) of this section);

(iv) Enhanced food-based menu planning (see paragraphs (c) and (g)(2) of this section); or

(v) Alternate menu planning as provided for in paragraph (h) of this section.

(6) Schools must keep production and menu records for the breakfasts they produce. These records must show how the breakfasts contribute to the required food components, food items or menu items every day. In addition, these records must show how the breakfasts contribute to the nutrition standards in paragraph (a) of this section and the appropriate calorie and nutrient levels (see paragraphs (c), (d), or (h) of this section, depending on the menu planning approach used) over the school week. If applicable, schools or school food authorities must maintain nutritional analysis records to demonstrate that breakfasts, when averaged over each school week, meet:

(i) The nutrition standards provided in paragraph (a) of this section; and

(ii) The nutrient and calorie levels for children for each age or grade group in accordance with paragraphs (b) and (e)(1) of this section or developed under paragraph (h) of this section.

(b) *What are the levels for nutrients and calories for breakfasts planned under the nutrient standard or assisted nutrient standard menu planning approaches?* (1) The required levels are:

MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS NUTRIENT STANDARD MEAL PLANNING APPROACHES (SCHOOL WEEK AVERAGES)

Nutrients and energy allowances	Minimum requirements		Optional
	Preschool	Grades K–12	Grades 7–12
Calories (kcal)	388	554	618
Total fat (as % of total kcals)	(1)	(1, 2)	(2)
Saturated fat (as % of total kcals)	(1)	(1, 3)	(3)
RDA for protein (g)	5	10	12
RDA for calcium (mg)	200	257	300
RDA for iron (mg)	2.5	3	3.4
RDA for Vitamin A (RE)	113	197	225
RDA for Vitamin C (mg)	11	13	14

[1] The Dietary Guidelines recommend that after 2 years of age "* * * children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat."

[2] Not to exceed 30 percent over a school week.

[3] Less than 10 percent over a school week.

(2) Optional levels are:

OPTIONAL MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS NUTRIENT STANDARD MEAL PLANNING APPROACHES (SCHOOL WEEK AVERAGES)

Nutrients and energy allowances	Ages 3–6	Ages 7–10	Ages 11–13	Ages 14 and above
Calories (kcal)	419	500	588	625
Total fat (as % of total kcals)	(1, 2)	(2)	(2)	(2)
Saturated fat (as % of total kcals)	(1, 3)	(3)	(3)	(3)
RDA for protein (g)	5.5	7	11.25	12.5
RDA for calcium (mg)	200	200	300	300

OPTIONAL MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS NUTRIENT STANDARD MEAL PLANNING APPROACHES (SCHOOL WEEK AVERAGES)—Continued

Nutrients and energy allowances	Ages 3–6	Ages 7–10	Ages 11–13	Ages 14 and above
RDA for iron (mg)	2.5	2.5	3.4	3.4
RDA for Vitamin A (RE)	119	175	225	225
RDA for Vitamin C (mg)	11.00	11.25	12.5	14.4

[1] The Dietary Guidelines recommend that after 2 years of age "* * * children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat."
[2] Not to exceed 30 percent over a school week.
[3] Less than 10 percent over a school week.

(3) Schools may also develop a set of nutrient and calorie levels for a school week. These levels are customized for the age groups of the children in the particular school.

(c) *What are the nutrient and calorie levels for breakfasts planned under the food-based menu planning approaches?*—(1) *Traditional approach.* For the traditional food-based menu planning approach, the required levels are:

MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS TRADITIONAL FOOD-BASED MENU PLANNING APPROACH (SCHOOL WEEK AVERAGES)

Nutrients and energy allowances	Age 2	Ages 3, 4, 5	Grades K–12
Calories (kcal)	325	388	554
Total fat (as % of total kcals)	(1)	(1)	(1, 2)
Saturated fat (as % of total kcals)	(1)	(1)	(1, 3)
RDA for protein (g)	4	5	10
RDA for calcium (mg)	200	200	257
RDA for iron (mg)	2.5	2.5	3
RDA for Vitamin A (RE)	100	113	197
RDA for Vitamin C (mg)	10	11	13

[1] The Dietary Guidelines recommend that after 2 years of age "* * * children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat."
[2] Not to exceed 30 percent over a school week.
[3] Less than 10 percent over a school week.

(2) *Enhanced approach.* For the enhanced food-based menu planning approach, the required levels are:

MINIMUM NUTRIENT AND CALORIE LEVELS FOR SCHOOL BREAKFASTS ENHANCED FOOD-BASED MENU PLANNING APPROACH (SCHOOL WEEK AVERAGES)

Nutrients and energy allowances	Required for		Option for
	Preschool	Grades K–12	Grades 7–12
Calories (kcal)	388	554	618
Total fat (as % of total kcals)	(1)	(1, 2)	(2)
Saturated fat (as % of total kcals)	(1)	(1, 3)	(3)
RDA for protein (g)	5	10	12
RDA for calcium (mg)	200	257	300
RDA for iron (mg)	2.5	3	3.4
RDA for Vitamin A (RE)	113	197	225
RDA for Vitamin C (mg)	11	13	14

[1] The Dietary Guidelines recommend that after 2 years of age "* * * children should gradually adopt a diet that, by about 5 years of age, contains no more than 30 percent of calories from fat."
[2] Not to exceed 30 percent over a school week.
[3] Less than 10 percent over a school week.

(d) *Exceptions and variations allowed in reimbursable breakfasts.* (1) *Exceptions for disability reasons.* Schools must make substitutions in breakfasts for students who are considered to have a disability under 7 CFR part 15b.3 and whose disability restricts their diet. Substitutions must be made on a case by case basis only when supported by a written statement of the need for substitutions that includes recommended alternate foods, unless otherwise exempted by FNS. Such statement must be signed by a licensed physician.

(2) *Exceptions for non-disability reasons.* Schools may make substitutions for students without disabilities who cannot consume the breakfast because of medical or other

special dietary needs. Substitutions must be made on a case by case basis only when supported by a written statement of the need for substitutions that includes recommended alternate foods, unless otherwise exempted by FNS. Except with respect to substitutions for fluid milk, such statement must be signed by a recognized medical authority.

(i) *Milk substitutions for non-disability reasons.* Schools may make substitutions for fluid milk for non-disabled students who cannot consume fluid milk due to medical or special dietary needs. A school that selects this option may offer the nondairy beverage(s) of its choice, provided the beverage(s) meet the nutritional standards established in paragraph (i)(3) of this section. Expenses incurred in providing substitutions for fluid milk that exceed program reimbursements must be paid by the school food authority.

(ii) *Requisites for milk substitutions.* (A) A school food authority must inform the State agency if any of its schools choose to offer fluid milk substitutes other than for students with disabilities; and

(B) A medical authority or the student's parent or legal guardian must submit a written request for a fluid milk substitute, identifying the medical or other special dietary need that restricts the student's diet.

(iii) *Substitution approval.* The approval for fluid milk substitution must remain in effect until the medical authority or the student's parent or legal guardian revokes such request in writing, or until such time as the school changes its substitution policy for non-disabled students.

(3) *Variations for ethnic, religious, or economic reasons.* Schools should consider ethnic and religious preferences when planning and preparing breakfasts. Variations on an experimental or continuing basis in the food components for the food-based menu planning approaches in paragraph (g) of this section may be allowed by FNS. Any variations must be nutritionally sound and needed to meet ethnic, religious, or economic needs.

(4) *Exceptions for natural disasters.* If there is a natural disaster or other catastrophe, FNS may temporarily allow schools to serve breakfasts for reimbursement that do not meet the requirements in this section.

(e) *What are the requirements for the nutrient standard menu planning approach?* (1) *Nutrient levels*—(i) *Adjusting nutrient levels for young children.* Schools with children who are age 2 must at least meet the nutrition standards in paragraph (a) of this section and the preschool nutrient and calorie levels in paragraph (b)(1) of this section over a school week. Schools may also use the preschool nutrient and calorie levels in paragraph (b)(2) of this section or may calculate nutrient and calorie levels for two year olds. FNS has a method for calculating these levels in menu planning guidance materials.

(ii) *Minimum levels for nutrients.* Breakfasts must at least offer the nutrient and calorie levels for the required grade groups in the table in paragraph (b)(1) of this section. Schools may also offer breakfasts meeting the nutrient and calorie levels for the age groups in paragraph (b)(2) of this section. If only one grade or age group is outside the established levels, schools may follow the levels for the majority of the children. Schools may also customize the nutrient and calorie levels for the children they serve. FNS has a method for calculating these levels in guidance materials for menu planning.

(2) *Reimbursable breakfasts*—(i) *Contents of a reimbursable breakfast.* A reimbursable breakfast must include at least three menu items. All menu items or foods offered in a reimbursable breakfast contribute to the nutrition standards in paragraph (a) of this section and to the levels of nutrients and calories that must be met in paragraphs (c) or (e)(1) of this section. Unless offered as part of a menu item in a reimbursable breakfast, foods of minimal nutritional value (see appendix B to part 220) are not included in the nutrient analysis. Reimbursable breakfasts planned under the nutrient standard menu planning approach must meet the nutrition standards in paragraph (a) of this section and the appropriate nutrient and calorie levels in paragraph (b) or (e)(1) of this section.

(ii) *Offer versus serve.* Schools must offer at least three menu items. At their option, school food authorities may allow students to select only two menu items and to decline a maximum of one menu item. The price of a reimbursable breakfast does not change if the student does not take a menu item or requests smaller portions.

(3) *Doing the analysis.* Schools using nutrient standard menu planning must conduct the analysis on all menu items and foods offered in a reimbursable breakfast. The analysis is conducted over a school week within the review period. Unless offered as part of a menu item in a reimbursable breakfast, foods of minimal nutritional value (see appendix B to part 220) are not included in the nutrient analysis.

(4) *Software elements*—(i) *The Child Nutrition Database.* The nutrient analysis is based on the Child Nutrition Database. This database is part of the software used to do a nutrient analysis. Software companies or others developing systems for schools may contact FNS for more information about the database.

(ii) *Software evaluation.* FNS or an FNS designee evaluates any nutrient analysis software before it may be used in schools. FNS or its designee determines if the software, as submitted, meets the minimum requirements. The approval of software does not mean that FNS or USDA endorses it. The software must be able to do all functions after the basic data is entered. The required functions include weighted averages and the optional combined analysis of the lunch and breakfast programs.

(5) *Nutrient analysis procedures*—(i) *Weighted averages.* Schools must include all menu items and foods offered in reimbursable breakfasts in the nutrient analysis. Menu items and foods are included based on the portion sizes and projected serving amounts. They are also weighted based on their proportionate contribution to the breakfasts offered. This means that menu items or foods more frequently offered are weighted more heavily than those not offered as frequently. Schools calculate weighting as indicated by FNS guidance and by the guidance provided by the software.

(ii) *Analyzed nutrients.* The analysis includes all menu items and foods offered over a school week. The analysis must determine the levels of: Calories, protein, vitamin A, vitamin C, iron, calcium, total fat, saturated fat, sodium, cholesterol and dietary fiber.

(6) *Comparing the results of the nutrient analysis.* Once the procedures in paragraph (i)(5) of this section are completed, schools must compare the results of the analysis to the appropriate nutrient and calorie levels, by age/grade groups, in paragraph (b) of this section or those developed under paragraph (e)(1) of this section. This comparison determines the school week's average. Schools must also make comparisons to the nutrition standards in paragraph (a) of this section to determine how well they are meeting the nutrition standards over a school week.

(7) *Adjustments to the menus.* Once schools know the results of the nutrient analysis based on the procedures in paragraphs (e)(5) and (6) of this section, they must adjust future menu cycles to reflect production and how often the menu items and foods are offered. Schools may need to reanalyze menus when the students' selections and,

consequently, production levels change. Schools may need to change the menu items and foods offered given the students' selections and may need to modify the recipes and other specifications to make sure that the nutrition standards in paragraph (a) and either paragraph (b) or (e)(1) of this section are met.

(8) *Standardized recipes.* If a school follows the nutrient standard menu planning approach, it must develop and follow standardized recipes. A standardized recipe is a recipe that was tested to provide an established yield and quantity using the same ingredients for both measurement and preparation methods. Any standardized recipes developed by USDA/FNS are in the Child Nutrition Database. If a school has its own recipes, they must be standardized and analyzed to determine the levels of calories, nutrients, and dietary components listed in paragraph (e)(5)(ii) of this section. Schools must add any local recipes to their local database as outlined in FNS guidance.

(9) *Processed foods.* The Child Nutrition Database includes a number of processed foods. Schools may use purchased processed foods and menu items that are not in the Child Nutrition Database. Schools or the State agency must add any locally purchased processed foods and menu items to their local database as outlined in FNS guidance. Schools or State agencies must obtain the levels of calories, nutrients, and dietary components listed in paragraph (e)(5)(ii) of this section.

(10) *Menu substitutions.* Schools may need to substitute foods or menu items in a menu that was already analyzed. If the substitution(s) occurs more than two weeks before the planned menu is served, the school must reanalyze the revised menu. If the substitution(s) occurs two weeks or less before the planned menu is served, the school does not need to do a reanalysis. However, schools should always try to substitute similar foods.

(11) *Meeting the nutrition standards.* The school's analysis shows whether their menus are meeting the nutrition standards in paragraph (a) of this section and the appropriate levels of nutrients and calories in paragraph (b) of this section or customized levels developed under paragraph (e)(1) of this section. If the analysis shows that the menu(s) are not meeting these standards, the school needs to take action to make sure that the breakfasts meet the nutrition standards and the calorie, nutrient, and dietary component levels. Actions may include technical assistance and training and may be taken by the State agency, the school food authority or by the school as needed.

(12) *Other Child Nutrition Programs and nutrient standard analysis menu planning.* School food authorities that operate the Summer Food Service Program (part 225 of this chapter) and/or the Child and Adult Care Food Program (part 226 of this chapter) may, with State agency approval, prepare breakfasts for these programs using the nutrient standard menu planning approach for children age two and over. FNS has program guidance on the levels of nutrient and calories for adult breakfasts offered under the Child and Adult Care Food Program.

(f) *What are the requirements for the assisted nutrient standard menu planning approach?*—(1) *Definition of assisted nutrient standard menu planning.* Some school food authorities may not be able to do all of the procedures necessary for nutrient standard menu planning. The assisted nutrient standard menu planning approach provides schools with menu cycles developed and analyzed by other sources. These sources include the State agency, other schools, consultants, or food service management companies.

(2) *Elements of assisted nutrient standard menu planning.* School food authorities using menu cycles developed under assisted nutrient standard menu planning must follow the procedures in paragraphs (e)(1) through (10) of this section. The menu cycles must also incorporate local food preferences and accommodate local food service operations. The menu cycles must meet the nutrition standards in paragraph (a) of this section and meet the applicable nutrient and calorie levels for nutrient standard menu planning in paragraphs (b) or (e)(1) of this section. The supplier of the assisted nutrient standard menu planning approach must also develop and provide recipes, food product specifications, and preparation techniques. All of these components support the nutrient analysis results of the menu cycles used by the receiving school food authorities.

(3) *State agency approval.* Prior to its use, the State agency must approve the initial menu cycle, recipes and other specifications of the assisted nutrient standard menu planning approach. The State agency needs to make sure all the steps required for nutrient analysis were followed. School food authorities may also ask the State agency for assistance with implementation of their assisted nutrient standard menu planning approach.

(4) *Required adjustments.* After the initial service of the menu cycle developed under the assisted nutrient standard menu planning approach, the nutrient analysis must be reassessed and appropriate adjustments made as discussed in paragraph (e)(7) of this section.

(5) *Final responsibility for meeting the nutrition standards.* The school food authority using the assisted nutrient standard menu planning approach retains final responsibility for meeting the nutrition standards in paragraph (a) of this section and the applicable calorie and nutrient levels in paragraphs (b) or (e)(1) of this section.

(6) *Adjustments to the menus.* If the nutrient analysis shows that the breakfasts offered are not meeting the nutrition standards in paragraph (a) of this section and the applicable calorie and nutrient levels in paragraphs (b) or (e)(1) of this section, the State agency, school food authority or school must take action to make sure the breakfasts offered meet these requirements. Actions needed include technical assistance and training.

(7) *Other Child Nutrition Programs and assisted nutrient analysis menu planning.* School food authorities that operate the Summer Food Service Program (part 225 of this chapter) and/or the Child and Adult Care Food Program (part 226 of this chapter) may, with State agency approval, prepare breakfasts for these programs using the assisted nutrient standard menu planning approach for children age two and over. FNS has guidance on the levels of nutrients and calories for adult breakfasts offered under the Child and Adult Care Food Program.

(g) *What are the requirements for the food-based menu planning approaches?*—(1) *Food items.* There are two menu planning approaches based on meal patterns, not nutrient analysis. These approaches are the traditional food-based menu planning approach and the enhanced food-based menu planning approach. Schools using one of these approaches must offer these food items in at least the portions required for various age/grade groups:

(i) A serving of fluid milk as a beverage or on cereal or used partly for both;

(ii) A serving of fruit or vegetable or both, or full-strength fruit or vegetable juice; and

(iii) Two servings from one of the following components or one serving from each component:

(A) Grains/breads; and/or

(B) Meat/meat alternate.

(2) *Quantities for the traditional food-based menu planning approach.* At a minimum, schools must offer the food items in the quantities specified for the

appropriate age/grade group in the following table:

TRADITIONAL FOOD-BASED MENU PLANNING APPROACH—MEAL PATTERN FOR BREAKFASTS

Food components and food items	1–2	Ages 3, 4 and 5	Grades K–12
MILK (fluid) (as a beverage, on cereal, or both)	4 fluid ounces	6 fluid ounces	8 fluid ounces.
JUICE/FRUIT/VEGETABLE: Fruit and/or vegetable; or full-strength fruit juice or vegetable juice.	¼ cup	½ cup	½ cup.
SELECT ONE SERVING FROM EACH OF THE FOLLOWING COMPONENTS, TWO FROM ONE COMPONENT, OR AN EQUIVALENT COMBINATION:			
GRAINS/BREADS:			
Whole-grain or enriched bread	½ slice	½ slice	1 slice.
Whole-grain or enriched biscuit, roll, muffin, etc	½ serving	½ serving	1 serving.
Whole-grain, enriched or fortified cereal	¼ cup or ⅓ ounce.	⅓ cup or½ ounce.	¾ cup or 1 ounce.
MEAT OR MEAT ALTERNATIVES:			
Meat/poultry or fish	½ ounce	½	1 ounce.
Alternate protein products[1]	½ ounce	½ ounce	1 ounce.
Cheese	½ ounce	½ ounce	1 ounce.
Large egg	½	½	½.
Peanut butter or other nut or seed butters	1 tablespoon	1 tablespoon	2 tablespoons.
Cooked dry beans and peas	2 tablespoons	2 tablespoons	4 tablespoons.
Nuts and/or seeds (as listed in program guidance)[2]	½ ounce	½ ounce	1 ounce.
Yogurt, plain or flavored, unsweetened or sweetened	2 ounces or ¼ cup.	2 ounces or ¼ cup.	4 ounces or ½ cup.

[1] Must meet the requirements in appendix A of this part.
[2] No more than 1 ounce of nuts and/or seeds may be served in any one breakfast.

(3) *Quantities for the enhanced food-based menu planning approach.* At a minimum, schools must offer the food items in the quantities specified for the appropriate age/grade group in the following table:

ENHANCED FOOD-BASED MENU PLANNING APPROACH-MEAL PATTERN FOR BREAKFASTS

Food components and food items	Required for		Option for	
	Ages 1–2	Preschool	Grades K–12	Grades 7–12
MILK (fluid) (as a beverage, on cereal, or both).	4 fluid ounces	6 fluid ounces	8 fluid ounces	8 fluid ounces.
JUICE/FRUIT/VEGETABLE: Fruit and/or vegetable; or full-strength fruit juice or vegetable juice.	¼ cup	½ cup	½ cup	½ cup.
SELECT ONE SERVING FROM EACH OF THE FOLLOWING COMPONENTS, TWO FROM ONE COMPONENT, OR AN EQUIVALENT COMBINATION:				
GRAINS/BREADS:				
Whole-grain or enriched bread	½ slice	½ slice	1 slice	1 slice.
Whole-grain or enriched biscuit, roll, muffin, etc..	½ serving	½ serving	1 serving	1 serving.
Whole-grain, enriched or fortified cereal.	¼ cup or 1/3 ounce	⅓ cup or ½ ounce	¾ cup or 1 ounce	¾ cup or 1 ounce plus an additional serving of one of the Grains/Breads above.
MEAT OR MEAT ALTERNATIVES:				
Meat/poultry or fish	½ ounce	½ ounce	1 ounce	1 ounce.
Alternate protein products[1]	½ ounce	½ ounce	1 ounce	1 ounce.
Cheese	½ ounce	½ ounce	1 ounce	1 ounce.
Large egg	½	½	½	½.
Peanut butter or other nut or seed butters.	1 tablespoon	1 tablespoon	2 tablespoons	2 tablespoons.
Cooked dry beans and peas	2 tablespoons	2 tablespoons	4 tablespoons	4 tablespoons.
Nuts and/or seeds (as listed in program guidance)[2].	½ ounce	½ ounce	1 ounce	1 ounce.
Yogurt, plain or flavored, unsweetened or sweetened.	2 ounces or ¼ cup	2 ounces or ¼ cup	4 ounces or ½ cup	4 ounces or ½ cup.

[1] Must meet the requirements in appendix A of this part.
[2] No more than 1 ounce of nuts and/or seeds may be served in any one breakfast.

(4) *Offer versus serve.* Each school must offer all four required food items listed in paragraph (g)(1) of this section. At the option of the school food authority, each school may allow students to refuse one food item from any component. The refused food item may be any of the four items offered to the student. A student's decision to accept all four food items or to decline one of the four food items must not affect the charge for a reimbursable breakfast.

(5) *Meal pattern exceptions for outlying areas.* Schools in American Samoa, Puerto Rico and the Virgin Islands may serve a starchy vegetable such as yams, plantains, or sweet potatoes to meet the grain/bread requirement.

(h) *What are the requirements for alternate menu planning approaches?*—(1) *Definition.* Alternate menu planning approaches are those adopted or developed by school food authorities or State agencies that differ from the standard approaches established in paragraphs (e) through (g) of this section.

(2) *Use and approval of major changes or new alternate approaches.* Within the guidelines established for developing alternate menu planning approaches, school food authorities or State agencies may modify one of the established menu planning approaches in paragraphs (e) through (g) of this section or may develop their own menu planning approach. The alternate menu planning approach must be available in writing for review and monitoring purposes. No formal plan is required; guidance material, a handbook or protocol is sufficient. As appropriate, the material must address how the guidelines in paragraph (h)(3) of this section are met. A State agency that develops an alternate approach that is exempt from FNS approval under paragraph (h)(2)(iii) of this section must notify FNS in writing when implementing the alternate approach.

(i) *Approval of local level plans.* Any school food authority-developed menu planning approach must have prior State agency review and approval.

(ii) *Approval of State agency plans.* Unless exempt under paragraph (h)(2)(iii) of this section, any State agency-developed menu planning approach must have prior FNS approval.

(iii) *State agency plans not subject to approval.* A State agency-developed menu planning approach does not need FNS approval if:

(A) Five or more school food authorities in the State use it; and

(B) The State agency maintains ongoing oversight of the operation and evaluation of the approach and makes any needed adjustments to its policies and procedures to ensure that the appropriate guidelines in paragraph (h)(3) of this section are met.

(3) *Elements for major changes or new approaches.* Any alternate menu planning approach must:

(i) Offer fluid milk, as provided in paragraph (i) of this section;

(ii) Include the procedures for offer versus serve if the school food authority chooses to implement the offer versus serve option. Alternate approaches should follow the offer versus serve procedures in paragraphs (e)(2)(ii) and (g)(4) of this section, as appropriate. If these requirements are not followed, the approach must indicate:

(A) The affected age/grade groups;

(B) The number and type of items (and, if applicable, the quantities for the items) that constitute a reimbursable breakfast under offer versus serve;

(C) How such procedures will reduce plate waste; and

(D) How a reasonable level of calories and nutrients for the breakfast as taken is provided.

(iii) Meet the Recommended Dietary Allowances and breakfast energy allowances (nutrient levels) and indicate the age/grade groups served and how the nutrient levels are met for those age/grade groups;

(iv) Follow the requirements for competitive foods in the definition of *Foods of minimal nutritional value* in § 220.2, in § 220.12, and in appendix B of this part;

(v) Follow the requirements for counting food items and products towards meeting the meal patterns. These requirements are found in paragraphs (g) and (i) of this section, in appendices A through C to this part, and in instructions and guidance issued by FNS. This only applies if the alternate approach is a food-based menu planning approach.

(vi) Identify a reimbursable breakfast at the point of service.

(A) To the extent possible, the procedures provided in paragraph (e)(2)(i) of this section for nutrient standard or assisted nutrient standard menu planning approaches or for food-based menu planning approaches provided in paragraph (g) of this section must be followed. Any instructions or guidance issued by FNS that further defines the elements of a reimbursable breakfast must be followed when using the existing regulatory provisions.

(B) Any alternate approach that deviates from the provisions in paragraph (e)(2)(i) or paragraph (g) of this section must indicate what constitutes a reimbursable breakfast, including the number and type of items (and, if applicable, the quantities for the items) which comprise the breakfast, and how a reimbursable breakfast is to be identified at the point of service.

(vii) Explain how the alternate menu planning approach can be monitored under the applicable provisions of § 210.18 of this chapter, including a description of the records that will be maintained to document compliance with the program's administrative and nutritional requirements. However, if the procedures under § 210.18 of this chapter cannot be used to monitor the alternate approach, a description of review procedures which will enable the State agency to assess compliance with the nutrition standards in paragraphs (a)(1) through (4) of this section must be included; and

(viii) Follow the requirements for weighted analysis and for approved software for nutrient standard menu planning as required by paragraphs (e)(4) and (5) of this section unless a State agency-developed approach meets the criteria in paragraph (h)(2)(iii) of this section.

(i) *What are the requirements for offering milk?*—(1) *Serving milk.* A serving of fluid milk as a beverage or on cereal or used in part for each purpose must be offered for breakfasts. Schools must offer students a variety (at least two different options) of fluid milk daily. All milk must be fat-free or low-fat. Milk with higher fat content is not allowed. Fat-free fluid milk may be flavored or unflavored, and low-fat fluid milk must be unflavored. Low fat or fat-free lactose-free and reduced-lactose fluid milk may also be offered. Schools must also comply with other applicable fluid milk requirements in § 210.10(d)(1) through (4) of this chapter.

(2) *Inadequate milk supply.* If a school cannot get a supply of milk, it can still participate in the Program under the following conditions:

(i) If emergency conditions temporarily prevent a school that normally has a supply of fluid milk from obtaining delivery of such milk, the State agency may allow the school to serve breakfasts during the emergency period with an alternate form of milk or without milk.

(ii) If a school is unable to obtain a supply of any type of fluid milk on a continuing basis, the State agency may allow schools to substitute canned or dry milk in the required quantities in the preparation of breakfasts. In Alaska, Hawaii, American Samoa, Guam, Puerto Rico, and the Virgin Islands, if a

sufficient supply of fluid milk cannot be obtained, ''milk'' includes reconstituted or recombined milk, or otherwise as allowed by FNS through a written exception.

(3) *Milk substitutes.* If a school chooses to offer one or more substitutes for fluid milk for non-disabled students with medical or special dietary needs, the nondairy beverage(s) must provide the nutrients listed in the following table. Milk substitutes must be fortified in accordance with fortification guidelines issued by the Food and Drug Administration. A school need only offer the nondairy beverage(s) that it has identified as allowable fluid milk substitutes according to this paragraph (i)(3).

Nutrient	Per cup
Calcium	276 mg.
Protein	8 g.
Vitamin A	500 IU.
Vitamin D	100 IU.
Magnesium	24 mg.
Phosphorus	222 mg.
Potassium	349 mg.
Riboflavin	0.44 mg.
Vitamin B–12	1.1 mcg.

(j) *What are the requirements for the infant breakfast pattern?* (1) *Feeding breakfasts to infants.* Breakfasts served to infants ages birth through 11 months must meet the requirements described in paragraph (j)(4) of this section. Foods included in the breakfast must be of a texture and a consistency that are appropriate for the age of the infant being served. The foods must be served during a span of time consistent with the infant's eating habits. For those infants whose dietary needs are more individualized, exceptions to the meal pattern must be made in accordance with the requirements found in paragraph (d)(1) of this section.

(2) *Breastmilk and iron-fortified formula.* Either breastmilk or iron-fortified infant formula, or portions of both, must be served for the entire first year. Meals containing breastmilk and meals containing iron-fortified infant formula supplied by the school are eligible for reimbursement. However, infant formula provided by a parent (or guardian) and breastmilk fed directly by the infant's mother, during a visit to the school, contribute to a reimbursable breakfast only when the school supplies at least one component of the infant's meal.

(3) *Solid foods.* For infants ages 4 through 7 months, solid foods of an appropriate texture and consistency are required only when the infant is developmentally ready to accept them. The school should consult with the infant's parent (or guardian) in making the decision to introduce solid foods. Solid foods should be introduced one at a time, on a gradual basis, with the intent of ensuring the infant's health and nutritional well-being.

(4) *Infant meal pattern.* Infant breakfasts must have, at a minimum, each of the food components indicated, in the amount that is appropriate for the infant's age. For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered. In these situations, additional breastmilk must be offered if the infant is still hungry. Breakfasts may include portions of breastmilk and iron-fortified infant formula as long as the total number of ounces meets, or exceeds, the minimum amount required of this food component. Similarly, to meet the component requirement for vegetables and fruit, portions of both may be served.

(i) *Birth through 3 months.* 4 to 6 fluid ounces of breastmilk or iron-fortified infant formula—only breastmilk or iron-fortified formula is required to meet the infant's nutritional needs.

(ii) *Four through 7 months.* Breastmilk or iron-fortified formula is required. Some infants may be developmentally ready for solid foods of an appropriate texture and consistency. Breakfasts are reimbursable when schools provide all of the components in the meal pattern that the infant is developmentally ready to accept.

(A) Four to 8 fluid ounces of breastmilk or iron-fortified infant formula; and

(B) 0 to 3 tablespoons of iron-fortified dry infant cereal.

(iii) *Eight through 11 months.* Breastmilk or iron-fortified formula and solid foods of an appropriate texture and consistency are required.

(A) Six to 8 fluid ounces of breastmilk or iron-fortified infant formula; and

(B) Two to 4 tablespoons of iron-fortified dry infant cereal; and

(C) One to 4 tablespoons of fruit or vegetable.

(5) *Infant meal pattern table.* The minimum amounts of food components to serve to infants, as described in paragraph (j)(4) of this section, are:

BREAKFAST PATTERN FOR INFANTS

Birth through 3 months	4 through 7 months	8 through 11 months
4–6 fluid ounces of formula[1] or breastmilk[2 3]	4–8 fluid ounces of formula[1] or breastmilk[2 3]; and 0–3 tablespoons of infant cereal[1 4]	6–8 fluid ounces of formula[1] or breastmilk[2 3]; and 2–4 tablespoons of infant cereal[1]; and 1–4 tablespoons of fruit or vegetable or both

[1] Infant formula and dry infant cereal must be iron-fortified.
[2] Breastmilk or formula, or portions of both, may be served; however, it is recommended that breastmilk be served in place of formula from birth through 11 months.
[3] For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breastmilk may be offered, with additional breastmilk offered if the infant is still hungry.
[4] A serving of this component is required only when the infant is developmentally ready to accept it.

(k) *What about serving additional foods?* Schools may offer additional foods with breakfasts to children over one year of age.

(l) *Must schools offer choices at breakfast?* FNS encourages schools to offer children a selection of foods and menu items at breakfast. Choices provide variety and encourage consumption. Schools may offer choices of reimbursable breakfasts or foods within a reimbursable breakfast. When a school offers a selection of more than one type of breakfast or when it offers a variety of food components, menu items or foods and milk for choice as a reimbursable breakfast, the school must offer all children the same selection(s) regardless of whether the child is eligible for free or reduced price breakfasts or must pay the designated full price. The school may establish different unit prices for each type of breakfast offered provided that the benefits made available to children eligible for free or reduced price breakfasts are not affected.

(m) *What must schools do about nutrition disclosure?* To the extent that school food authorities identify foods in

a menu, or on the serving line or through other available means of communicating with program participants, school food authorities must identify products or dishes containing more than 30 parts fully hydrated alternate protein products (as specified in appendix A of this part) to less than 70 parts beef, pork, poultry or seafood on an uncooked basis, in a manner which does not characterize the product or dish solely as beef, pork, poultry or seafood. Additionally, FNS encourages schools to inform the students, parents, and the public about efforts they are making to meet the nutrition standards (see paragraph (a) of this section) for school breakfasts.

(n) *Implementation timeframes.* All the requirements in this section will be superseded by the requirements in § 220.8 beginning July 1, 2013 (SY 2013–2014) with the following exceptions:

(1) Fruits and vegetables component. The fruits and vegetables requirements in paragraphs (g)(1) through (3) will be superseded July 1, 2014; and

(2) Sodium specification. The sodium requirements in (a)(3)(vi) will be superseded July 1, 2014.

Appendix A to Part 220 [Amended]

■ 14. Amend Appendix A to part 220 by removing section I. Formulated Grain-Fruit Products in its entirety, and by removing the Roman numeral ''II.'' from the words ''II. Alternate Protein Products''.

Kevin Concannon,

Under Secretary, Food, Nutrition, and Consumer Services.

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