ORGANIC, PLANT-FORWARD, SCRATCH COOKED SCHOOL MEALS
A CALIFORNIA CASE STUDY
ACKNOWLEDGEMENTS

This report was written by Kari Hamerschlag, Friends of the Earth; Sarah Arndt, consultant to Conscious Kitchen and Kendra Klein, Friends of the Earth; with editing support provided by Christopher Cook and Ariana Gunderson.

We gratefully acknowledge the following individuals for providing thoughtful input and review of the report: Judi Shils, Conscious Kitchen; Debbie Friedman, Food-Climate Strategies; Lena Brook, NRDC; Leah Smith, consultant; Elizabeth Vaughan, Friends of the Earth; and Julian Kraus-Polk, consultant.

We also wish to thank the following people who provided key data and information, their assistance was invaluable in helping us share the detailed analysis contained in this report: Barbara Jellison, Maria Rodriguez, Dylan Hatami, Martina Sanchez, Teresa Villarreal of West Contra Costa Unified School District Nutrition Services; Jawan Eldridge, Christy Chen, Kelly Carey Peres at K-8 School; Maurice Lewis, Armando Leapheart, and David Finnane at Bayside MLK; Mehreen Amad and Emily Cox at Willow Creek Academy; Guillaume Pfahl, Conscious Kitchen Executive Chef; Sue Waiss, Conscious Kitchen; Keith Schauffel and Carly Wertheim, Chef Consultants; as well as Jonathan Kitchens, Earl’s Organic; Adriana Silva, Tomatero Farms; Dan Sinkay, Mary’s Chicken/Pitman Farms; Karen Salinger, Veritable Vegetable; Al Baylacq, Good Earth Natural Foods; Beatrix Scolari, Straus Family Creamery; and Jeff Lucchesi, Mindful Meats.

We are grateful to the Bronner Family Foundation and Patagonia for their generous support of this case study and Friends of the Earth’s Climate-Friendly School Food Program. Finally, our gratitude to all of the students, school food service workers, school administrators, farmers, food suppliers, activists and anyone we may have unintentionally left off of this list, for helping to provide healthy school meals to California kids.

About Friends of the Earth

Friends of the Earth U.S., founded by David Brower in 1969, is the U.S. voice of the world’s largest federation of grassroots environmental groups, with a presence in 74 countries. Friends of the Earth works to defend the environment and champion a more healthy and just world. Friends of the Earth’s climate-friendly food program helps school districts make the shift towards healthy, delicious, plant-forward menus. We provide technical assistance and marketing materials, support student and community engagement strategies, and link school districts with the resources they need to be successful. We also advocate for state and federal policy change in support of healthy, climate-friendly food.

About Conscious Kitchen

Conscious Kitchen is a scalable and economically-feasible model designed to feed our children healthy, delicious meals that will reduce preventable disease and build community at schools and beyond with kitchens as key hubs, while helping to accelerate the conversion of farmland toward producing a diversified, regenerative, climate friendly, organic supply chain.

Any errors or omissions in this brief are the responsibility of Friends of the Earth U.S. and Conscious Kitchen.

©Copyright December 2020 by Friends of the Earth U.S. and Conscious Kitchen
# TABLE OF CONTENTS

**Executive Summary**................................................................................................................. 04

**I. Introduction**......................................................................................................................... 09

**II. The Social Justice, Public Health, and Environmental Imperatives for Transforming School Food Service**.............................................................................. 11

**III. Case Study: Implementation and Lessons Learned from the Conscious Kitchen Model**................................................................................................... 14

1. Fresh and Scratch Cooked: Investing in Kitchen Infrastructure and Workforce.......................................................... 16
   A. Rationale: Benefits of Fresh, Scratch-cooked Meals.......................................................... 16
   B. Implementation............................................................................................................... 17
   C. Lessons Learned........................................................................................................... 19

2. Expanding Organic and Regional Purchasing via Diverse Food Supply Chains.............................................................................................................. 20
   A. Rationale: Benefits of Organic Sourcing.......................................................................... 20
   B. Implementation............................................................................................................... 22
   C. Lessons Learned........................................................................................................... 23

3. Designing Plant-Forward Menus: Healthy, Cost-Effective and Climate-Friendly Meals................................................................................................................. 24
   A. Rationale: Benefits of Plant-forward Menus.................................................................. 24
   B. Implementation............................................................................................................... 25
   C. Lessons Learned........................................................................................................... 26

4. Food and Packaging Waste Reduction.......................................................................................... 27
   A. Rationale: Benefits of Reducing Waste........................................................................... 27
   B. Implementation............................................................................................................... 27
   C. Lessons Learned........................................................................................................... 28

5. Student and Community Education and Engagement............................................................................ 29
   A. Rationale: Benefits of Education and Engagement......................................................... 29
   B. Implementation............................................................................................................... 29
   C. Lessons Learned........................................................................................................... 30

**IV. The Costs of Transforming School Meal Programs**.................................................................................. 31

   Budget Strategies.................................................................................................................. 32
   Snapshot: Peres Elementary Cost Analysis........................................................................ 33

**V. Recommendations**............................................................................................................... 35

**VI. Conclusion**......................................................................................................................... 37

**Appendix**................................................................................................................................... 38

   1) Background on the National School Lunch Program and Reimbursement.......................... 38
   2) Permitting, Procedures, and Equipment Needs for Scratch Cooking.................................. 38
   3) Greenhouse Gas Emissions of Select Foods......................................................................... 39
A. Introduction

Too often, school meals are made with pre-packaged, highly processed food that is unhealthy for kids, unsustainable for our environment, and produced using an exploited workforce. Fortunately, innovative school food programs are proliferating across the country, demonstrating viable pathways for positive change. As this report reveals, transforming school food service can generate multiple benefits, from improving students’ nutrition, to supporting local organic farmers, to making school food service a source of dignified, well-paid jobs in communities. It can also produce numerous health and environmental benefits that ripple out far beyond the school community.

This report spotlights one alternative, values-based, climate-friendly school food service model developed by the California-based non-profit organization Conscious Kitchen. This model is rooted in providing 100 percent organic, scratch-cooked, and plant-forward meals from low-waste kitchens. We examine three California schools in the San Francisco Bay Area that are currently implementing the Conscious Kitchen model:

- The Sausalito Marin City School District has been operating federally supported meal programs based on the Conscious Kitchen model for 7 years at its two elementary schools, Willow Creek Academy and Bayside MLK Academy.

- Peres Elementary School in West Contra Costa Unified School District (WCCSD) completed a successful 2018-19 school year pilot program.

All three schools are racially diverse, and 100 percent of students at Bayside MLK and Peres qualify for free and reduced meals. Peres is the largest of the schools, serving 536 students, while the Sausalito Marin-City schools serve 505 students combined. Conscious Kitchen provides staffing, resources, and expertise to facilitate schools’ transition. It serves as a one-stop-shop for technical and leadership support, funding, and logistical coordination.

Conscious Kitchen’s long-term goal is for schools to pilot the program, adopt its practices, and eventually fully operate their own on-site and self-sustaining kitchens based on the model.

This report details five strategies, or investments, for school food transformation:

- Serving fresh and scratch-cooked meals through investment in workforce and kitchen infrastructure
- Expanding organic and regional sourcing through diverse supply chains
- Designing plant-forward menus for healthy, cost-effective and climate-friendly meals
- Reducing food and packaging waste
- Educating and engaging students and the school community

CLIMATE-FRIENDLY FOOD SERVICE

Achieves a lower carbon and water footprint by regularly offering healthy, plant-forward, and plant-based menu options. It also cuts emissions by sourcing food from organic and regenerative farms, reducing food and packaging waste, and implementing energy and water saving measures in the cafeteria.

“Considering that many of our students qualify for free or reduced lunch, having a healthy, organic breakfast and lunch available to ALL kids is a powerful way to address equity issues in our community.”

— Emily Cox, Principal, Willow Creek Academy
It also highlights key lessons learned and details the public health, ecological, economic, and social justice benefits that accompany these strategies. While Conscious Kitchen is unique in its comprehensive approach to values-based, climate-friendly school food service, there are many examples of school districts across the nation that are adopting various strategies outlined in this report. The State of California’s 2020-21 budget allocation of $10 million for the Department of Food and Agriculture’s (CDFA) Farm to School Program is an exciting new opportunity that will allow more school districts in California to pursue school food service transformation strategies.

We hope that this case study will inspire leaders at other schools — superintendents, food service directors, principals, teachers, and other stakeholders — to discover which strategies and investments work for them. We also hope that the compelling benefits of this model will inspire greater public and philanthropic advocacy and investment to support a comprehensive transition to healthier, more sustainable school food service.

B. The Imperative For Values-Based School Food Service

By recognizing the hidden health, social justice and environmental costs of the dominant industrial school food paradigm, this case study envisions how to shift resources toward a values-based paradigm that incorporates social, health, and environmental values. Instead of spending the $14 billion of taxpayer dollars used in the National School Lunch Program to exacerbate an unhealthy and unjust system, we must begin to invest in school food programs that center human and planetary health. Since the 2010 Healthy, Hunger Free Kids Act strengthened nutrition guidelines, school food has improved. Kids eat more fresh fruits and vegetables, and school garden, nutrition programs, and farm-to-school programs are more widespread. Yet, highly processed food still dominates school menus, and efforts to improve school meals are hindered by lack of kitchen infrastructure and scratch-cooking capacity and complex regulations, low reimbursement rates, and industry influence over policy.

This case study offers key lessons for how school districts were able to overcome these challenges with significant technical and financial support from an outside group, Conscious Kitchen. While the coronavirus pandemic’s economic effects will make investing in healthier school food more difficult, it also highlights the importance of investing in healthy food for schools. Diet-related diseases, which are most prevalent in BIPOC communities (Black, Indigenous, people of color), are among the strongest predictors of whether an individual infected with the virus will require hospitalization or even die. These health disparities emerge early in life. For example, Hispanic and Black youth have significantly higher rates of obesity than white children. The majority of students eating meals at school are low-income and disproportionately students of color. Because these students disproportionately rely on school meals as a primary source of nutrition, improving school meal quality is a compelling point of intervention to mitigate racial health disparities from an early age.

C. Key Strategies And Benefits Of School Food Service Transformation

1. Investing in scratch cooked meals is an investment in higher quality jobs, gender and racial equity, and tastier food that increases equitable participation in school meals.

Making fresh, delicious scratch-cooked food requires upgrading kitchen infrastructure, training kitchen staff, and hiring skilled cooks who use quality ingredients and recipes. Many school kitchens are in a state of disrepair due to underinvestment over the last forty years as districts have shifted to centralized, pre-packaged and outsourced food production.

Conscious Kitchen helped the three schools in this case study invest in food service jobs as well as in kitchen equipment and upgrades. Equipment upgrades in the Sausalito Marin City School District cost approximately $30,000 per kitchen. Once these investments were made, scratch-cooked food became the most cost-effective way to create meals.
**BENEFITS:** Scratch cooking requires more labor, which means investing in full-time school food jobs that generate higher incomes, more work hours, health care, and benefits. Scratch meal preparation also results in increased training opportunities that build transferable skills. Across all three schools, eight full time equivalent jobs were created, in contrast with typical school meal programs that employ primarily part-time staff. Investing in the school food service workforce advances justice and equity since most school lunch workers are women and women of color. Surveys found that kids also prefer fresh, organic scratch-cooked meals. When kids like school meals, full-paying students are more likely to participate. At Willow Creek Academy, the higher quality food increased participation rates from paid students. This created a more equitable school food service environment that helped reduce the stigma around school lunch while also increasing revenue for the school meal program.

2. **Sourcing organic food reduces exposure to toxic pesticides, benefits the environment, and when sourced from regional distributors, can create jobs in the regional food economy.**

The schools profiled in this report serve one hundred percent organic meals. While it is widely assumed that organic food is too expensive for school food service, this analysis shows that organic purchasing is not only possible, but that the price can be on par with or lower than conventional school meals, that are typically provided by broadline distributors which do not offer a wide variety or the most competitively priced organic products. By developing strong relationships with values-driven regional distributors and companies—including Earls Organic Produce—the schools profiled here were able to secure consistent organic supply with good prices. The organic food costs for Peres Elementary’s breakfast and lunch combined were $0.11 less than the reported National School Lunch Program daily average food costs.

**BENEFITS:** There are many health, community, and environmental benefits associated with serving more organic food in schools. Organic food reduces children’s exposure to pesticides, and rural communities’ from pesticide exposure. Organic farming also eliminates farmers, farmworkers, and rural communities’ from pesticide exposure. Organic farming also eliminates routine use of antibiotics and other drugs in animal agriculture, provides food with improved nutritional profiles, and protects biodiversity and the climate. What’s more, organic farming systems are more profitable for farmers, can create more jobs than conventional farming systems, and can help address rural poverty.

3. **Investing in plant-forward menus with “less and better” meat is a win-win-win for health, environment, and cost-savings**

The schools profiled in this report increased the number of plant-forward options on their menus. The schools found that scratch cooked plant-forward and plant-based meals were often less expensive than meat-based dishes, creating budget flexibility to purchase organic ingredients and more sustainably raised meat. Willow Creek discovered it could save $9,450 per year by swapping out some beef-based meals for plant-forward and plant-based options. This analysis is confirmed by an Oakland Unified case study that found that by shifting to plant-forward meals, the district saved over $42,000 during the assessment year, and student participation increased.

**BENEFITS:** There is broad expert consensus that eating more plants and less meat is better for our health and the environment. Animal products are resource-intensive foods, requiring massive water and energy inputs. They also generate significant greenhouse gas emissions, soil, air, and water pollution. To avert the worst impacts of climate change, we must produce and eat “less and better” animal products. This means consuming fewer animal products and supporting the farmers who are raising animals sustainably.
4. Reducing food and packaging waste saves water and reduces pollution.

Conscious Kitchen worked with maintenance, operations, and food service teams to employ cost-effective strategies to reduce packaging and food waste through prevention, recycling, and composting. To prevent waste associated with typical heat-and-serve meals, schools served meals out of metal hotel pans with reusable utensils. Kitchen teams prevented food waste by implementing monthly meal planning, weekly food buying, and standardized storage and labeling practices that allowed them to adjust and cook recipes according to demand and integrate leftovers into new meals.

**BENEFITS:** Preventing food waste saves water and reduces greenhouse gas emissions by reducing the water and energy resources required to produce, process, and transport food and packaging, and cutting the significant methane emissions associated with landfill-bound food waste.

5. Student and community education and engagement improves participation and ensures that program meets the diverse needs of the school community.

School dining facilities should be considered as much a place of learning as the classroom, art room, and recreation field. Toward this vision, Conscious Kitchen staff developed the Student Ambassadors Program, created resources for implementing a “hospitality mindset” in the dining hall, and at Bayside MLK, provided funding support for a school garden and nutrition teacher. This engagement improved student nutrition education and increased participation in school meals, a main driver behind school food service profitability.

**BENEFITS:** When students participate in initiatives like the Student Ambassador Program, school meals are more likely to represent the diverse cultures and values of the community that they serve. When students are eating delicious food, are educated about just and sustainable food systems, and are more involved with food through cooking and gardening, they are more likely to participate in school lunch and become future advocates for a healthy and sustainable food system.

D. The Costs of Transforming School Meal Programs

The three schools profiled in this report, like others in California, were operating within constrained budgets. Each school’s partnership with Conscious Kitchen was crucial to fundraising and building the capacity, leadership, and innovation needed to make new investments. In some cases, Conscious Kitchen provided direct financial support.

**Strategies to cover additional costs**

- Modest general fund support can produce big returns. The Sausalito Marin City School District allocated $126,800, or 1.6 percent of the district’s general funds to support the transformation of the school meal programs at Bayside MLK and Willow Creek Academy.
- Leveraging philanthropy to fill the gap and spur innovation. The pilot program at Peres was funded through federal and state reimbursement based on student participation rates and private philanthropy to cover the shortfall. The breakfast meal based on the Conscious Kitchen model cost $0.76 more per student and the lunch meal cost $1.33 more per student than what the district received in reimbursement, primarily to cover the cost of additional labor for scratch cooking and other program support costs. In total, this amounted to a $142,432 additional annual cost for school meals, or $265 per student, that wasn’t covered by reimbursement.
E. Recommendations

Many food service directors and their staff share a vision of healthier, more just, and sustainable food service. They want to upgrade their kitchen operations and improve their menus, recipes, and sourcing to provide fresh food and scratch cooked meals to students. But vision and commitment only go so far. Making it possible to serve scratch cooked and/or speed scratch school meals across our state using more organically sourced food will require policymakers and philanthropists at the local, state, and federal level to step up and dedicate meaningful resources to the effort.

Key recommendations for State policy makers include:

• Provide consistent annual funding to CDFA Farm to School Program and ensure that the program prioritizes sourcing from climate-smart and organic agricultural producers.

• Allocate at least $70 million for school food personnel training and healthier school meals—the amount proposed by Governor Newsom in his pre-COVID January 2020-21 budget proposal.

• Allocate more funding from CDFA’s $22 million Specialty Crop Block grant program to projects that will directly benefit school meal programs and producers.

• Advocate for the Department of Defense Fresh and the Fresh Fruit and Vegetable Program operating in the state to prioritize purchases from organic and climate-smart agricultural producers.

• Advance values-driven procurement and healthy school food via legislation similar to prior bills supporting organic (AB 958); plant-based foods (AB 479), and school nutrition standards (AB 2949).  

• Advocate for policy changes at the federal level, including universal free meals for all children, more funding for kitchen equipment and facilities, scratch cooking training, Farm to School programs, and stronger nutritional standards in the upcoming Child Nutrition Reauthorization Act.

• Advocate for funding increases in 2023 Farm Bill programs that support healthy food and regional food systems, including the Fresh Fruit and Vegetable Snack Program, the DOD Fresh Program, Section 32 fruit, nut and vegetable purchases for nutrition programs, Local Agriculture and Marketing Promotion Program, the Specialty Crop Block Grant Program, among others.  

Building the political will to support policy change and school food service transformation will take a broad dedicated movement working collectively across many sectors. Philanthropists, school boards, and school food service staff must join with students, NGOs, and parents to advocate for policy shifts at the state and federal level. In addition, philanthropists across sectors can fill a critical resource gap and use private funds to help school districts make changes in procurement, staffing, and culinary infrastructure that can demonstrate the value of policy change at the state and federal levels. They can also expand funding for NGOs to assist with technical assistance, advocacy, and community engagement to facilitate healthy and sustainable school food services. More recommendations for school boards and school districts can be found in Section V.