

foods that are completely new to them; and 69% of millennials and 65% of generation z (born between mid-90s and mid-2000s) find plant-based and plant-forward eating appealing. According to the survey, these positive trends seem to be consistent across all regions in the United States. (See compelling [video](#) on plant-based trends in foodservice).⁴⁵

A 2014 Vegetarian Resource Group Harris Poll of more than 1,200 young people estimated that four percent of 8- to 18-year-olds (about 1.5 million kids) identified as vegetarian and/or vegan,⁴⁶ while 32 percent of youth polled said they eat one or more vegetarian meals a week. Demand for plant-based milk alternatives is also high, especially among minority students. Approximately 95 percent of Asians, 60 to 80 percent of African Americans, 80 to 100 percent of American Indians and 50 to 80 percent of Hispanics are lactose intolerant.⁴⁷ Offering more plant-based milk options is critical given that these groups represent a significant portion of public school students.⁴⁸

E. Institutional Support and Commitments for Plant-Based Foods

Institutional commitments to serve healthy, climate-friendly food through efforts like the [Good Food Purchasing Program](#), [Meatless Monday](#), [California Thursdays](#) or “Lean and Green” days helps ensure long-lasting structural changes that are not dependent on the leadership of one or two people. Much of the progress around institutional shifts over the past decade can be attributed to the valuable tools and support provided by organizations and initiatives such as the [GFPP](#), [Meatless Monday](#), [Lean and Green Kids](#), Chef Ann Foundation’s [More Plants Please](#), [Forward Food](#), [California Thursdays](#), [Farm to School Network](#), [Physicians Committee for Responsible Medicine](#), [Wellness in the Schools](#), [FoodCorps](#) and [Coalition for Healthy School Food](#). Find more information on

the resources and support these organizations can offer districts in Appendix B, p. 36.

The GFPP, first adopted by the City of Los Angeles and Los Angeles Unified School District in 2012, is notable for its comprehensive standards-based framework that uses public procurement to promote local, healthy, sustainable, fair and humanely produced foods, including climate-friendly foods. The Program’s animal welfare and environmental sustainability standards encourage reduced purchases of conventional animal products. For example, **reducing the carbon and water footprint of animal products** by 20 percent over five years is one option for meeting the minimum environmental standard. Other institutions that have formally adopted the Program are the San Francisco, Oakland, and Chicago school districts, the City of Chicago and Cook County (Chicago area). In total, 28 public institutions in 14 cities participate in the Program, including seven school districts that are moving toward adoption. The GFPP recently announced an important partnership with the [Urban School Food Alliance](#) that will bring even more school districts into GFPP’s comprehensive climate-friendly five-value framework.

Meatless Mondays: Making A Difference

Nationwide, 261 districts have participated in Meatless Mondays, with 148 schools committed to offering meatless menus every week. A recent study⁴⁹ found the program has had an extraordinary impact on the environment and animal welfare over a five-year period:

- 399 million meals converted to meatless
- 595,547 tons of carbon dioxide equivalent saved (equal to 1.4 billion less auto miles driven)
- 10.3 million animals saved

Section II. Case Studies: Four Districts Pioneering Climate-Friendly Food

This section details the foodservice programs of four pioneering school districts in Novato, California; Lee County, Florida; Santa Barbara, California and Boulder Valley, Colorado. In each of these districts, we interviewed the foodservice director or purchasing manager to capture the story behind the impressive transformation toward healthy, fresh and climate-friendly food. While recognizing that foodservice must be context-specific, these case studies offer replicable and adaptable strategies for increasing plant-based menu offerings including:

creative recipes, community collaboration and engagement, nutrition education and budget balancing approaches. They reveal that climate-friendly food relies on many of the same strategies that support fresh, farm to school purchasing and scratch-cooked meals. These districts are simultaneously pioneers of climate-friendly food and powerful leaders in the larger movement for healthy school food. We hope these stories inspire and empower more districts to take the path toward healthy, climate-friendly foodservice.

NOVATO UNIFIED SCHOOL DISTRICT

Miguel Villarreal arrived at Novato Unified School District in 2002 from Plano Independent School District in Texas, a much larger district where he managed around 300 employees. He noticed that “beautiful Marin County” was a highly productive agricultural region with abundant organic farms and ranches. Yet he quickly realized that no regional produce was served in the schools, and in his words, “that just didn’t make sense.” He entered Novato USD, a relatively small district, with a large school district mindset. This mindset, according to Miguel, enabled him to improve the quality of the food and increase the amount of plant-forward and plant-based meals. Smaller districts have fewer human resources, so he contacted organizations that could help advance his vision of healthy, climate-friendly food. Miguel was empowered, resourceful and dedicated to educating Novato’s community along the way, which proved essential to making positive and lasting change.



Miguel Villarreal,
Foodservice Director

“Today there is no reason why any foodservice Director shouldn’t be providing plant-based options.”

At A Glance

7,500 total students
\$2.15 million total budget
\$700,000 food budget (1.25/lunch)
4,000 meals served /day
720,000 meals served /year 4,000 meals /day
38% free & reduced meals
60% speed scratch
40% heat & serve

Self operated foodservice, with a central distribution center, onsite kitchens & no central kitchen

Plant-based or vegetarian options at every meal & 100% meatless every Monday

Plant-forward menu transitions start locally

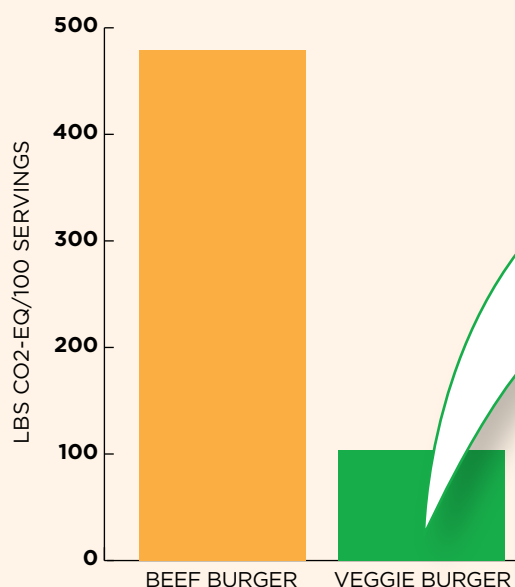
Miguel’s “first phase” was to introduce more local and organic vegetables into the cafeteria. In the early 2000s, he worked with Marin Organic’s School Lunch and Gleaning Program (harvesting produce that would otherwise be left in the field) in order to obtain high-quality local, organic produce from farmers at

an affordable price. Miguel then connected with local farmers to increase the amount of fresh ingredients served. These shifts slowly changed the perception of school food in the community and helped build trust for future shifts.

In 2008, six years after arriving in Novato, Miguel eliminated beef. This bold move was grounded in a larger goal to eliminate highly processed food from the menu. After the eighth national recall of beef

The Power of One Recipe Swap: Veggie Burger

Source: *EPA GHG Calculator*



Over 10 years of serving a **VEGGIE BURGER** instead of a beef burger, Novato Unified has saved **1.3 million lbs of CO₂ emissions**

equivalent to



1.5 million miles driven

OR



burning
70,000 gallons
of gasoline

OR



planting 15,000 seedlings & letting them grow for 10 years

NOVATO UNIFIED SCHOOL DISTRICT



Source: Novato Unified School District

during his tenure as a foodservice director, Miguel decided that instead of serving cheap, unhealthy and environmentally-damaging beef, he would not serve any at all. “Initially my superintendent asked if I was nuts,” Miguel recalls.

Miguel succeeded by educating the community through school food events and writing board reports that explained every food shift he made. He also created a precedent a few years earlier by eliminating chocolate milk from the menu. “The education took time, but now there’s so much data out there, so it won’t take as long to get people on board,” he explains.

The district serves plant-based options at every meal and features creative recipes such as the plant-forward chicken taco (one of the most popular entrees, Miguel says). Novato USD also frequently serves a veggie burger and mixes up the daily menu with plant-based burritos, chili bean bowls, and sunflower seed butter sandwiches. Plus, students can always make 100 percent plant-based meals from the salad bar.

Collaboration with outside partners is key to success

From the beginning, Miguel has collaborated with numerous organizational partners, who have assisted with menu planning, nutrition education and leadership. These include Meatless Mondays, Chef Ann Foundation and the Culinary Institute of America’s Healthy Kids Collaborative. Novato Unified has also partnered with the Golden Gate Dietetic Internship Program, which provides interns to help with menu planning and nutrition education.

Miguel also works with Wellness in the Schools to bring a chef into the district to lead student culinary labs. Elementary school students aged 5 to 11 receive at least one 50-minute kitchen lab experience, where students learn to prepare foods like hummus, kale salad, tomato sauce, balsamic vinaigrette and more.

So far, they reach 3,000 students each spring and fall semester. Since launching the program, Miguel has observed increased consumption of these foods in the cafeteria and he credits nutrition education and taste testing as critical factors in successful menu changes. While teachers and administrators have embraced these programs and asked for more culinary labs in the classroom, their expansion is currently prevented by limited resources.

Strong participation rates help offset costs

Miguel’s resourcefulness allowed Novato to incorporate local fresh ingredients and plant-forward options within tight budget constraints while maintaining steady participation. Miguel admits that when Novato “picked out a day, like Meatless Monday, to get the message out, we saw a decline in participation early on,” but “slowly they inched back up, when it became the norm.” If he could do it over again, Miguel says he might not focus on just one day to feature plant-based recipes. He believes that the district’s taste testing and nutrition education programs have played a key role in educating students about the benefits and deliciousness of plant-forward foods. Miguel refers to current students as the “healthier generation,” with increasing consciousness and receptivity to these menu shifts.

When it comes to incorporating plant-based proteins, cost is still a challenge. When Novato phased out beef in 2008 and switched from hamburgers to veggie burgers, the shift did not save Novato money. The heavily subsidized beef cost 25 cents per portion, half the price of the Morning Star veggie burger that replaced it. This is one major challenge for K-12 foodservice. To overcome the higher cost of the veggie burger, Miguel offsets costs by purchasing heavily subsidized USDA Foods products (such as chicken and cheese) and Department of Defense produce, which are much cheaper than market prices. This saves enough money for Novato to afford more fresh, local ingredients and more expensive items like the veggie burger.



Source: Novato Unified School District

SCHOOL DISTRICT OF LEE COUNTY, FLORIDA

Students are receptive to “healthy & fresh” messaging

Amy Carroll started working as Lee County School District’s food procurement supervisor in 2017. She became familiar with the growing interest in plant-based meals among the younger generation initially from her pre-teen daughter, who decided to become a vegetarian when she was eleven.

In 2015, with encouragement from the Humane Society of the United States’ Forward Food Program, Lee County, the 32nd largest school district in the country, instituted a Lean and Green Friday — an entirely plant-based day focused on health and nutrition. The district highlights the positive health and nutritional qualities of the meals (especially the fresh ingredients), rather than the vegetarian or meatless aspect. Using social media and educational cafeteria signage, the district demonstrates the health and environmental benefits of Lean and Green days. Sometimes they promote individual ingredients and highlight the specific nutritional benefits and local sourcing.

Lee County also hosts events like “Farm to Table” days and will implement “Taste It Tuesday” (where students can try different fruits and vegetables and new recipes), which builds enthusiasm for plant-based meals. Amy is convinced that this positive messaging is key to the overwhelming support among



Amy Carroll, RD
Supervisor, Food
Procurement

“For us it was just a healthy food transition.”

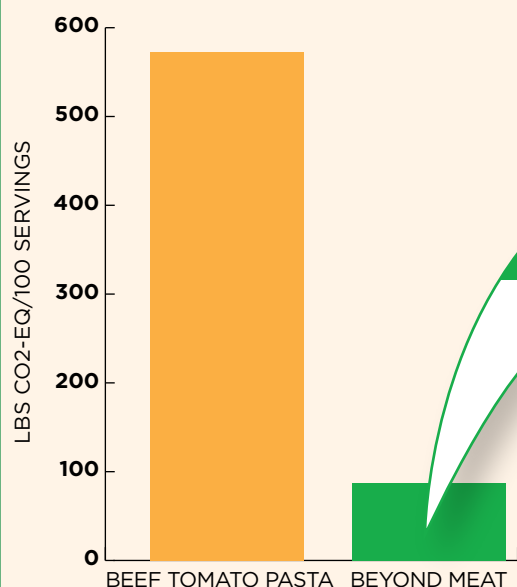
At A Glance

93,221 students (32nd largest in the U.S.)
\$59.5 million total budget
\$17 million food budget (\$1.40/lunch)
32,627 breakfasts /day 55,937 lunches /day
14 million meals served /year
95% free & reduced meals
Limited speed-scratch cooking
Self-operated foodservice Onsite kitchens & no central kitchen Plant-based option at every meal and 100% meatless day every Friday.

students and the community. In fact, Amy says she has only heard feedback asking for more plant-forward menus. Currently, at all of Lee County’s high schools and middle schools, food courts offer a vegetarian option (e.g., veggie entree salad) every day, as do the elementary schools. In response to student enthusiasm, Lee County is planning to pilot a separate vegetarian line in the high school food courts, which would be one of 10 distinct food lines at the high schools.

The Power of One Recipe Swap: Beyond Meat Tomato Pasta

Source: [EPA GHG Calculator](#)



In 2016, Lee County School District implemented a (meat-free) Lean and Green Friday and eight times per year started to serve a pasta with **BEYOND MEAT CRUMBLE TOMATO SAUCE** to replace a beef tomato pasta. Over two years this swap alone has reduced Lee County’s footprint by **2.3 million pounds of CO2 emissions**.

equivalent to



2.6 million
miles driven

OR



burning
120,000 gallons
of gasoline

OR



planting 30,000
seedlings &
letting them grow
for 10 years

SCHOOL DISTRICT OF LEE COUNTY, FLORIDA

Popularity of plant-based recipes varies across cultural groups.

As Amy explains, “Lee County is so big, something might be popular in one segment of the county but be totally different across town,” highlighting the need to serve culturally appropriate plant-based foods and conduct taste tests at different schools to gain broad acceptance. While several vegetarian recipes were popular throughout the district (e.g., mac and cheese, pasta spirals and tomato sauce made with Beyond Meat plant-based crumbles), other recipes only worked with select populations. For instance, many Latino students didn’t like the flavor of the Fiesta Bowl (bean and cheese) and found it inauthentic, whereas non-Latino kids across town loved it. Amy found that the schools with a curriculum focused on the arts were particularly positive about plant-forward menus. Other food interests are harder to track: “Hummus wraps can be very popular in some schools and less popular in others.” Amy notes, “it’s just hit or miss.” Next year the schools will feature new hummus flavors and add hummus wraps to the grab-n-go section, Amy says. Lee County schools are exploring new creative recipes vetted by students, including a black bean gyro with tzatziki (yogurt sauce), which has been a “total hit” with students so far. In order to support culturally appropriate menu planning, Amy encourages districts in the same region with similar demographics to communicate and share recipes and marketing strategies.



Student enjoys Beyond Meat pasta spirals. Source: Lee County School District

Leadership from the top and outside resources help support plant-based menus.

Like many districts, Lee County successfully capitalized on support from non-profits and community-based organizations to make its plant-based improvements. The Humane Society’s Forward Food Program provided Lee County with culinary training and supported its launch of the Lean and Green Friday program. Amy emphasizes that leadership and support from the superintendent helped smooth the transition to plant-forward food. As a farmer, the superintendent had a strong interest in getting more local fresh fruits and veggies into the cafeterias, and the district is now hoping to invest in a salad and fruit bar in every school.

Making plant-forward meals affordable.

Amy has found that most of the vegan and vegetarian options (e.g., veggie entree salad and bean and cheese burrito) do not cost the district extra money. One exception is the plant-based Beyond Meat Pasta, which costs 71 cents per serving compared to the heavily subsidized ground beef spaghetti at 44 cents per serving. However, the beef spaghetti has much larger hidden health and environmental costs, with a carbon footprint seven times that of Beyond Meat Pasta. The Beyond Meat Pasta is served once a month, so the slightly higher cost is worth the benefits it provides to the students and the environment.

After the devastation of Hurricane Irma in the fall of 2017, a need for greater community assistance meant that the district now qualifies for a 100 percent free breakfast and lunch program. As a result, Lee County will receive the highest level of federal reimbursements, providing more budget flexibility to invest in greater food quality. Lee County is also considering sampling new, pre-made, plant-based products like breaded tofu nuggets ([Asian Food Solutions](#)).



Black bean burger gyros with tzatziki sauce Source: Lee County School District

SANTA BARBARA UNIFIED SCHOOL DISTRICT, CALIFORNIA

A strong culinary vision can shift foodservice culture.

Before becoming foodservice director in 2008, Nancy Weiss was a restaurateur focused on scratch cooking with high-quality local and organic ingredients. When she started in school food, Nancy saw a need to introduce the restaurant model and ethic to the cafeteria. This meant taking more care in cooking and food purchasing in order to increase food quality. The “frozen to oven, fast-food model needed to be cleaned up,” she says. The school board hired Nancy to pursue this vision.

Prior to taking on the role, she worked as a cook in the SBUSD cafeteria, observing how things could be improved. Her first step as director was to connect the school district to the local farming community. “By introducing the farmers to the school food program, energetically I was already making the swing in a positive direction, which was infectious,” she says. “People started to listen; and the more they listened, the more participation; and the more participation, the more money from the federal government; the more money, the better the staff and the better the food.”

Strategic partnerships and community engagement support food shifts.

Nancy has partnered with the [School Food Initiative](#),



Nancy Weiss,
Foodservice Director

*“Eat to live, live to learn
and learn to eat!”*

At A Glance

14,546 total students

\$9.1 million total budget

\$2 million food budget (\$1.28/meal)

\$390,000, USDA Foods allocation

8,050 lunches served /day

1,449,000 lunches served /year

50% free & reduced meals

Nearly 100% scratch cooking

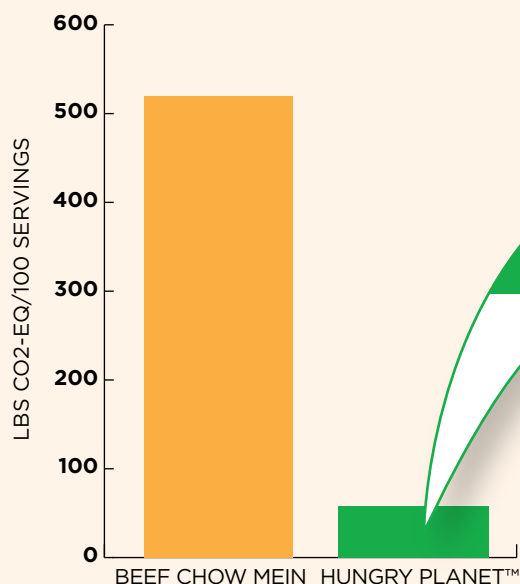
Self-operated foodservice with 11 production kitchens including 5 satellite kitchens (with no food prep) and 28 locations district-wide

Hot, plant-based option at every meal, one or two meat-free days per week.

the [Chef Ann Foundation](#) and the Humane Society of the United States' [Forward Food](#) Culinary Training Program, receiving valuable assistance with procurement, menu planning and education. The School Food Initiative (which has since closed) was particularly instrumental in providing infrastructure grants, local food sourcing assistance and culinary training to promote scratch cooking. The initiative also helped fund seven food trucks (called the Mobile

The Power of One Recipe Swap: Hungry Planet™ Chow Mein

Source: [EPA GHG Calculator](#)



In 2016, Santa Barbara Unified started featuring HUNGRY PLANET™ plant-based proteins on the menu, allowing one-for-one replacement of meat-centric recipes. One such replacement was the beef chow mein for the Hungry Planet™ chow mein, which alone has reduced the district's carbon footprint by **300,000 pounds of CO2 equivalent emissions over two years.**

equivalent to



**300,000
miles driven**

OR



**burning
15,000 gallons
of gasoline**

OR



**planting 3,500
seedlings &
letting them grow
for 10 years**

SANTA BARBARA UNIFIED SCHOOL DISTRICT, CALIFORNIA

Cafe) that serve delicious food to both students and community members. “The food trucks are hip and build a positive association with school food,” Nancy says. “Food got more attention, a positive buzz developed about the improved quality of the food, and students and parents began to trust the food more.” The food trucks operate in the summer, giving students more exposure to new foods, engaging the community and increasing revenue, all of which enabled Nancy to make menu changes without sacrificing participation.

The Santa Barbara Unified School District participates in an annual Earth Day festival, which draws 30,000 people over a weekend in April (2018). The Mobile Cafe food truck is present, educating the community about the type of whole foods meal program SBUSD operates. Nancy noted, “We sold out both days this past April, as we highlighted Hungry Planet™’s 100% plant-based products, in a chicken chili verde burrito, hamburger, and meatball sub.” In 2017, Nancy received the U.S. Congressional Woman of the Year Award and the Physicians Committee of Responsible Medicine’s Golden Carrot Award. These accolades affirmed her work and amplified the positive perception of the school food program.

Make plant-forward meals delicious by serving what appeals to the customer.

When Nancy started, SBUSD’s foodservice was losing money; in her first year, it was still not profitable. She explains that she was overzealous, offering complex and unfamiliar dishes like a tandoori veggie wrap and eggplant scaloppini. In her second year, she increased student interest by adapting the food to the cultural context of the community — starting with more familiar foods like tacos, lasagna and burgers, and enhancing them through scratch cooking, including plant-based options like veggie lasagna with tofu and a BBQ tofu sandwich. Offering these familiar foods that kids seemed to like increased participation and put the program on firmer financial ground, enabling employees to be paid a living wage.

In 2016, Nancy brought in [Hungry Planet™](#) a plant-based meat company, which now constitutes most of the district’s plant-based options. The company’s fleet of plant-based meats (using non-GMO soy protein to create beef crumble, beef burgers and chicken strips) make it possible to serve a hot, nutritious option at every meal and eliminate meat on some days. Students have been very receptive to these climate-friendly plant-based or vegetarian spins on classic school meals, such as the beef taco and beef chow mein. In fact, most students chose the plant-based sausage and veggie pizza, even when served alongside the meat option, “BBQ bone-in chicken.”

Nancy’s most popular plant-based entrees include: tacos, nachos, chow mein, plant-based cheeseburger with coconut-based vegan cheese, spaghetti and plant-based meat sauce, plant-based crispy chicken burger and plant-based meatball subs with marinara. She explained that all Hungry Planet™ products are void of fat, so you do need to add fat and some flavor. Although these products are processed, they give Nancy the ability to supply scratch-cooked meals with plant-based protein that kids love. Reflecting on her success in expanding meat-free foods, Nancy explains: “If we want to make an impact, we need to do it at volume and do it with foods kids will come back to. If my kids won’t eat it, it’s a waste of labor and food.”

Meat replacement products can be made more affordable.

It has taken some finesse to make the transition to Hungry Planet™ economically viable within a tight budget. Even at a discounted rate, Hungry Planet™ products cost \$3.45 per pound. So, Nancy saves by using her USDA Foods entitlement dollars on meat and cheese products that are the most expensive items, then uses the remaining entitlement money on canned fruit (for smoothies), canned pinto beans and flour. This provides more flexibility to buy fresh local ingredients and pre-made plant-based proteins from Hungry Planet™. Nancy has boosted participation in other creative ways to capture more reimbursement dollars:

- The district now has a more robust supper program with strong participation and reimbursement rates.
- The department operates seven “Mobile Cafe” food trucks, providing greater reach in the community for supper and summer meal service.
- The Summer Foodservice Program feeds over 2,000 kids daily.
- The Child and Adult Care Food Program serves free supper daily to over 1,000 children.
- The district has a full-service catering division.

All of these operations are amplified with effective marketing strategies. For example Santa Barbara never uses the word “vegan.” Instead, a diamond at the top of the item reads a variation of: prepared from scratch, local, organic, proudly sponsors Hungry Planet™, 100 percent pure protein or soy delicious. This type of positive framing can make a huge impact in boosting participation and student acceptance of plant-based meals.

BOULDER VALLEY SCHOOL DISTRICT, COLORADO

Lead with vision and take chances.

Ann Cooper is a K-12 foodservice visionary. Years before entering the school food world, Ann was a fine dining chef. Her school foodservice career began as director at Ross School in East Hampton, New York, where she transformed the menu to seasonal and sustainable. She was then recruited by Alice Waters to transform school food in Berkeley, California before taking the helm in Boulder.

Ann has led Boulder's district to become one of the most successful school food operations in the country. Since Ann began nine years ago, BVSD has prioritized scratch cooking and local and organic sourcing whenever possible. The kitchen avoids using highly processed foods, high fructose corn syrup, chemicals, dyes or food additives.

Plant-forward or vegetarian options are offered daily at every meal, along with salad bars stocked with fresh, delicious and often local farm produce. BVSD is the first REAL certified school district in the country, recognizing the district's excellence in implementing healthy and sustainable food goals. Boulder has received 39 USDA Healthier U.S. School Challenge awards and is the only school district on the Good Food 100 Restaurants List. Ann also helps other school districts through her non-profit, the Chef Ann Foundation, which aims to "provide school communities with the tools, training,



Ann Cooper,
Foodservice Director

"We know our mission is to serve kids healthy food and educate them about healthy food, and that's what we do."

At A Glance

31,000 total students

\$8.8 million total budget

\$2.6 million food budget
(\$1.25/lunch)

13,000 meals served /day

2,219,000 meals served /year

19.4% free & reduced meals

95% scratch cooking

Self operated foodservice,
3 regional production kitchens
(planning central kitchen for
2019-20).

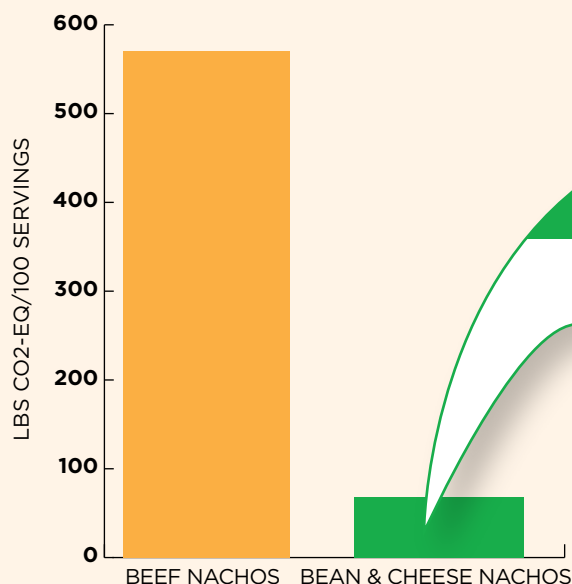
Plant-based every day (plus 25%
regional)

resources, and funding to create healthier food and redefine lunchroom environments."

Ann says her experience working in high-end restaurants makes her "willing to take more chances." "I have two big white boards with my next six-week menu cycles on it. I ask myself, 'how do I sell it?' I'm not worried about pushing the envelope. For example, the day veggie Bibimbap is on the menu, there are red

The Power of One Veggie Option: Bean and Cheese Nachos

Source: *EPA GHG Calculator*



Approximately 13 percent of students choose the **VEGGIE NACHOS** when served alongside the Beef Nachos. Over 7 years, just by offering this veggie option, BVSD reduced its carbon footprint by **800,000 pounds of CO2 equivalent**.

equivalent to



900,000
miles driven

OR



burning
41,000 gallons
of gasoline

OR



planting 9,000
seedlings &
letting them grow
for 10 years

BOULDER VALLEY SCHOOL DISTRICT, COLORADO

pork tamales and a chicken dish. We can take chances, and even if the vegetarian dish doesn't sell well, something else will. But for a lot of other people, they can't take a chance to lose Average Daily Participation (ADP). It's like a menu mix, if the total overall works out, it's okay," she says.

Creative funding strategies help pay for better food.

BVSD features a robust catering program that helps fund their local and regional purchases and their quality plant-based menu items. This "School Food Project" program includes food truck catering and event catering marketed to the public for events, parties and meetings, as well as classroom celebrations. Rather than a parent bringing in a cake or pizza, kids can have a pizza party prepared by the school foodservice staff, with items such as vegetable crudité, hummus or quesadillas. The catering business helps raise money for the program and boosts exposure for their work.

Community events and nutrition education can increase participation.

Ann and her staff participate in more than 200 events a year teaching kids "what we eat matters." These

events range from menu tastings to "A Taste of BVSD Food Festival." The tastings, Ann says, "provide an opportunity for students to try samples of our menu items and Harvest of the Month featured produce." "It's challenging to get anyone to change eating habits," said Ann. "But we do Rainbow Days, menus tastings, and chef demos, which supports the students trying new flavors and helps make changing their pallets easier."

To deepen kids' engagement, Ann hosts Iron Chef competitions where students can cook what they want to eat for school lunch. "We had 12 teams apply for the Iron Chef this year and we chose six. Every team had to get up and speak about why they chose their dish. We have six teams of kids in middle school talking about plant-forward and really understanding it. It's great."

In this year's plant-forward theme, "kids came up with the menu and the winner was served in schools," Ann says. This year's winner was a traditional tomato soup with pureed chickpeas. "Soups are challenging because of the protein requirement in school foodservice. The kids pureed the chickpeas into the soup and served it with veggie flatbread."



Boulder Valley School District's innovative approaches to educate and engage students:

- "Rainbow Days" introduce elementary students to the salad bar while teaching them healthy fruit and veggie choices (tasting the rainbow) and portion control;
- Chef demonstrations engage secondary students with a sensory approach and encourage them to try new foods;
- Calendar and poster art contests show what local food means to kids;
- Farmer visits enable students to meet BVSD's farmer partners, who grow the beautiful produce for schools' salad bars and lunch menu;
- Farm field trips provide hands-on experiences for students to learn about farm operations, where food comes from and how it is grown;
- "A Taste of BVSD Food Festival" offers parents, students and the community an opportunity to sample high-quality entrees and side dishes while celebrating local food — and connects students and their families with BVSD garden and farmer partners.

Source: Boulder Valley School District

BOULDER VALLEY SCHOOL DISTRICT, COLORADO



Source: Boulder Valley School District

Ramp up plant-based options with whole ingredients.

To expand the variety of vegetarian and vegan options, Ann insists on using whole foods for her plant-based dishes. “I don’t like meat analogues because I want to cook with real ingredients,” she says. “I get that it’s climate friendly, but it’s highly processed and I don’t feel like it’s teaching children anything. To make a chicken nugget that’s plant-based isn’t teaching kids how to eat vegetables.” Ann is also concerned about the manufacturing processes used to produce these meat substitutes, such as protein isolates.

Boulder’s participation numbers have increased (up 29 percent in the nine years since she’s been with the district) as Ann has added more vegetarian options. About 10 to 15 percent of BVSD students choose vegetarian options daily. Next year, she’s ramping up her plant-based game with a veggie ramen with (Meat/ Meat Alternate) protein from tofu and edamame. “We’ve had good luck with Ramen bowls,” she says. “Ethnic food works well. A bean burrito (50% beans, 50% cheese) sells well too and another new item next year is an open-face falafel with tzatziki, which will be vegan, and almost all of our dressings will be vegan with aquafaba.”⁵⁰

Ann is also **blending animal and plant protein to offer more plant-forward entrees.** The Plant-Forward Continuum is a useful framework developed by Ann and promoted by the Chef Ann Foundation. The continuum shows how foodservice directors can incrementally include more plant-based protein that credits as meat or meat alternative or M/MA into dishes — adding first 25 percent plant protein, then 50 percent, then 100 percent. For instance, Boulder Valley has been adding 25 percent (M/MA) beans into the beef nachos, reducing the cost and enabling the district to buy higher quality local beef. Blending is not only more climate-friendly, it also supports more purchasing of local and fresh products.

Policy limitations

Ann acknowledges that plant-based proteins for K-12 students are a challenge due to USDA guidelines and restrictions. “The idea that quinoa is not considered a protein is a problem. We need to figure out a whole foods answer to this. It’s not about highly processed. It’s about how to use whole foods as a plant-based answer.”