

ALBUQUERQUE PUBLIC SCHOOLS

Nutrition Pilot Project
Evaluation
2005-2006

Quality, Safe Learning & Working Environments

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Nutrition Pilot Project Evaluation

Executive Summary

Congress added a new requirement to the Child Nutrition and WIC Reauthorization Act in 2004. All school districts receiving U.S. Department of Agriculture funds for school meals are required to have an approved wellness policy in place no later than the 2006-07 school year.

Members of APS Board Policy Committee on October 19, 2004, decided that the district should begin implementation of the nutrition component of the wellness policy with a pilot project. The pilot schools converted foods and beverages served in snack bars, vending machines, and school activities to healthier items that met nutrition standards recommended by the Physical Activity and Nutrition Advisory Committee.

The nutrition changes have been in action at 22 APS pilot schools for a little over a year. This is an insufficient time to evaluate the effects of a new policy on schools and students. However, an assessment of one-year implementation shows promising trends. An RDA evaluation compared pilot and non-pilot school snack bar and Pepsi revenue as well as average daily lunches served. RDA also conducted lunch period observations of beverage consumption at three pilot and five comparison schools.

While the higher nutritional standards will most likely have a positive impact on student health and well-being, there could be unintended fiscal consequences considering that the vending revenue is important to schools and the district.

Findings

- Over the past four years, generally vendor sales have declined in the district as a whole. In 2004-05, however, sales were up in pilot schools even when the vendor's full line of products was limited.
- Our study compared high-poverty pilot and non-pilot schools.
 - High-poverty elementary schools in the pilot had higher snack sales compared to those not in the pilot.
 - Among high-poverty mid schools, no differences were found among pilot and non-pilot schools in terms of snack sales.
- The benefits of the wellness policy may be limited in more affluent schools.
 - Students in affluent schools brought non-approved beverages from home.
 - Affluent non-pilot mid schools showed significantly higher snack sales and revenue during the study time than the affluent pilot schools (\$2 per student per month).
- Difference in the consumption of approved foods and beverages correlates more with the poverty level of the school than the pilot status. Pilot and non-pilot

poverty schools consumed more approved foods and beverages than affluent schools.

Conclusions and Implications

- The district has a prior commitment with vendors that must be considered when coming into compliance with the new requirement.
- Because profits from the vendor have been dwindling over a four-year period, it is not possible for the recent implementation of nutrition policy in pilot schools to have had an impact on overall revenue. Therefore, the district may wish to further evaluate the factors impacting vending revenue.
- Full implementation of the wellness policy will likely **not** impact vending revenue at the high-poverty schools. It might impact revenues at more affluent schools.
- Because there are fewer high-poverty schools and more affluent schools in the district, preliminary information from the pilot suggests that overall revenue from vending may decline.
- Students at the more affluent schools in the pilot brought non-policy drinks from home. In order for the wellness policy to have the intended impact at the more affluent schools, better parent communication will be necessary.
- There are certain aspects of the policy that warrant further study by Food and Nutrition Services staff. For example, reducing the size of the sports drinks did not reduce sugar concentration. Some students continued to consume high levels of sugar as they bought more of the smaller bottles of the sport drinks.

APS Nutrition Pilot Project Evaluation

Program Description

In 2004, Congress added a new requirement to the Child Nutrition and WIC Reauthorization Act that all school districts receiving U.S. Department of Agriculture funds for school meals have an approved wellness policy in place no later than the 2006-07 school year (Public Law 108-265, Sec 204). To help prepare the district for this change, the APS Board Policy Committee meeting on October 19, 2004, decided that a pilot project was a good place to start. The APS Physical Activity & Nutrition Advisory Committee (PANAC) organized a pilot to implement the Committee's recommendation for nutrition standards for competitive food and beverages available to students on school campus during normal school hours.

The Food and Nutrition Services Department sent an invitation letter to all school principals K-12 to participate in the healthy school pilot. Ten elementary and eight middle schools agreed to participate for the full pilot period, and four more schools joined during the pilot period. No high school offered to participate in the pilot project. The pilot project period was January 2005 through January 2006.

The pilot project started with training for participating school principals in November 2004. This training presented the reasons for the pilot, required steps schools needed to take to participate, and provided resources to help schools take those steps. To help each school recognize components of a healthy school environment and areas for improvement, the principals were asked to designate a school team or committee to complete a school needs assessment around nutrition and physical activity. This school assessment also helped us identify nutrition and physical activity areas that schools needed to advance. Subsequently, pilot schools implemented the nutrition standards recommended by the PANAC for foods and beverages outside of the school meal programs (see Appendix A).

After the nutrition pilot started, a state legislation passed during the 2005 session charged the NM Public Education Department (PED) to develop standards around competitive food sales in schools. In March 2006, PED released a final set of nutrition rules outlining specific nutrition standards for all food and beverages sales in schools (see Appendix B). These school-level specific nutrition standards for vending machines sales, a la carte, and fundraisers must be included in the nutrition component of the district wellness policy and implemented at the start of the 2006-07 school year. The nutrition standards implemented by schools during the pilot differ somewhat in detail from the new PED requirements, but are consistent with the common goal of offering healthier food and beverages to students.

Purpose of the Evaluation

The implementation of the nutrition policy component as part of the overarching wellness policy includes replacing unhealthy food and beverage options with more nutritious alternatives in competitive foods outside the school meal program, such as snack bars,

PTA booths, vending machines, and other school outlets. After one year of implementation of the nutrition policy, Food and Nutrition Services asked RDA to conduct a pilot project evaluation in anticipation of the district-wide implementation of nutrition policy guidelines. This formative evaluation explored if the students were indeed making healthy choices once the nutritional standards were in place in schools, gauged the policy's financial impact on schools, and examined implementation issues confronted by administrators. The purpose of the evaluation was to systematically evaluate the impact of the pilot to inform refinement of nutrition guidelines before their district-wide implementation.

Evaluation Questions

This evaluation focused on the following questions to assess the impact of nutrition policy in the pilot schools:

1. Has the policy impacted the number of lunches served or the revenue from a la carte sales?
2. What is the effect of the new nutrition policy on Pepsi revenue?
3. Do students make positive choices when healthful options replace less healthful items? Or, do students and/or their parents plan ahead and acquire non-policy foods and beverages elsewhere, circumventing the nutrition policy?

To answer the evaluation questions, RDA evaluators analyzed the following information:

- Revenue from a la carte sales by the cafeteria, vending machines, and other competitive snack bars in pilot versus other APS schools
- Average daily lunches served in pilot and other APS schools
- Commission from Pepsi vending machines in pilots and other schools
- Lunch period observations of students' beverage consumption in three pilot and five comparison schools

The Food and Nutrition Services provided information about Pepsi and a la carte revenue and average daily lunches that allowed comparison between pilot and other APS schools. For a more meaningful comparison between nutrition policy pilot project schools and other APS school, RDA evaluators made schools comparable by controlling for the effects of school size, school level (elementary versus mid school), and poverty (Provision II versus Non-Provision II). Provision II schools are high poverty schools where 100% of the students receive free meals. Non-Provision II schools will be considered low-poverty schools in this evaluation.

Evaluators conducted systematic observations during school lunch periods by trained observers to estimate of within-policy beverages consumed by the students in pilots and comparison schools. Evaluators also obtained information during lunch observations about the proportion of beverages students purchased on school campuses as opposed to from outside schools.

In order to understand the logistical issues in the implementation of the wellness policy in schools, a team from Food and Nutrition Services conducted interviews of eight elementary (ES) and mid school (MS) principals in the pilot.

- Principal Interviews.

The evaluation subcommittee of the APS PANAC and PANAC team constructed the questions for the principal interviews. The Food and Nutrition team interviewed most of the principals that were part of lunch period observation sample and two others.

Limitations. First, pilot schools and comparison schools were not randomly assigned to the groups and may involve systematic bias in the two groups, making comparisons problematic. Second, many non-pilots had already adopted the nutrition policy, thus contaminating the comparison group. Third, the lunch observation component of the study only included beverages and not snacks.

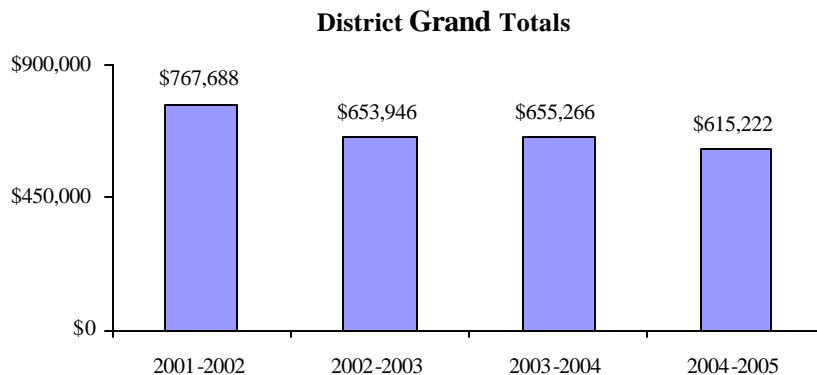
The Results section below includes four sub-sections.

Results

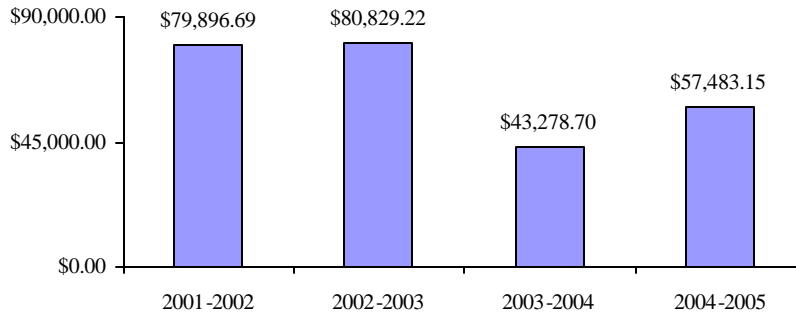
Pepsi Commissions

- Pepsi has seen a 20% decline in volume and commission in beverage vending machines since the 2001-2002 school year, well before the nutrition policy pilot project implementation, through the 2004-2005 school year.
- While there was a 6.11% drop in district Pepsi commissions from 2003-04 to 2004-05, there was a net increase of 32.8% in 20 pilot schools' Pepsi commissions from 2003-04 to 2004-05.
- Seven out of the 10 pilot mid schools showed an increase in commissions during the 2004-2005 school year (see Appendix C).

School Commissions from Pepsi Vending Machines



**School Commissions from Pepsi Vending Machines
Pilot Schools (N=20) Grand Totals**



A la carte (ALC) revenue and average daily lunches (ADL) in APS schools

The APS Food and Nutrition Services provided information on a la carte revenue and average daily lunches served per month by school. For a more meaningful comparison between nutrition policy pilot project schools and other APS school, the evaluators administered control over the effects of school size, school level (ES versus MS), and poverty. High and low-poverty schools appear systematically different and often face different instructional and other challenges. Hence, in order to provide a clear picture of the impact of nutritional changes in schools, evaluators compared high-poverty pilots to high-poverty comparison schools, and low-poverty pilots to their counterparts.

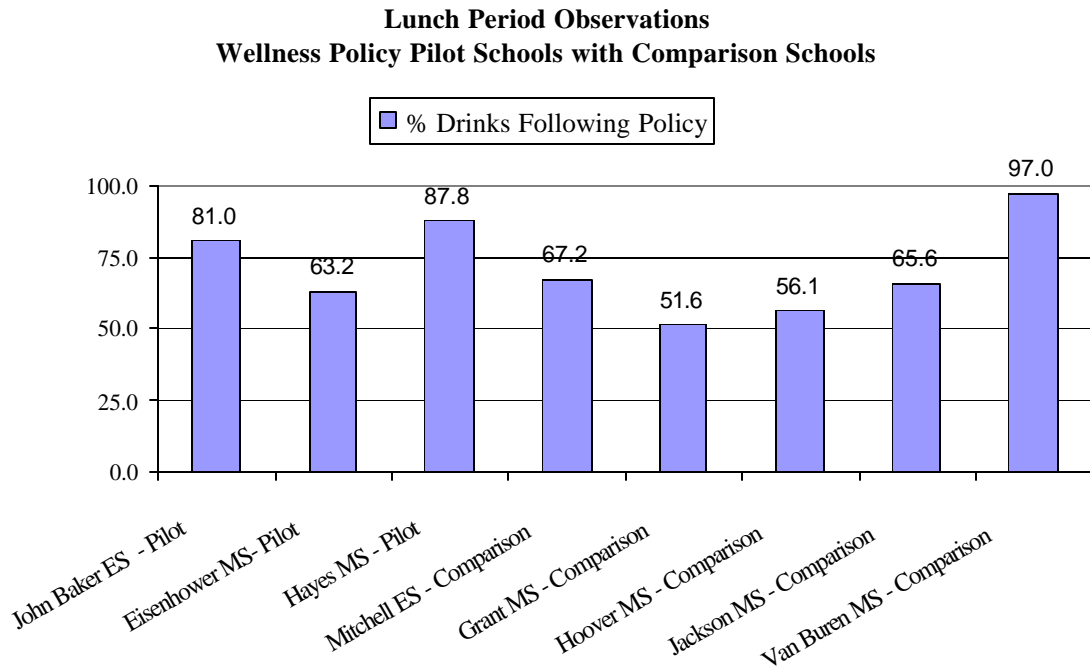
RDA compared information about ALC sales and ADL served over years 2004-05 and 2005-06.

- ES Provision II: The high-poverty ES recorded greater per student a la carte revenue and greater number of ADL when compared to high-poverty non-pilots. Higher ALC revenue suggests that students continued to buy the healthier replacements in snack bars and vending machines in pilot schools.
- MS Provision II: There was no difference between high-poverty pilot and non-pilot MS in ALC revenue in 2004-05 or 2005-06. While pilot MS served fewer average meals than the non-pilot schools in 2004-05, there was no difference between them in 2005-06.
- ES Non-Provision II: There was no difference in the a la carte revenue or average daily meals served between pilot and non-pilot ES in 2004-05 or 2005-06. In other words, students continued to buy competitive foods at the same rate even when they were replaced with healthier alternatives.
- MS Non-Provision II: While there was no difference during the 2004-05 school year, there was a **significant difference** in the a la carte revenue between pilot and non-pilot MS in 2005-06 school year. The non-pilot MS earned about \$2 more per student. Pilot MS served fewer meals in 2004-05 but they served slightly more average daily meals in 2005-06.

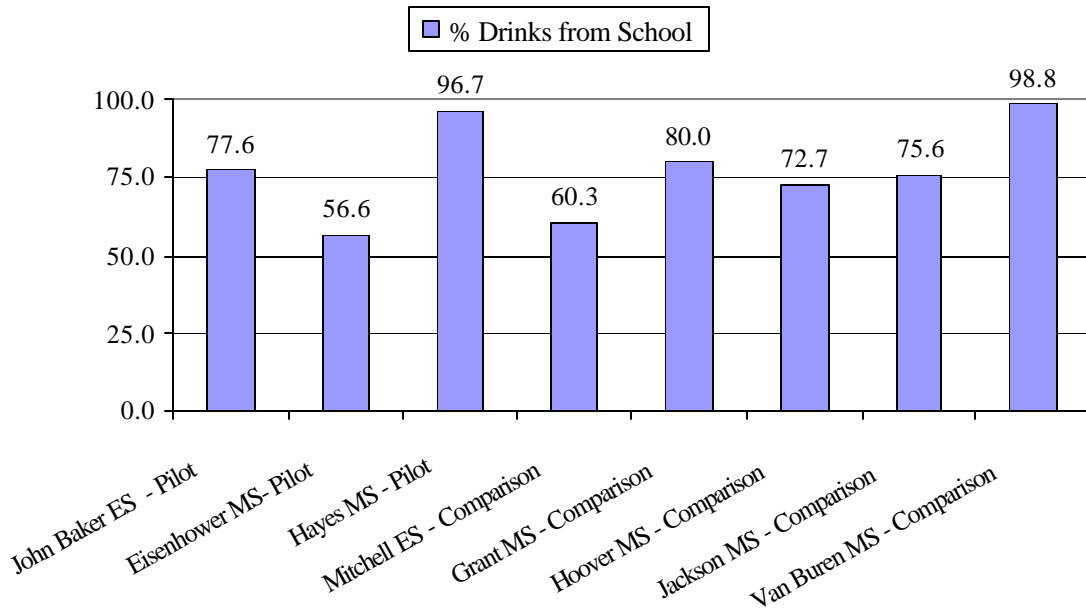
Lunch Period Observations

Trained observers went to pilot and comparison schools and systematically recorded information about the types of beverages students consumed and whether they purchased the beverages in the school or elsewhere. There were three pilot schools and five comparison schools in the lunch observation study sample. One of the comparison schools was a high-poverty Provision II school. Although the school sample size is small, lunch period observations supported the findings from other data sources reported elsewhere in this report.

- Two of the three pilot schools demonstrated that over 80% of the drinks were within the nutrition policy directives and were purchased at the school outlets.
- The school's income level was an important dynamic. The high-poverty school in the sample where all students received free meals showed the highest proportion consumed within-policy guidelines beverages. Although it was not a pilot school, almost all the students were drinking within-policy beverages purchased on the school premises. By contrast, in a low-poverty APS pilot school, observers found that a third of the drinks were non-policy drinks and half of all the drinks came from outside the school.



**Lunch Period Observations
Wellness Policy Pilot Schools with Comparison Schools**



Principal Interviews Conducted by Food and Nutrition Services – Key Comments

A Food and Nutrition Services team interviewed eight elementary and middle school principals during February 2006 about their experience with the pilot project and implementing changes in food and beverage selection outside the school lunch plan. Principals were asked to share steps taken toward implementation, key factors that led to their success, and lessons learned. Here is a small sample of principals' comments and concerns:

- Most started a health committee or team to help implement changes
- It often takes a local "champion" to get things started and keep momentum
- Excited about offering students healthier choices
- Some want to extend the change to staff
- Concerns about loss of revenue
- Seeing unhealthy food brought from outside of school
- Confusion about enforcement.

Observations and Recommendations on the Implementation of Nutrition Guidelines

- Lunch period observations in the low-poverty pilot mid school showed that students brought non-policy drinks from outside at a significant rate. Perhaps the parents were not fully informed or aware of the new nutrition policy in their school. RDA recommends that there should be a repeated and conscious effort to communicate the school's nutrition guidelines and expectations about healthy choices to the parents and students through newsletters, PTA, and a variety of other avenues.
- During lunch observations, students in at least one pilot mid school pointed out that new nutrition standards has meant smaller beverage size in vending machines. As a result they buy more drinks spending more money and end up consuming a higher quantity of sugar. For the nutrition guidelines to achieve the intended purpose of reducing the amount of sugar in drinks, nutrition standards should specify lower sugar percentage as well as smaller volume for drinks.
- Before our district attempts to expand the nutrition policy beyond the pilot schools, the district will have to reconcile the expectations of the wellness policy standards (both federal and state) with existing vendor contracts.

Appendix A

Nutritional Standards Developed in 2004

Elementary Schools

VENDING

- No food vending allowed.
- Beverage vending only allowed after the last lunch period can only provide:
 - Water
 - Milk 2% fat or less
 - Soy milk

A LA CARTE

- **A la carte foods allowed only during the lunch period:**
 - Contain 400 or fewer calories per container, package or amount served
 - Contain no more than 16 grams of fat per serving with no more than 2 grams from saturated and trans fat combined.
 - No more than 30 grams of sugar/container, package or amount served.
 - **with exception of nuts, seeds, cheese, and yogurt products.*
- **A la carte beverages allowed only during the lunch period:**
 - Water
 - Milk 2% fat or less
 - Soy milk

Middle Schools (6-8)

VENDING

- **Foods allowed after the last lunch period only:**
 - Contain no more than 200 calories per container/package or amount served.
 - Contain no more than 8 grams fats per serving with no more than 2 grams from saturated and trans fats.
 - No more than 15 grams of sugar/package
 - **with exception of nuts, seeds, cheese, and yogurt products.*
- **Beverages allowed any time:**
 - Water
 - 100% fruit juice that has no added sweeteners and no more than 125 calories/container and a serving size not to exceed 20 oz.
 - Milk 2% fat or less
 - Soy milk

A LA CARTE

- **A la carte foods allowed only during the lunch period:**
 - Contain 400 or fewer calories per container, package or amount served
 - Contain no more than 16 grams of fat per serving with no more than 2 grams from saturated and trans fat combined.
 - No more than 30 grams of sugar/container, package or amount served.
 - **with exception of nuts, seeds, cheese, and yogurt products.*

- **A la carte beverages allowed only during the lunch period:**
 - Water
 - 100% fruit juice that has no added sweeteners and no more than 125 calories/container and a serving size not to exceed 20 oz.
 - Milk 2% fat or less
 - Soy milk

High Schools (9-12)

VENDING

- **Foods allowed anytime:**
 - Contain no more than 200 calories per container/package or amount served; contain no more than 8 grams fats per serving with no more than 2 grams from saturated and trans fats.
 - No more than 15 grams of sugar/package
 - **with exception of nuts, seeds, cheese, and yogurt products.*

- **Beverages allowed any time:**
 - Water
 - At least 50% fruit juice that has no added sweeteners and no more than 125 calories/container and a serving size not to exceed 20 oz.
 - Milk 2% fat or less
 - Soy milk

- **Beverages allowed after the last lunch period:**
 - Sugar-free & caffeine free soft drinks
 - Non-carbonated flavored water with no added sweeteners
 - Sports drinks

A LA CARTE

- **A la carte foods allowed only during the lunch period:**
 - Contain 400 or fewer calories per container, package or amount served
 - Contain no more than 16 grams of fat per serving with no more than 2 grams from saturated and trans fat combined.
 - No more than 30 grams of sugar/container, package or amount served.

- **with exception of nuts, seeds, cheese, and yogurt products.*
- **A la carte beverages allowed only during the lunch period:**
 - Water
 - At least 50% fruit juice that has no added sweeteners and no more than 125 calories/container and a serving size not to exceed 20 oz.
 - Milk 2% fat or less
 - Soy milk

Fundraising for elementary schools

During normal school hours

- No food fundraisers
- Beverages allowed as fundraisers except during lunch period:
 - Water
 - Milk 2% fat or less
 - Soy milk

Outside of normal school hours - Follow same guidelines for middle and high schools outlined below.

Fundraising for middle and high schools

During normal school hours

- Beverages and food products can be sold as fund raisers in middle and high schools during normal school hours, except for during the lunch period and must meet requirements outlined for vending as per grade level above.

Outside of normal school hours

- Beverages and food products may be sold as fundraisers outside of normal school hours for elementary, middle and high schools provided that at least 50% of the offerings meet the following requirements:
 - Beverages:
 - Water
 - At least 50% fruit juice that has no added sweeteners and no more than 125 calories/container and a serving size not to exceed 20 oz.
 - Milk 2% fat or less
 - Soy milk
 - Foods:
 - Contain no more than 200 calories per container/package or amount served,
 - Contain no more than 8 grams fats per serving with no more than 2 grams from saturated and trans fats.
 - No more than 15 grams of sugar/package, container or amount served.
 - **with exception of nuts, seeds, cheese, and yogurt products.*

Appendix B

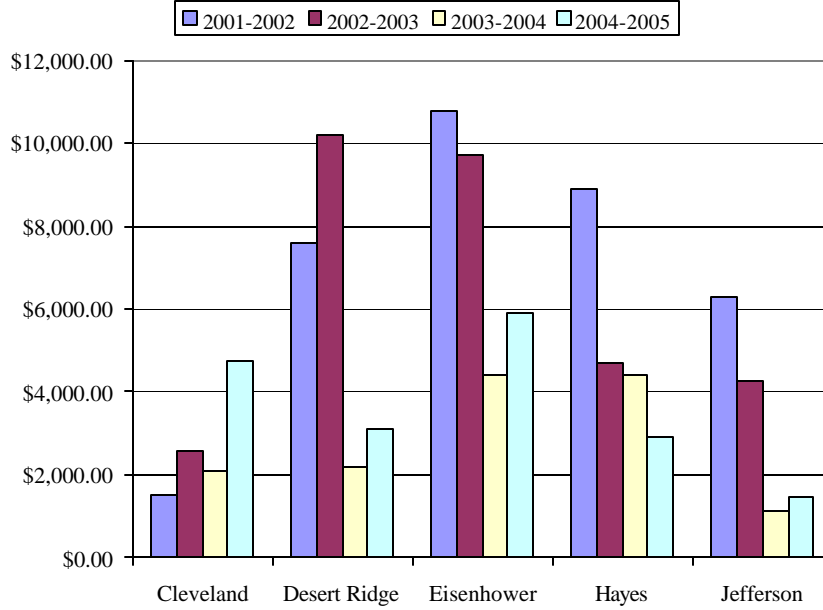
PED Guidelines - Nutritional Standards 2006

For Appendix – PED nutrition: competitive foods rule (6.12.5 NMAC). OR you can download the entire rule at

http://www.ped.state.nm.us/div/sipds/health/dl/022706_docs/6%2012%205%20NMAC%20Nutrition%20Rule.pdf.

Appendix C

**School Commissions From Pepsi Vending Machines
Pilot Middle Schools (N=5) Grand Totals**



**School Commissions From Pepsi Vending Machines
Pilot Middle Schools (N=5) Grand Totals**

