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In our recent report *Healthy Food Within Reach*, SPUR identified economic barriers as one of the biggest obstacles to accessing healthy food. One of the report's recommendations to address this barrier is to support healthy food incentive programs. These programs provide a subsidy, in the form of matching dollars for produce purchases, to low-income individuals and families. In California, the Market Match program, coordinated by the Ecology Center of Berkeley, provides families with an extra \$10 for every \$10 of CalFresh benefits (formerly known as food stamps) that they spend on fresh produce at participating farmers' markets. When the program is available at farmers' markets, it also supports local farmers and the economic viability of the regional food system.

At the start of 2015, SPUR commissioned a team of graduate students at the UC Berkeley Goldman School of Public Policy to answer the question: What would it take to broaden the reach and financial sustainability of the Market Match program? This report is the answer to that question.

To make the project manageable, SPUR and the research team limited the scope of the research to looking at how to expand Market Match's reach in terms of increasing the affordability of healthy food. The Market Match program's goals also include increasing revenue for small and mid-scale farmers. While we believe that this important aspect of the program deserves further research, this report does not delve into the questions of how Market Match currently benefits small and mid-scale farmers, nor does it estimate the impact on agricultural producers of an expanded program.

Toward the end of the research project, the USDA announced it was awarding \$3.7 million to the Ecology Center to support the expansion of Market Match to 234 farmers' markets and other farm-direct retail outlets. The data in this report, unless indicated otherwise, reflects the operations of Market Match prior to this expansion, which is currently underway.

Lastly, the report's findings and recommendations were developed by the graduate student research team: Marc Bacani, Alejandra Barrio, Sasha Feldstein, Adam Gorski, and Jacob Rukin. SPUR commissioned the analysis, but the conclusions from the report are those of the research team and do not necessarily reflect SPUR's official position, which is currently in development. However, we believe that the data, analysis, estimates and recommendations provide new information and insight that will help inform the ongoing conversation about the future of healthy food incentive programs in California and across the country.

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SPUR looks forward to continuing to engage in that conversation with many of the other organizations and individuals who are also working to support regional food systems and improve access to healthy food.

A handwritten signature in black ink, appearing to read 'E. Zigas', is positioned above the printed name.

Eli Zigas
Food and Agriculture Policy Director

Expanding Market Match: A Healthy Food Incentive Program for Low-Income Californians

Reducing financial barriers for low-income families in California to consuming fresh fruits and vegetables.

Presented for Eli Zigas, SPUR

2015

Authored by: Marc Bacani, Alejandra Barrio, Sasha Feldstein, Adam Gorski, Jacob Rukin

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I. GLOSSARY OF TERMS AND ORGANIZATIONS

CalFresh Program - The Supplemental Nutrition Assistance Program (SNAP) as administered in California.

California Department of Food and Agriculture (CDFA) - A cabinet-level agency in the California state government responsible for ensuring the state's food safety, the protection of the state's agriculture from invasive species, and promoting the California agricultural industry.

California Department of Social Services (CDSS) - A cabinet-level agency in the California state government responsible for administering social services, including SNAP.

California Market Match Consortium (CMMC) - A group of community-based organizations and farmers' market operators that administer Market Match, led and coordinated by the Ecology Center, which now comprises over 30 community-based organizations and farmers' market operators throughout the state.

Double Up Food Bucks (DUFb) - A nutrition incentive similar to Market Match that doubles the value of federal nutrition assistance spent at participating markets. The Double Up program is administered by the Fair Food Network. It began at five farmers markets in Detroit in 2009 and has since grown to more than 150 sites across Michigan. It also provides technical assistance to states across the country looking to develop their own Double Up program.

Double Value Coupon Program (DVCP) - Network of nutrition incentive programs operated at farmers' markets across the country that began in 2008 in California, Connecticut and Massachusetts.

Ecology Center - A nonprofit organization and farmers' market operator based in Berkeley, California with a mission to inspire and build a sustainable, healthy, and just future for the East Bay, California, and beyond.

Edible Plant Starts - Plants that produce edible food.

Electronic Benefit Transfer (EBT) - Electronic system that allows state welfare departments to issue benefits via a magnetically encoded payment card.

Fair Food Network - A national nonprofit based in Ann Arbor, Michigan that facilitates the Double Up Food Bucks program.

Food Insecurity Nutrition Incentive Grant Program (FINI) - Supports projects to increase the purchase of fruits and vegetables among low-income consumers participating in SNAP by providing incentives at the point of purchase.

Food and Nutrition Service (FNS) - Agency within the USDA that establishes rules and regulations around EBT and SNAP use.

Healthy Incentives Pilot (HIP) - Effort authorized by FNS devoted \$20 million for pilot projects to determine if incentives provided to recipients at the point-of-sale increase the purchase of fruits, vegetables or other healthful foods among SNAP participants.

Heart of the City Farmers Market (HOCFM) - A nonprofit farmers' market based in San Francisco, CA.

Market Match - A fruit and vegetable incentives program for recipients of federal nutrition assistance benefits, where purchases of fruits and vegetables at farmers' markets are matched with funding from the program so that participants can buy additional produce.

Pacific Coast Farmers' Market Association (PCFMA) - A nonprofit organization that develops, operates, and supports certified farmers' markets in San Francisco Bay Area.

Point-of-Sale (POS) - The electronic terminal where a retail transaction is completed. In this report, we often refer to POS in the context of Electronic Benefit Transfer (EBT) transactions.

Roots of Change (ROC) - A food advocacy group based in Oakland, CA that created and launched the California Market Match Consortium.

Scrip - Market Match tokens or dollars, which are the total amount spent plus the funds that are matched for the customer

Senior Farmers' Market Nutrition Program (SFMNP) - A food assistance program that provides benefits to low-income seniors, generally defined as individuals who are at least 60 years old and who

have household incomes of not more than 185 percent of the federal poverty level. Eligible recipients receive coupons in addition to their regular benefits, which can be used to buy eligible foods from farmers, farmers' markets or roadside fruit and vegetable stands that have been approved by the state agency to accept coupons.

Special Supplemental Nutrition Program for Women, Infants and Children (WIC) - A federal assistance program for healthcare and nutrition of low-income pregnant women, breastfeeding women, and infants and children under the age of five. The eligibility requirement is a family income below 185% of the U.S. Poverty Income Guidelines. Similar to the Senior Farmers' Market Nutrition Incentive Program, eligible recipients receive coupons in addition to their regular benefits which can be used to buy eligible foods from farmers, farmers' markets or roadside fruit and vegetable stands that have been approved by the state agency to accept coupons.

Specialty Crop Block Grant Program (SCBGP) - A program of the USDA designed to enhance the competitiveness of specialty crops, which are defined as "fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture)".

SPUR - Non-profit organization that promotes good planning and good government in the San Francisco Bay Area through research, education, and advocacy.

Supplemental Nutrition Assistance Program (SNAP) - Federal nutrition assistance benefits, formerly known as food stamps and known as CalFresh in California.

Supplemental Security Income (SSI) - A United States government program that provides stipends to low-income people who are either aged (65 or older), blind, or disabled.

Targeted Fruits and Vegetables (TFV) - Fruits and vegetables that are eligible for incentives under the Healthy Incentive Pilot program. These include all fresh, frozen, canned and dried fruits and vegetables, except for dry and canned mature legume and fruit juices. Yams and sweet potatoes are allowed, but white potatoes are excluded. Fruits and vegetables with added sugars, fats, oils, or salt are also excluded.

U.S. Department of Agriculture (USDA) - Federal government department in charge of food and nutrition assistance, including the Supplemental Nutrition Assistance Program (SNAP).

Wholesome Wave - A national nonprofit that facilitates a network of nutrition incentive programs across the country, in collaboration with over 80 community-based partners.

II. EXECUTIVE SUMMARY

Too many California families have difficulty accessing and affording healthy food.

The link between consumption of fruits and vegetables and decreased risk of chronic disease, such as stroke, heart disease, and obesity, is widely known.^{1 2 3} However, consumption among low-income Americans is limited. Geography, culture, finances, and education all contribute to the fact that low-income Americans consume just over half the USDA recommended amount of fruits and vegetables per day.⁴ However, research shows that low-income families spend the same percentage on fruits and vegetables as the average household, which indicates that lowering financial burdens could be an effective strategy for increasing the consumption of fruits and vegetables.

One strategy that has had success in improving the affordability of healthy foods is nutrition incentive programs such as California's Market Match. When low-income families use their federal nutrition food assistance benefits to buy fruits and vegetables at participating markets, Market Match provides matching funding for additional produce. Research has shown that households who participate in incentive programs significantly increase their consumption of fruits and vegetables.

Despite this success, we find Market Match to be limited in its potential reach and financial sustainability. Funding is insufficient to meet current demand and is not guaranteed for future years. Additionally, the current program is not always offered year-round nor in many counties with high poverty and low consumption rates. With the goal of increasing the fruit and vegetable consumption of low-income families, we analyzed two potential approaches for broadening the reach and financial sustainability of

1 He, Feng J., Caryl A. Nowson, and Graham A. MacGregor. "Fruit and Vegetable Consumption and Stroke: Meta-Analysis of Cohort Studies." *The Lancet* 367(9507)(2006): 320-26.

2 Appel, Lawrence J., Thomas J. Moore, Eva Obarzanek, William M. Vollmer, Laura P. Svetkey, Frank M. Sacks, George A. Bray, Thomas M. Vogt, Jeffrey A. Cutler, Marlene M. Windhauser, Pao-Hwa Lin, Njeri Karanja, Denise Simons-Morton, Marjorie McCullough, Janis Swain, Priscilla Steele, Marguerite A. Evans, Edgar R. Miller, and David W. Harsha. "A Clinical Trial of the Effects of Dietary Patterns on Blood Pressure." *New England Journal of Medicine* 336.16 (1997): 1117-124.

3 Tohill, Beth Carlton, Jennifer Seymour, Mary Serdula, Laura Kettel-Khan, and Barbara J. Rolls. "What Epidemiologic Studies Tell Us about the Relationship between Fruit and Vegetable Consumption and Body Weight." *Nutritional Review* 62.10 (2004): 365-74.

4 Dong, Diansheng, and Biing-Hwang Lin. Fruit and Vegetable Consumption by Low Income Americans: Would a Price Reduction Make a Difference? Economic Research Report No. 70, U.S. Department of Agriculture, Economic Research Service, January 2009.

Market Match: 1) Expansion to all California farmers markets, and 2) Expansion to all grocery retailers in California.

We found that expanding to farmers' markets is effective at reaching consumers able to access farmers' markets, low-cost, and may be politically feasible. Grocery retailer expansion, while very costly and politically infeasible in the short term, has the potential to reach the vast majority of low-income individuals, especially those with low fruit and vegetable consumption.

Our Recommendation: Lay the groundwork for expanding Market Match to all grocery retailers.

Expanding into all grocery retailers across the state will allow a far greater number of SNAP recipients to participate in the Market Match program, so we recommend working to build a political coalition to pursue the financial resources necessary to make grocery retail expansion feasible in the long term. Specifically, we find that revenue generated by a state soda tax is a promising potential source of sustainable funding. In the interim, we recommend creating a pilot program to garner institutional support and test the effects of Market Match in grocery retailers in California.

III. INTRODUCTION

In February of 2015, SPUR released *Healthy Food Within Reach*, a report that identified strategies to increase both access to and consumption of fruits and vegetables in low-income communities in the San Francisco Bay Area. SPUR emphasizes that food access, defined as the “ability to obtain ‘sufficient, safe and nutritious food to meet... dietary needs and food preferences for an active and healthy life,’” is crucial to addressing food insecurity, health, and the prevention of chronic disease.⁵ To that end, SPUR is committed to supporting the expansion of nutrition incentive programs like Market Match, a program that matches low-income consumers’ federal nutrition assistance benefits with a subsidy to purchase fruits and vegetables. By increasing the financial ability of beneficiaries to purchase nutritious food, Market Match seeks to address food access and improve health outcomes for recipients of federal assistance.

However, the best method for expanding the Market Match program in California remains in question. This report explores two options for expanding Market Match and analyzes their effectiveness, costs, and feasibility.

⁵ “Healthy Food Within Reach.” SPUR Report. SPUR, Feb. 2015. Web.
<www.spur.org/sites/default/files/publications_pdfs/SPUR_Healthy_Food_Within_Reach.pdf>

IV. MARKET MATCH IN CALIFORNIA

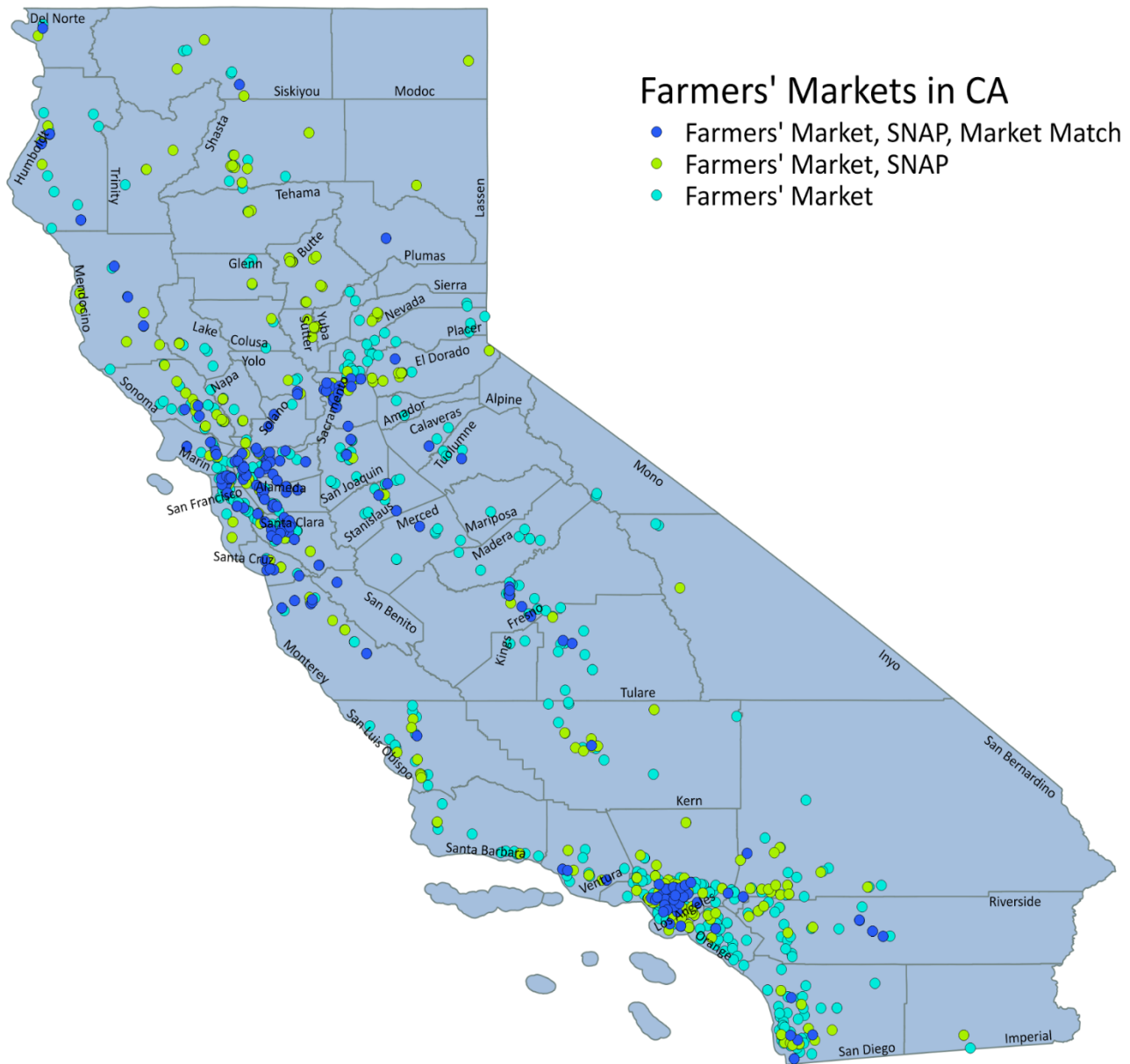
The Market Match program was created in 2009 to "...improve the sales of specialty crops in California, increase healthy food access and address food insecurity."⁶ Designed by Roots of Change (ROC), a food advocacy group based in Oakland, CA, Market Match is a program that allows recipients of federal nutrition assistance benefits to earn incentives matching the amount they spend on fruits and vegetables to buy additional produce at farmers' markets. The program began with a small group of farmers' market operators and community based organizations, collectively known as the California Market Match Consortium (CMMC), and was offered at 46 markets in six counties across the state. Since then, Market Match has grown to 153 farmers' markets in 23 counties, with annual sales of over \$2.2 million, over \$500,000 of which were Market Match incentives. CMMC members administer Market Match at their respective farmers' markets.

In 2013, ROC passed on leadership of the CMMC to the Ecology Center, a nonprofit organization and farmers' market operator based in Berkeley, California. The Ecology Center's stated goal is to continue to grow the Market Match program to every region of the state.⁷

⁶ "California Market Match Consortium." California Market Match Consortium. Roots of Change, n.d. Web. 30 Apr. 2015. <www.rootsofchange.org/projects/california-market-match-consortium/>.

⁷ Farmers' Markets America. "Market Match: SNAPing Up Benefits for Farmers & Shoppers." (2014): n. pag. Market Match Report: SNAPing Up Benefits for Farmers and Shoppers. Roots of Change. Web. 25 Mar. 2015. <ecologycenter.org/wp-content/uploads/2014/12/ROC-final-upload-2.pdf>.

Figure 1. Market Match Offered at Farmers' Markets



*Source: Ecology Center

Program Structure

Market Match allows recipients of federal nutrition assistance benefits to purchase more healthy fruits and vegetables by matching each dollar that they spend on select produce. For instance, a customer spending \$10 of their allotted benefit at a farmers' market is given an extra \$10 to spend on fruits and vegetables.⁸ The level of incentive that a customer can earn is usually capped at \$5 to \$10 per visit.⁹ Several federal nutrition assistance benefits may be eligible for Market Match dollars, including SNAP (the federal food assistance program, formerly known as food stamps), and in some locations, nutrition assistance benefits for Women, Infants and Children (WIC), disability benefits (SSI), and the Senior Farmers' Market Nutrition Program (SFMNP).

Currently, a customer who wishes to receive Market Match dollars must visit the manager's stand at the farmers' market and spend a portion of their federal benefits to receive the match, by swiping their Electronic Benefit Transfer (EBT) card to process the transaction.

The market manager then grants the total amount of SNAP the customer wishes to spend in EBT-SNAP scrip, plus the Market Match to the customer in the form of separate scrip (Market Match tokens or vouchers), good only for fruits and vegetables. The customer is able to spend their EBT-SNAP scrip on SNAP-eligible foods, and Market Match scrip on fruits, vegetables, nuts, and edible plant starts.¹⁰

In the locations that also match other benefits, beneficiaries whom receive WIC, SSI or SFMNP can present their benefits at the manager's stand to receive additional tokens or vouchers to spend on fruits and vegetables at the participating farmers' market.

The Market Match program is available at participating markets for varying amounts of time throughout the year. For example, the Pacific Coast Farmers' Market Association, which runs 65 markets throughout Northern California, offers Market Match primarily in the summer months, while Phat Beets Produce Stand in Oakland offers Market Match September through June.^{11 12} Most markets offer the Market Match program for a specified period of time and while their matching dollars last.¹³

⁸ Ibid., pg. 8

⁹ Mazurek, Brie. "Market Match: Making Fresh and Healthy Food Affordable." CUESA Blog. Web. 2 May. 2015. <<http://www.cuesa.org/article/market-match-making-fresh-and-healthy-food-affordable>>.

¹⁰ "Market Match | Making Fresh Affordable." Market Match. Web. 30 Mar. 2015. <www.marketmatch.org/>.

¹¹ Phat Beets Produce. Phat Beets Produce, n.d. Web. 20 Mar. 2015. <www.phatbeetsproduce.org/about>.

Funding Structure

Since 2009, Market Match incentive dollars and implementation costs have been funded through a combination of private and public funds. Roots of Change received a total of \$1.9 million in Specialty Crop Block Grants (SCBG) from the California Department of Food and Agriculture (CDFA) to fund Market Match from 2009 to 2013.¹⁴ After the Ecology Center took over leadership of the program in 2013, they received an additional \$400k from SCBG funding, as well as a five-year \$2.5 million grant from First5 Los Angeles to expand the program in Southern California.¹⁵

In 2015, the Ecology Center was awarded a \$3.7 million grant from the United States Department of Agriculture (USDA) through the Food Insecurity Nutrition Incentive Program (FINI) to continue to grow the Market Match program. This funding will support an expansion of Market Match to 234 farm-to-consumer outlets including farmers' markets, mobile markets, farm stands, and Community Supported Agriculture outlets. The Ecology Center's award represents 10 percent of all FINI funds awarded in 2015 across the country, and is granted for a period of two years. Additionally, the Ecology Center, ROC, and the Latino Coalition for a Healthy California have recently joined efforts to sponsor a state budget request alongside Assembly Bill 1321 that would direct \$5 million from the California General Fund to further increase Market Match funding.¹⁶

¹² "Pacific Coast Farmers' Market Association." Pacific Coast Farmers' Market Association. Web. 30 Apr. 2015. <www.pcfma.com/market-listing.html>.

¹³ "Market Match | Making Fresh Affordable." Market Match. Web. 30 Mar. 2015. <www.marketmatch.org/>.

¹⁴ "2013 Project Descriptions." 2013 Specialty Crop Grants. California Department of Food and Agriculture, n.d. Web. 20 Mar. 2015. www.cdfa.ca.gov/Specialty_Crop_Competitiveness_Grants/FFY2013.html.

¹⁵ Interview with Carle Brinkman, Ecology Center.

¹⁶ "Ecology Center Awarded \$3.7 Million Grant from USDA to Expand Statewide Program That Supports Farmers & Feeds Families." Ecology Center Blog. Ecology Center, n.d. Web. 20 Mar. 2015. <ecologycenter.org/blog/ecology-center-awarded-3-7-million-grant-from-usda-to-expand-statewide-program-that-supports-farmers-feeds-families/>.

V. FRUIT AND VEGETABLE CONSUMPTION IN CALIFORNIA

Fruit and Vegetable Consumption Among Low-Income Californians

The link between consumption of fruits and vegetables and decreased risk of chronic disease, such as stroke, heart disease, and obesity, is widely known.^{17 18 19} However, consumption among low-income Americans is limited. For example, those enrolled in SNAP average only 2.71 servings per person per day, below the American average of 2.97 servings per person per day, and well below the Center for Disease Control and Prevention's (CDC) recommendation of 5 servings per day.²⁰ These relatively low consumption rates have important consequences for overall health, given that chronic disease now accounts for over 75 percent of all deaths in California.²¹

Dietary and nutritional behavior is complex and is a result of a number of factors, including time constraints, awareness, availability, and financial access. While increasing education, outreach and supply are important, research has shown that financial barriers are often the most significant hurdles to fruit and vegetable consumption.²²

According to the Bureau of Labor Statistics' 2013 Consumer Expenditure Report, households earning less than \$20,000 a year spend roughly the same amount as a percentage of their grocery bill on fresh fruits

¹⁷ He, Feng J., Caryl A. Nowson, and Graham A. MacGregor. "Fruit and Vegetable Consumption and Stroke: Meta-Analysis of Cohort Studies." *The Lancet* 367(9507)(2006): 320-26.

¹⁸ Appel, Lawrence J., Thomas J. Moore, Eva Obarzanek, William M. Vollmer, Laura P. Svetkey, Frank M. Sacks, George A. Bray, Thomas M. Vogt, Jeffrey A. Cutler, Marlene M. Windhauser, Pao-Hwa Lin, Njeri Karanja, Denise Simons-Morton, Marjorie McCullough, Janis Swain, Priscilla Steele, Marguerite A. Evans, Edgar R. Miller, and David W. Harsha. "A Clinical Trial of the Effects of Dietary Patterns on Blood Pressure." *New England Journal of Medicine* 336.16 (1997): 1117-124.

¹⁹ Tohill, Beth Carlton, Jennifer Seymour, Mary Serdula, Laura Kettel-Khan, and Barbara J. Rolls. "What Epidemiologic Studies Tell Us about the Relationship between Fruit and Vegetable Consumption and Body Weight." *Nutritional Review* 62.10 (2004): 365-74.

²⁰ Dong, Diansheng, and Biing-Hwang Lin. *Fruit and Vegetable Consumption by LowIncome Americans: Would a Price Reduction Make a Difference?* Economic Research Report No. 70, U.S. Department of Agriculture, Economic Research Service, January 2009.

²¹ Health in All Policies Task Force. "Health in All Policies Task Force Report to the Strategic Growth Council." (2010): n. pag. Web. 1 Apr. 2015. <sgc.ca.gov/docs/HiAP_Task_Force_Report-Dec_2010.pdf>.

²² "Healthy Food Within Reach." SPUR Report. SPUR, Feb. 2015. Web. <www.spur.org/sites/default/files/publications_pdfs/SPUR_Healthy_Food_Within_Reach.pdf>.

and vegetables as the average household.²³ Of course, those same percentages buy very different amounts of fruits and vegetables. Therefore, it may not be that low-income households are unwilling to purchase healthy foods, but that they are simply unable to buy as many due to limited funds. Additionally, lower-income households spend higher percentages of their incomes on other necessities, such as housing, which may leave little room to expand food budgets. Taken together, these findings suggest that low-income households may purchase more fruits and vegetables if they have the funds to do so.

Nutrition Incentive Programs as a Solution

Research indicates that nutrition incentive programs work to increase fruit and vegetable consumption among low-income individuals. For instance, nonprofit organization Wholesome Wave has been running the largest nutrition incentive program in the country, the Double Value Coupon Program (DVCP), since 2008. In a 2012 survey of 1,452 respondents from 101 markets within Wholesome Wave's network, 90 percent of DVCP participants reported that they increased or greatly increased their consumption of fruits and vegetables.²⁴ Furthermore, in a peer-reviewed study conducted by Wholesome Wave, New York University, and the University of California San Diego, increased consumption levels attributed to the DVCP program were found to remain two months after the program had ended.²⁵

From 2011 to 2012, the United States Department of Agriculture Food and Nutrition Service (FNS) conducted the most comprehensive research study and only randomized control trial evaluating nutrition incentive programs to date. Under a 2008 Farm Bill provision, FNS selected Hampden County, Massachusetts to implement the Healthy Incentives Pilot Program (HIP) to determine if incentives

23 The Bureau of Labor Statistics categorizes households under \$20,000 into \$5,000 increments. The average expenditure on fresh fruits and vegetables among all households was 14.7 percent of the household budget, while the average for each decreasing \$5,000 increment under \$20,000 was 21.8 percent, 20 percent, 18.9 percent and 18.7 percent, respectively. Consumer Expenditures in 2013. Rep. no. 1053. N.p.: Bureau of Labor Statistics, 2015. Print. BLS Reports.

24 Wholesome Wave. "Wholesome Wave's Double Value Coupon Program: Increasing Food Access and Local Farm Business Nationwide. 2009-2012 Outcomes and Trends." July 2014: pg. 6 2012 Double Value Coupon Program Report. 2014. Web. 25 Mar. 2015. <www.wholesomewave.org/wp-content/uploads/2014/07/2012_double_value_coupon_program_report.pdf>.

25 Oberholtzer, Lydia, Carolyn Dimitri, and Michelle Zive. Double Value Coupon Program: Diet and Shopping Behavior Study Results. Rep. Bridgeport, CT: Wholesome Wave, 2012. Web. wholesomewave.org/wp-content/uploads/2012/09/Double-Value-Coupon-Program-Diet-Shopping-Behavior-Study-.pdf.

increase the purchase of fruit and vegetables among SNAP participants.²⁶ 7,500 SNAP households were randomly selected to participate in HIP and earn a \$0.30 incentive for every \$1 spent on fruits and vegetables, with a total incentive cap of \$60 per households per month. Overall, HIP participants spent \$6.15 more on fruits and vegetables per month than non-participants. They also consumed, on average, a quarter cup more of targeted fruits and vegetables per day, which represents a 26 percent increase in consumption.²⁷ This increase was found to be both statistically and nutritionally relevant, meaning that it was large enough to significantly close the gap between original consumption and federal dietary guidelines.²⁸

The relative success of nutrition incentive programs is reflected in their growth over the past several years. The number of nutrition incentive programs across the country has grown from over 170 in 2010 to over 680 in 2015.^{29 30} These programs are operated by nonprofit organizations that have discretion over the amount of incentive provided, the types of federal nutrition assistance eligible for participation in the program and the kinds of produce eligible for the incentive. While most nutrition incentive programs operate at farmers' markets, some programs operate at other farm-to-retail outlets such as farm stands and CSAs, as well as grocery retailer outlets.

²⁶ "Evaluation of the Healthy Incentives Pilot (HIP) Final Report." Food and Nutrition Service. September 2014: pg. 1 U.S. Department of Agriculture, Sept. 2014. Web. <www.fns.usda.gov/sites/default/files/HIP-Final.pdf>.

²⁷ Targeted fruits and vegetables refers to all fresh, frozen, canned and dried fruits and vegetables, except for dry and canned mature legume and fruit juices. Yams and sweet potatoes are allowed, but white potatoes are excluded. Any fruits and vegetables with added sugars, fats, oils, or salt are also excluded.

²⁸ "Evaluation of the Healthy Incentives Pilot (HIP) Final Report." Food and Nutrition Service September 2014: pg. 140 U.S. Department of Agriculture, Sept. 2014. Web. <www.fns.usda.gov/sites/default/files/HIP-Final.pdf>.

²⁹ Community Science. SNAP Healthy Food Incentives Cluster Evaluation 2013 Final Report. 2013. Web. 1 February 2015. <www.fairfoodnetwork.org/sites/default/files/2013_Cluster_Evaluation_Final_Report_final_10.4.13_Dec2013.pdf>. Note: report includes data from four organizations which oversee the majority of farmers' markets; a small number of farmers' markets operate independent of these four.

³⁰ See Table 1.

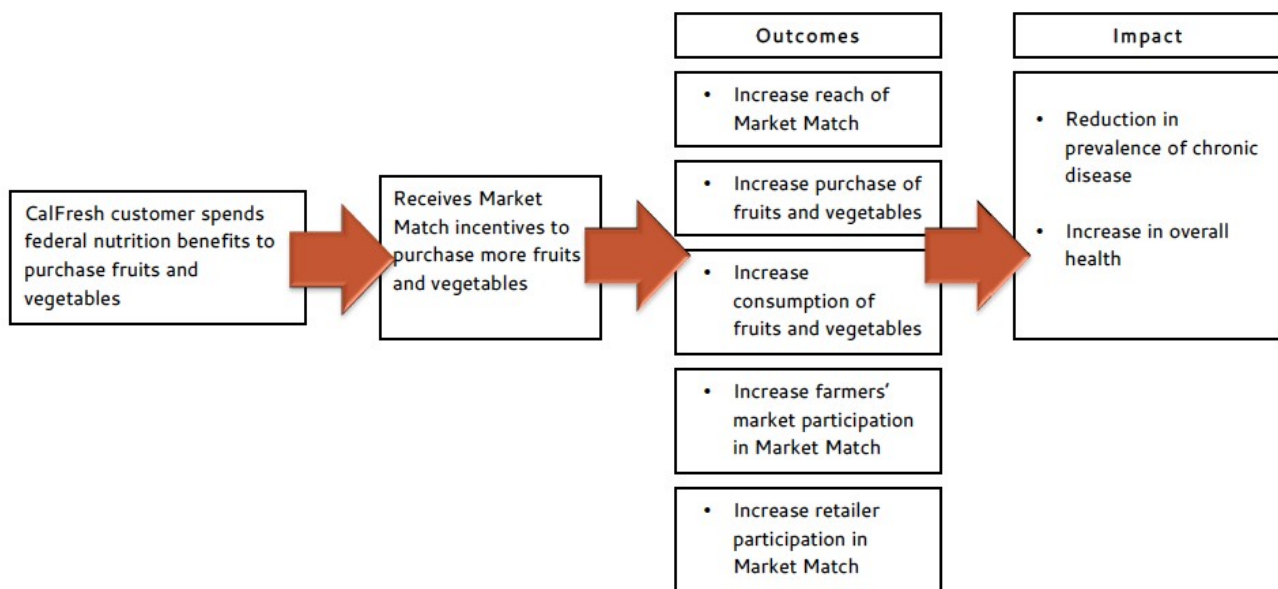
Table 1. Sample Nutrition Programs in the U.S.

Organization	Program	Program Founding	Operating Location	Match Amount	Eligible Benefits	Eligible Purchases	Program Reach
Fair Food Network	Double Up Food Bucks (DUFb)	2009	Michigan and Toledo, Ohio, and piloting at sites in several other states	\$1 for \$1, capped at \$20 per visit	SNAP	All fresh fruits and vegetables grown by Michigan growers	The program operates at over 150 locations statewide, plus several other locations in pilot states.
Wholesome Wave	Double Value Coupon Program (DVCP)	2008	Connecticut, California, Massachusetts and 24 others	Cap and incentive discretion of individual market, but never more than a \$1 for \$1 match	SNAP, WIC, SFMNP	All fruits and vegetables	More than 300 farmers' markets and other farm-to-retail vendors
NYC Dept. of Health and Mental Hygiene, with Farmers' Market Federation of NY	Health Bucks	2005	New York City	\$2 vouchers distributed as cash-value credits, or as match for every \$5 spent	SNAP for matching incentive, all low-income individuals eligible for vouchers	All fruits and vegetables	All farmers' markets in NYC (more than 140)
USDA HIP Program, run by MA Department of Transitional Assistance	Healthy Incentive Pilot (HIP)	2011 (pilot concluded in 2012)	Hampden County, Massachusetts	\$0.30 for \$1 spent, capped at \$60 per month per household	SNAP	Targeted Fruits and Vegetables: - No added sugar, salt, oils (with some exceptions) - Excludes juice, white potatoes, mature legumes (e.g., dried beans and peas)	130 HIP participating stores, including supermarkets, superstores, grocery stores, convenience stores and farmers markets
Ecology Center of Berkeley (California Market Match Consortium)	Market Match	2009	California	\$1 for \$1, cap discretion of CMMC member organization	SNAP, as well as WIC, SSI, and SFMNP (at discretion of CMMC member organization)	All fresh fruits and vegetables grown by California growers	Over 150 farmers' markets

Market Match as a Solution in California

The figure below illustrates the logic of California's Market Match program as it relates to low-income fruit and vegetable consumption. The measurable indicators of success for the program include an increase in the program's reach, an increase in fruit and vegetable purchases and consumption, and an increase in market operators that provide the program, with a long term intended impact of an increase in health and a reduction of chronic disease.

Figure 2. Suggested Performance Indicating Outcomes for Market Match



As California's nutrition incentive program, Market Match has shown promising results as evidenced by an increase in federal nutrition assistance benefits and Market Match incentives used to purchase fruits and vegetables at farmers' markets. In 2014, farmers' markets participating in Market Match received \$2,217,876 in total federal nutrition assistance benefit purchases, of which \$551,924 were Market Match incentive dollars.³¹ This represents a 51.2 percent increase in total benefit sales and a 131 percent increase in Market Match redemptions from the previous year (See Figure 3).^{32 33 34}

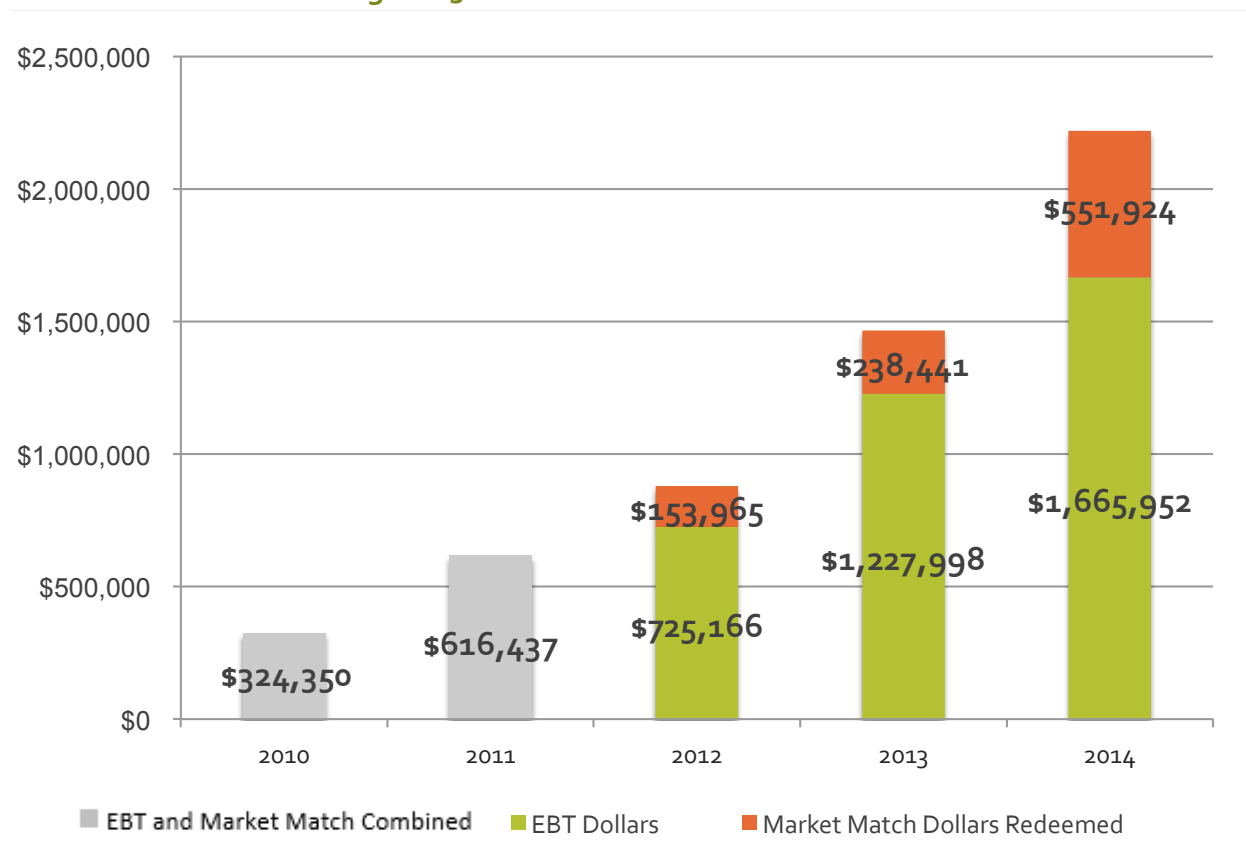
³¹ Federal nutrition assistance benefit purchases refers to all sales from SNAP/EBT, WIC, SSI and SFMNP.

³² Farmers' Markets America. "Market Match: SNAPing Up Benefits for Farmers & Shoppers." (2014): pg. 20. Market Match Report: SNAPing Up Benefits for Farmers and Shoppers. Roots of Change. Web. 25 Mar. 2015. <ecologycenter.org/wp-content/uploads/2014/12/ROC-final-upload-2.pdf>.

³³ Data from Carle Brinkman, Ecology Center.

Furthermore, in a 2013 cluster evaluation of four nutrition incentive programs, including Market Match, more than three-fourths of SNAP recipients reported that they increased their produce purchases because of the incentives and that the incentive was a strong factor in their decision to shop at a farmers' market.³⁵

Figure 3. Market Match Sales Per Year



Source: Ecology Center

While not a focus of this report, Market Match has also shown additional benefits in helping local farmers' bottom lines. In a 2013 Market Match survey, 69 percent of farmers reported that they had new

³⁴ Market Match specific data does not exist for 2010-2011.

³⁵ Community Science. SNAP Healthy Food Incentives Cluster Evaluation 2013 Final Report. 2013. pg. 21. Web. 1 February 2015. < [www.fairfoodnetwork.org/sites/default/files/2013 Cluster Evaluation Final Report_final_10.4.13_Dec2013.pdf](http://www.fairfoodnetwork.org/sites/default/files/2013%20Cluster%20Evaluation%20Final%20Report_final_10.4.13_Dec2013.pdf)>.

customers and 67 percent made more money as a result of the Market Match program. Twenty-eight percent of farmers also reported that they were diversifying their production because of Market Match.³⁶

³⁶ Ecology Center. Driving CA's \$7.8B in CalFresh Towards Small & Mid-Sized Farmers. Web. 4 March 2015. <marketmatch.org/wp-content/uploads/2014/12/MM-Farmers-Brief.pdf>.

VI. CHALLENGES OF MARKET MATCH

While Market Match has been largely successful since the program began, several challenges persist. First, funding for the program is insufficient to meet the current demand of SNAP enrollees. In the 2013 cluster evaluation, lack of funding was noted as a principal barrier for nutrition incentive program operators.³⁷ Funds often run out faster than in previous years due to an increasing customer base. This creates further issues when customers return to the market expecting to earn incentive dollars, only to learn that funds are no longer available.³⁸ Another survey of farmers' market nutrition incentive providers, conducted by the USDA, cited excess demand for the program, earmarked funding, and a limited desire by funders to provide multiple years of funding as common challenges faced by organizations.³⁹

In order to address funding and support challenges, nutrition incentive providers have coped by using strategies such as changing the program structure, changing the staffing structure, and reducing the incentive amount. These may limit both the ability of market operators and organizations to offer incentives to meet current demand, and the capacity to achieve maximum results. For example, Market Match providers like Alchemist CDC in Sacramento and Phat Beets farmers' market in Oakland, among others, limit the seasons they offer Market Match due to limited funds.

Second, funding is unsustainable. All of the organizations that currently provide nutrition incentive programs, including Market Match, rely on public and private grants for support.⁴⁰ This funding is continuously impacted by shifts in philanthropy, culture, and strategy, and is unlikely to generate permanent funding streams. Market Match partners have noted that while they have been able to raise sufficient funds to offer a dollar-for-dollar incentive match in the short term, sustained fundraising sufficient to offer that match permanently is becoming increasingly challenging.⁴¹

37 Community Science. SNAP Healthy Food Incentives Cluster Evaluation 2013 Final Report. 2013. pg. 34. Web. 1 February 2015. <[www.fairfoodnetwork.org/sites/default/files/2013 Cluster Evaluation Final Report_final_10.4.13_Dec2013.pdf](http://www.fairfoodnetwork.org/sites/default/files/2013%20Cluster%20Evaluation%20Final%20Report_final_10.4.13_Dec2013.pdf)>.

38 Ibid.

39 King, Melissa, Sujata Dixit-Joshi, Keith MacAllum, Michael Steketee, and Stephen Leard. Farmers Market Incentive Provider Study. Prepared by Westat, Inc. For the U.S. Department of Agriculture, Food and Nutrition Service, March 2014. pg. 21. <www.fns.usda.gov/farmers-market-incentive-provider-study>.

40 Community Science. SNAP Healthy Food Incentives Cluster Evaluation 2013 Final Report. 2013. pg. 34. Web. 1 February 2015. <[www.fairfoodnetwork.org/sites/default/files/2013 Cluster Evaluation Final Report_final_10.4.13_Dec2013.pdf](http://www.fairfoodnetwork.org/sites/default/files/2013%20Cluster%20Evaluation%20Final%20Report_final_10.4.13_Dec2013.pdf)>.

41 Ibid.

For instance, in 2015, the Ecology Center was awarded a \$3.7 million federal Food Insecurity Nutrition Incentive (FINI) grant, which will allow Market Match to expand to additional farmers' markets and outlets throughout the state over the next two years.^{42 43} However, the funding provided is not guaranteed for future years and there is no plan for the State or the federal government to take over the program once the grant has expired. Roots of Change, the Ecology Center, and the Latino Coalition for a Healthy California have sponsored a state budget request alongside Assembly Bill 1321 that would direct \$5 million in state funds for the program. However, the bill and budget request are still pending.⁴⁴

Third, Market Match only reaches a small fraction of low-income households. Even though Market Match has been growing consistently over recent years, it only operates at one-third of all farmers' markets in the state, and at just half of all farmers' markets that accept SNAP.⁴⁵ Further, all farmers' markets combined represent less than 1 percent of all SNAP purchases in California (See Figure 4).⁴⁶ This means that the overwhelming majority of SNAP participants do not currently shop at farmers' markets and do not have access to Market Match benefits. The ability of Market Match to increase low-income households' access to fruits and vegetables is therefore limited in its potential impact.

42 Palmer, Tamara. "Nonprofit Farmers Market Gets Grant." NBC Bay Area. 3 Apr. 2015. Web. 30 Apr. 2015.

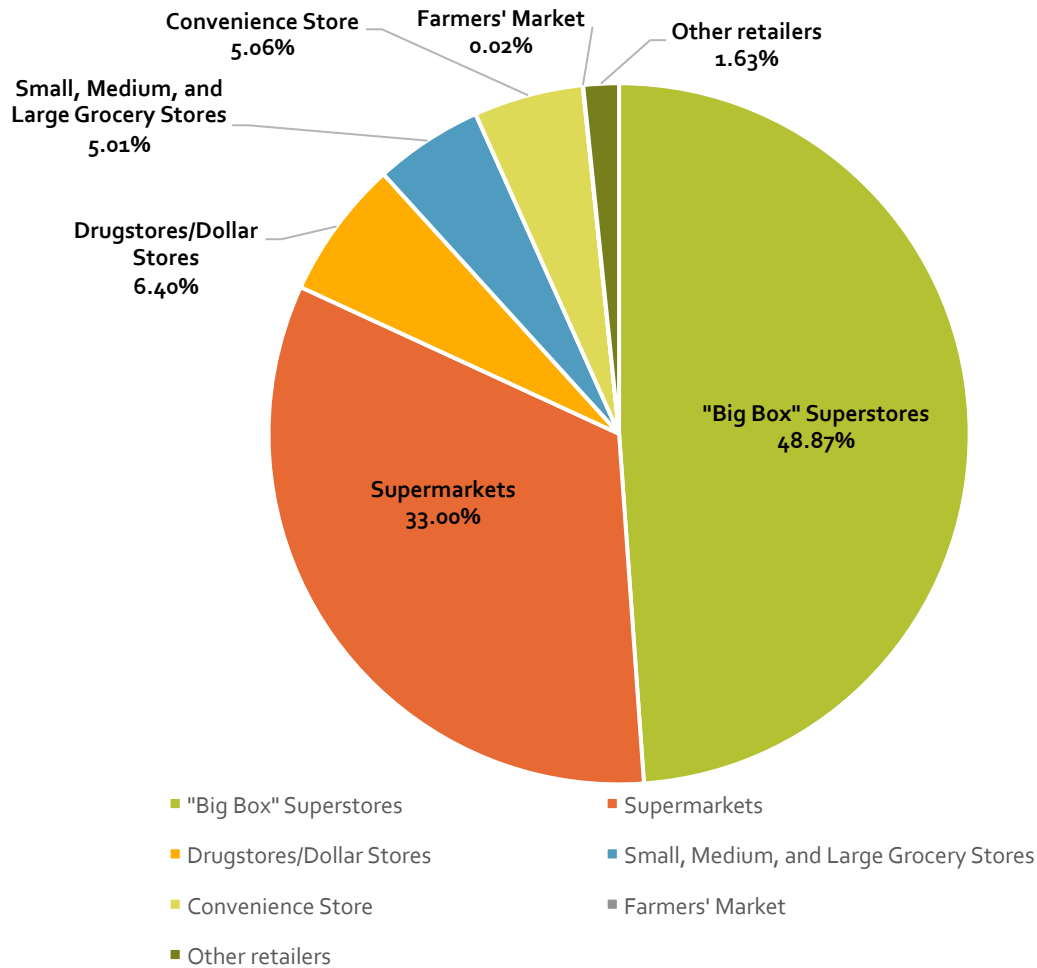
43 "Heart of the City Farmers' Market: About." Heart of the City Farmers' market. Squarespace, n.d. Web. 29 April 2014. <heartofthecity-farmersmar.squarespace.com/about/>.

44 See Information on AB 1321 in Appendix.

45 Because Market Match is a benefit provided to SNAP participants, farmers' markets must accept SNAP in order to offer Market Match.

46 USDA. SNAP Retailer Management 2013 Annual Report. Web. 2 February 2015. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

Figure 4. National SNAP Sales by Type of Retailer



Source: USDA FNS SNAP Retail Management Annual Report, 2013

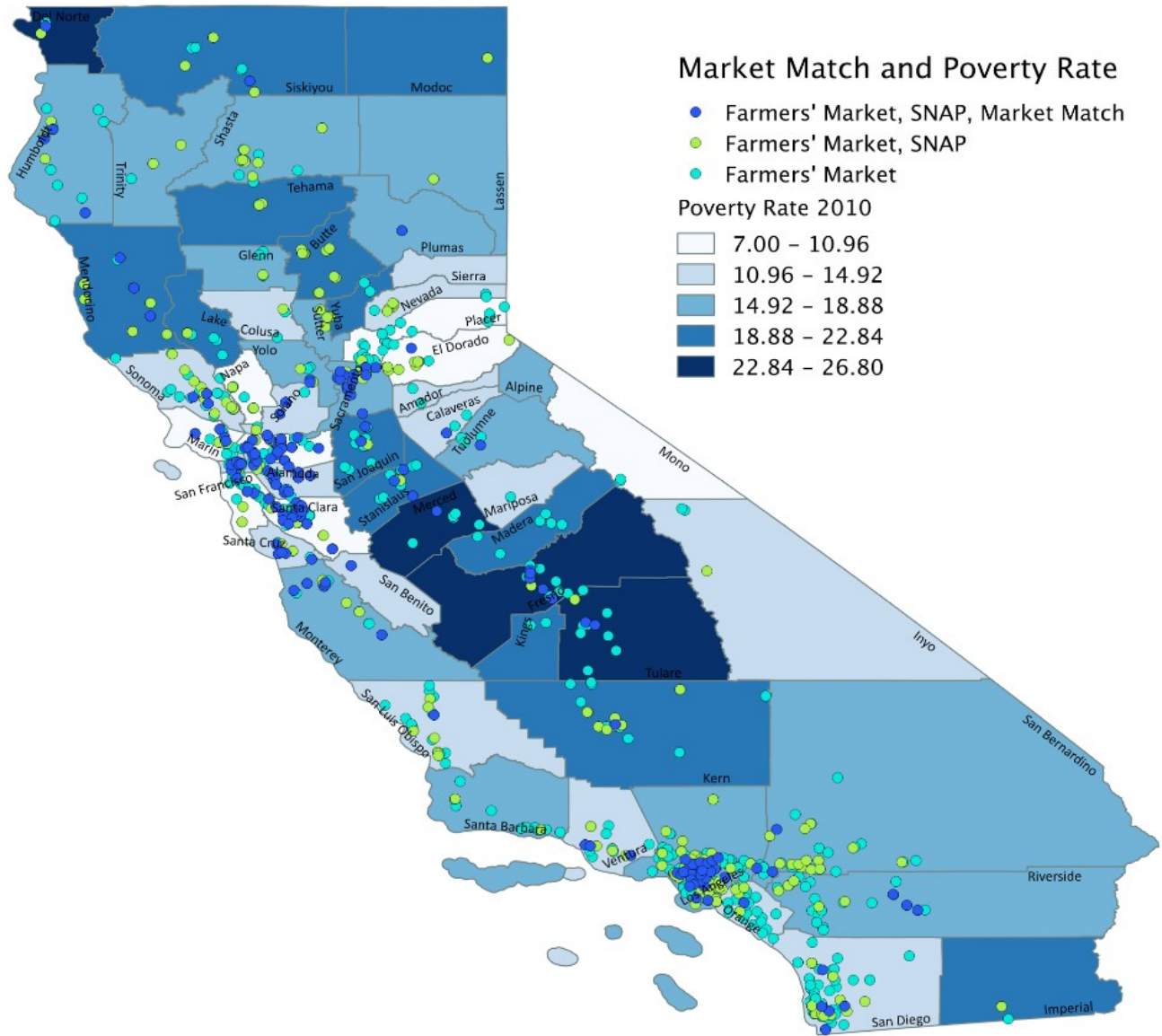
Finally, it is possible that Market Match is not currently offered where people may need it most. Of the top 20 counties in California with the highest poverty rates, only seven have any farmers' markets that offer Market Match (See Table 2). This may be due to a relatively low number of farmers' markets in the county that accept SNAP, or a relatively low number of farmers' markets in general. Some counties, however, have several farmers' markets but very few that offer Market Match. For example, San Joaquin

has 14 farmers' markets, of which none offer Market Match (refer to Figure 5 for an overall view of farmers' markets and county poverty rates).

The same problem is evident when examining counties' fruit and vegetable consumption. While data for adults does not currently exist, the USDA Food and Nutrition Service collects information on whether children ages 2 through 11 consume the USDA recommendation of five fruit and vegetable servings per day. Counties with relatively low rates of fruit and vegetable consumption tend to have fewer farmers' markets that offer Market Match (See Figure 6).

Figure 5. Market Match and Poverty Rate⁴⁷

Market Match farmers markets are sparse in California counties with the highest poverty rates.

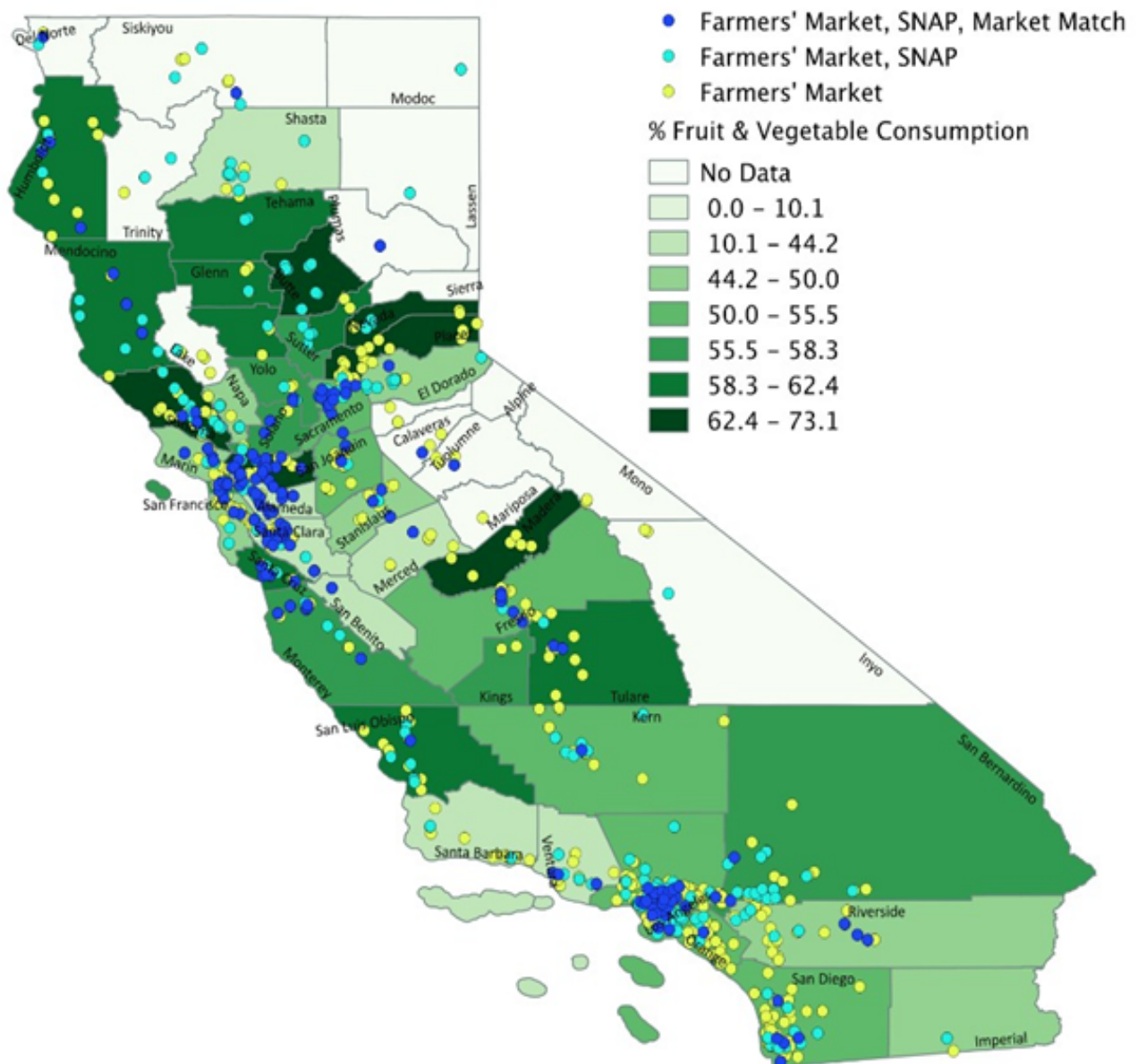


Source: USDA Food and Nutrition Service, Ecology Center

⁴⁷ Poverty rate refers to the percent of the population falling below the federal poverty line.

Figure 6. Market Match Availability and Fruit and Vegetable Consumption, Age 2-11

Market Match farmers markets are sparse in California counties with low rates of child fruit and vegetable consumption, defined as the rate of children consuming USDA's recommended average of five servings of fruits and vegetables per day.



Source: USDA Food and Nutrition Service, Ecology Center

Table 2. High-Poverty Counties and Market Match Availability

County	Population	Poverty Rate	Number Farmers' Markets	Number Farmers' Markets Accepting SNAP	Number of Farmers' Markets Offering Market Match
Fresno	955,272	26.8	14	9	9
Tulare	454,143	24.6	9	3	3
Del Norte	27,873	23.5	1	0	0
Merced	263,228	23.1	8	1	0
Kings	150,960	22.5	2	0	0
Imperial	176,584	22.3	2	1	0
Modoc	9,147	21.9	1	0	0
Madera	152,389	21.7	5	1	1
Siskiyou	43,799	21.5	7	2	2
Kern	864,124	21.4	16	3	2
Lake	63,860	21	8	2	0
Yuba	73,340	20.7	2	0	0
Tehama	63,057	20.4	2	0	0
Butte	222,090	20.1	7	3	0
Stanislaus	525,491	19.7	11	1	1
Mendocino	87,192	19.6	9	5	5
San Joaquin	704,379	19	14	6	0
Trinity	13,448	18.4	2	0	0
Shasta	178,980	18.2	11	4	0
San Bernardino	2,088,371	18.1	20	6	0

Source: USDA Food and Nutrition Service, Ecology Center

VII. PURPOSE OF THE REPORT

To address the challenges of Market Match, we analyzed alternatives to broaden the reach and financial sustainability of the program. While other aspects of Market Match, such as its impact on local farmers and the environment, should be considered, our analysis specifically focuses on increasing access to fruits and vegetables for low-income households. This report examines the projected effectiveness, budgetary costs, and feasibility of expanding Market Match to 1) all farmers' markets in California and 2) all grocery retailers in California. Particular program design considerations and assumptions are also explored.

VIII. OPTIONS FOR EXPANDING MARKET MATCH

Expansion Alternative 1: Expand to all Farmers' Markets

The Market Match incentive program will be expanded to all California farmers' markets where Market Match is not currently available. Participants will be able to use their EBT cards to access the program incentives when they make eligible purchases of fruits and vegetables. For every \$1 of SNAP benefits spent on fruits and vegetables, participants will receive an additional dollar to be spent on fruits and vegetables.

Expansion Alternative 2: Expand to all Grocery Retailers

In every grocery retailer⁴⁸ in California that accepts EBT,⁴⁹ SNAP users will be able to use their EBT card to participate in the Market Match incentive program. For every \$1 spent on fruits and vegetables, participants will receive \$1 additional to be spent on fruits and vegetables.

Program Structure of Expansion Alternatives

For our analysis, we will use a set structure of program incentives, modeled in part on the existing Market Match program in California. We determined this program structure to be the most appropriate for the state based on interviews with federal and state government agencies, grocery retailers, and facilitators of farmers' market incentive programs, as well as on the research available on similar incentive programs.⁵⁰ This section highlights each of the program design options, analyzes the advantages and disadvantages of each potential strategy, and details the program design that we will analyze in this report.

⁴⁸ The USDA categorizes retailers by size, using annual revenue and other factors. Grocery retailer categories that will be included are Large Grocery Store, Medium Grocery Store, Small Grocery Store, Super Store, and Supermarket. Other categories of retailer, such as Convenience Store, are not included.

⁴⁹ According to the USDA FNS Snap Retailer Management 2013 Annual Report, there are 25,862 retailers that accept EBT in California. Using national percentages of retailer categories, we estimate there are 6,905 grocery retailers in California that accept EBT.

⁵⁰ See Appendix 4 for full list of individuals interviewed for this report.

Table 3. Summary of Program Structure

Programmatic Option	Chosen Alternative
Match Amount	Dollar-for-dollar (\$1/\$1) match: \$1 spent earns \$1 in incentives
Food Assistance Programs Eligible for Market Match	Incentive accessed solely through SNAP benefits (not WIC, SSI, etc.).
Restrictions on Eligible Purchases	All fruit and vegetable purchases, regardless of origin, eligible for incentive. ⁵¹
Restrict to Certain Grocery Retailers	Program incentives accessible at all California grocery retailers

Match Amount

Fruit and vegetable incentive programs around the country and within California use different match amounts, ranging from \$0.20 additional cents for every \$1 spent, to \$1 for each \$1 spent. The Massachusetts Healthy Incentives Pilot (HIP)⁵² used a \$0.30/\$1 match, and our analysis extrapolates many of the findings from that pilot to estimate a statewide expansion. Incentive structures also vary in the maximum amount that can be redeemed, either capping the amount per month or per visit.

Dollar-for-dollar (\$1/\$1)

We chose a \$1/\$1 match for several reasons. First, Market Match incentives at California farmers' markets already are \$1/\$1. Additionally, a higher match provides greater benefits for participants, as well as added simplicity that reduces training and comprehension costs for consumers and retailers. That added simplicity also possibly makes the program more politically feasible. The amount of incentives that participants can redeem will be capped at farmers' markets on a per visit basis and at grocery retailers on a per month basis. The details and impact of each cap are included in the analysis section.

⁵¹ In the grocery retailer expansion, some vegetables, such as white potatoes, are exempt.

⁵² The 2011-12 pilot was implemented by the USDA in Hampden County, Massachusetts, which has a mix of urban, rural, and suburban areas. Researchers used random assignment to choose whether households were in the HIP group or not. The primary purpose of the study was to assess the impact of the program on fruit and vegetable consumption by SNAP households. See "Evaluation of the Healthy Incentives Pilot (HIP) Final Report." Food and Nutrition Service (2014): pg. 126-128. U.S. Department of Agriculture, Sept. 2014. Web. <<http://www.fns.usda.gov/sites/default/files/HIP-Final.pdf>>.

Food Assistance Programs Eligible for Market Match

Nearly all fruit and vegetable incentive programs are tied to the participant's SNAP benefits, meaning that when they spend their SNAP funds on eligible fruit and vegetable purchases, they receive the incentive. Some incentive programs allow participants to access incentives with other forms of benefits as well, such as Women, Infants, and Children (WIC) benefits or SSI (disability) benefits.

Incentives only accessible through SNAP benefits

Our program design connects solely to SNAP benefits due to the technology concerns of expanding to other types of benefits and the relative size and stability of SNAP compared to other benefit programs.

Technology barriers would preclude an incentive program that was connected to WIC and SSI benefits⁵³ from being available on the EBT card, since WIC and SSI benefits are not currently able to be loaded on the card in California. Some farmers' market incentive programs accept WIC and SSI benefits, along with SNAP, but the HIP program in grocery retailers only accepted SNAP so that benefits could be accessed with participant's EBT cards. In order to accept WIC and SSI at grocery retailers, a paper scrip would need to be used, and the additional cost of training staff and printing materials would increase the per retailer expansion of such a program by as much as ten times.⁵⁴

Furthermore, in Wholesome Wave's evaluation of its Double Value Coupon Program, SNAP accounted for 67 percent of federal nutrition benefits redeemed at participating markets, while WIC only accounted for 20 percent. This may be due to the fact that the SNAP incentive program was larger overall.⁵⁵

Additionally, WIC is not an entitlement program, meaning that Congress does not set aside funds to allow every eligible individual to participate in the program. Instead, WIC is a federal grant program for which Congress authorizes a specific amount of funding each year for program operations. This affects the feasibility, methods of implementation, and funding for WIC.

⁵³ This is also true for other, smaller benefits programs, such as the Senior Farmer's Market Nutrition Program.

⁵⁴ The HIP report estimates that the per-retailer cost of expanding when program incentives are accessed through the EBT card would be \$386. An incentive program using paper coupons would cost an estimated \$5,000 per retail store (of supermarket size), according to our interviews with retail associates.

⁵⁵ Wholesome Wave. Wholesome Wave's Double Value Coupon Program Increasing Food Access and Local Farm Business Nationwide, 2009–2012 Outcomes and Trends Full Report. Web. 13 February 2015. <www.wholesomewave.org/wp-content/uploads/2014/07/2012_double_value_coupon_program_report.pdf>.

The primary argument for connecting incentives to WIC and SSI benefits is that it would increase the number of people able to participate in Market Match. For instance, the Urban Institute found that of the 1.29 million people who received WIC, only 18 percent of WIC participants also receive SNAP. Further, WIC recipients have a higher redemption rate of benefits compared to SNAP. California's 2014 WIC participation rates in Market Match were 74 percent, significantly higher than SNAP participation rates of 57 percent.⁵⁶ Additionally, those receiving WIC were 1.4 times more likely to shop at farmers' markets than those who only participate in SNAP.⁵⁷

Restrictions on Fruits and Vegetables Eligible for Market Match

Purchases eligible to receive the match can be restricted by type and state of origin depending on the program's desired impact. For example, the Michigan Double Up Grocery Project restricted eligible purchases to only fresh fruits and vegetables, and was limited to only those grown in Michigan. This program design option is only relevant for an expansion to grocery retailers, as purchases at Certified California farmers' markets are inherently restricted to California-grown products. The HIP program provided incentives for targeted fresh fruits and vegetables, as well as canned, frozen, and dried fruits and vegetables, regardless of origin.⁵⁸

All purchases of fruit and vegetables eligible

We chose to make all fruit and vegetable purchases eligible for program incentives, regardless of origin, in order to simplify the program for participants and retailers and to avoid the cost that would be involved in tracking and monitoring products based on origin. This is supported by the HIP report, in which stakeholders identified choosing from a list of eligible foods as one of the greatest challenges for monitoring operations and ensuring compliance. The Government Accountability Office (GAO) found

⁵⁶ Martinez-Schiferl, Michael. "WIC Participants and Their Growing Need for Coverage." Urban Institute, 25 Apr. 2012. Web.

⁵⁷ "Nutrition Assistance in Farmers Markets: Understanding the Shopping Patterns of SNAP Participants." Food and Nutrition Service, Office of Policy Support. Food and Nutrition Services. USDA, Oct. 2014.

Web. <www.fns.usda.gov/sites/default/files/FarmersMarkets-Shopping-Patterns-Summary.pdf>.

⁵⁸ Fruits and vegetables could have no added sugars, fats, oils, or salt. White potatoes, mature legumes, and 100 percent fruit juice were also excluded. This is in contrast with the FINI program guidelines, which allowed for white potatoes and dried beans.

that using a general food category—such as fruits and vegetables—is a promising practice that makes it easier for participants and retailers, rather than identifying and selecting specific items from a list.⁵⁹

Additionally, restricting program incentives based on product origin would necessitate coding those products distinctly in all grocery retailers. Since no such system currently exists, an infrastructure would need to be created, which would involve costs for verification, labeling, education, technology upgrades, and other components. Allowing all fruit and vegetable purchases to be program eligible avoids this costly hurdle.

Limiting this program to California-grown fruits and vegetables could increase political feasibility as farmer's groups may be more likely to support legislation if they know the benefits will exclusively support their produce. Also, the economic benefits to the state may be greater, since the revenue from incentives would stay within the local economy. However, given that nearly half the country's fruits and vegetables are grown in California,⁶⁰ the benefits to this restriction may be fairly limited while providing fewer options for consumers.

Restrict to Certain Grocery Retailers

The USDA categorizes retailers that accept SNAP into several classes based on size, annual revenue, and other factors. Depending on the desired result, an incentive program could be made available only in a specific subset of grocery retailers. This program design option is only relevant when analyzing the expansion to grocery retailers, not to farmers' markets.

All grocery retailers included

We elected to make program incentives available in all grocery stores to increase the accessibility for SNAP users. Nationally, grocery retailers make up 27 percent of firms that accept SNAP.⁶¹ If the goal of an incentive program were to benefit small- and medium-sized retailers as well as the consumers, the

59 "Food Stamp Program: Options for Delivering Financial Incentives to Participants for Purchasing Targeted Foods." Government Accountability Office, July 2008. Web. <www.gao.gov/new.items/do8415.pdf>.

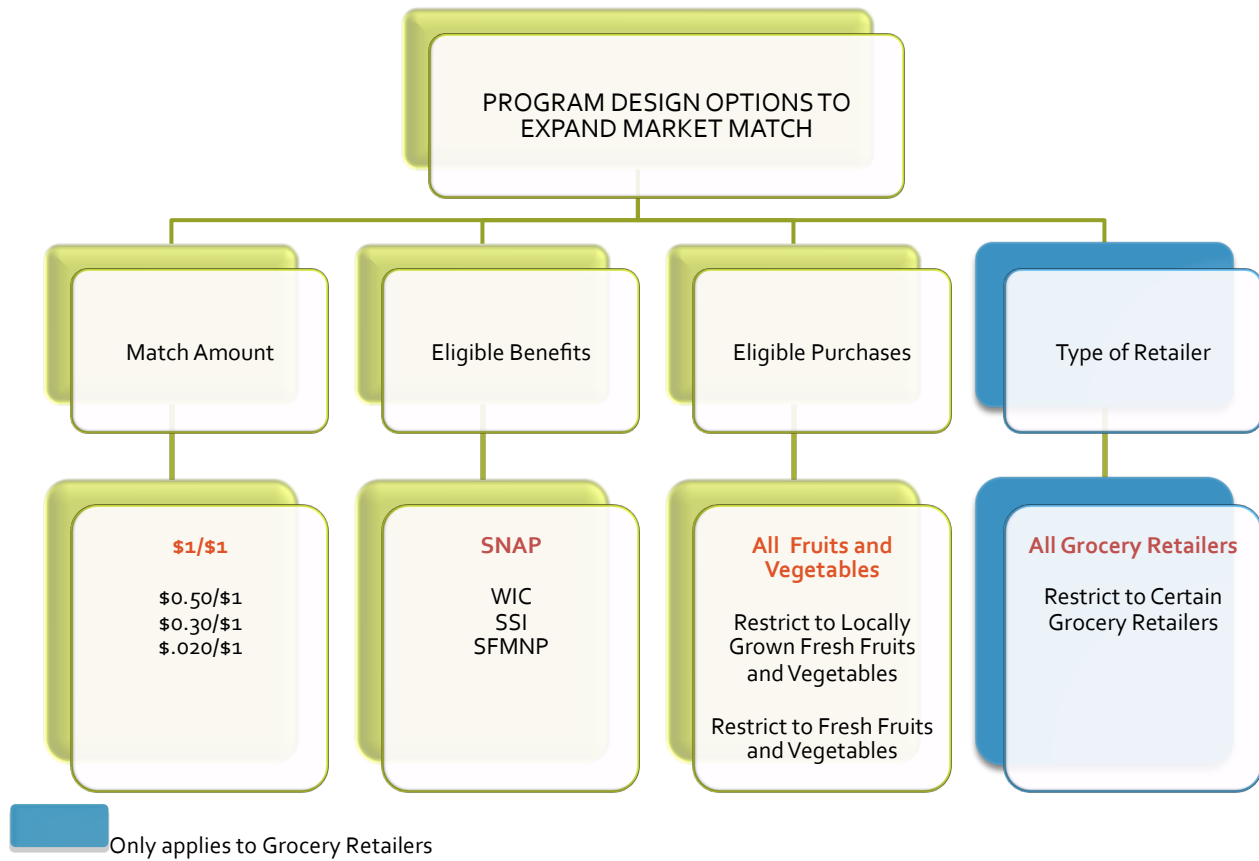
60 California Department of Food and Agriculture. California Agricultural Production Statistics. Web. 13 May. 2015. <<http://www.cdafa.ca.gov/statistics/>>.

61 SNAP Retailer Management 2013 Annual Report (2013): 10. USDA, 2013. Web. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

incentive could be made available only at those retailers and not at supermarkets and superstores. However, nearly 90 percent of SNAP purchases are made at either supermarkets or superstores, so with the goal of maximizing the access SNAP users have to the incentive program, broader availability is the best option.

An additional option would be to expand accessibility to the remaining 73 percent of firms that accept SNAP and are not grocery stores. However, there is a per retailer cost associated with expansion, and including all firms would quadruple that initial program cost while having only a marginal impact on consumer access. SNAP users spend some portion of their benefits at non-grocery retailers, such as convenience stores, but these are less likely to have eligible fruits and vegetables for purchase. As previously stated, the overwhelming majority of SNAP users do the bulk of their shopping at large grocery retailers.

Figure 7. Program Design Options to Expand Market Match



* Text in red is the program design option chosen for evaluation in this report

IX. CRITERIA

This report uses three systematic criteria by which to assess efforts to expand the program.

1. Effectiveness

Based on existing data and knowledge, our analysis evaluates the effectiveness of each alternative for increasing the numbers of low-income individuals using the Market Match program (as a proxy measurement for increasing consumption of fruits and vegetables).

Where appropriate, we predict to what extent these alternatives impact different subgroups of California's low-income population, and how much of the potential increase in Market Match availability will be accessible to these communities.

2. Budgetary Costs

For each alternative, we analyze the budgetary costs of initiating and facilitating the expansion of Market Match. Each alternative includes initial expansion costs, ongoing administrative costs (if any), and the ongoing costs of program incentives earned by participants. Initial costs associated with initial expansion include updating current systems in place to be able to recognize and process eligible transactions, technical consultant services for systems modifications and troubleshooting, and retailers' administrative and programmatic costs of training and promotion. Administrative costs are any involved with facilitating the program. The costs of incentives earned by participants are estimated given current conditions, and future cost projections are also predicted, taking into account changes to California's population, changes to SNAP benefits, and changes to the economy.

3. Feasibility

Political Feasibility examines the likely support, challenges, and chances of political passage for each of the expansion options.

Legal Feasibility considers rules and regulations that govern SNAP operations and the likelihood of obtaining waivers for these rules.

X. ANALYSIS OF EFFECTIVENESS

Effectiveness of Expansion to All Farmers' Markets

Expanding to farmers' markets is effective at reaching consumers able to access farmers' markets, but does not reach the vast majority of low-income individuals.

Increasing Individual Participation in Market Match

Overall demand for nutrition incentives at farmers' markets has grown significantly over the past several years. For example, an outcomes report of Wholesome Wave's Double Value Coupon Program (DVCP), a program similar to Market Match, found that low-income consumers' shop more at farmers' markets now because of the nutrition incentive program. DVCP operates at over 500 farmers' markets in 33 states across the country and the District of Columbia. In a survey of 2,017 respondents from 101 markets across the country, 71 percent of DVCP consumers said they would not have shopped at the farmers' market if incentives had not been provided. The survey also showed that of 549 respondents who find it difficult or very difficult to purchase quality fresh fruits and vegetables in their neighborhood, 84 percent get half or more of their fresh fruit and vegetables at participating markets during market season, with over a fifth saying they get all of their fruits and vegetables at the market. This suggests that farmers' markets can play an important role in providing affordable access for those who may otherwise have low consumption of fruits and vegetables.⁶²

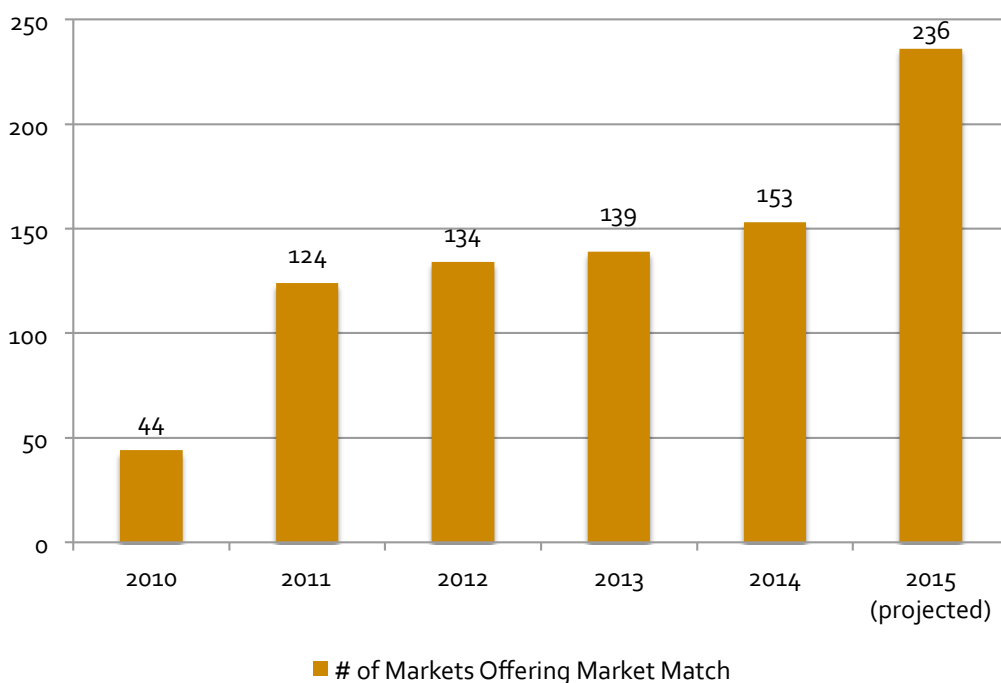
For Market Match in particular, demand has grown, with the most significant growth occurring between 2013 and 2014 (See Figure 3).⁶³ The number of farmers' markets that offer Market Match has also grown, from 44 markets in 2010 to 153 in 2014 (See Figure 8).⁶⁴

62 "Wholesome Wave's Double Value Coupon Program: Increasing Food Access and Local Farm Business Nationwide." (2012): pg. 7. Wholesome Wave. Web.

<www.wholesomewave.org/wp-content/uploads/2014/07/2012_double_value_coupon_program_report.pdf>.

63 Interview with Carle Brinkman, Ecology Center.

64 Ibid.

Figure 8. Markets Offering Market Match

Other factors may contribute to more limited demand for incentive programs at farmers' markets. Even though California has a year-round growing season compared to its eastern counterparts, not all California farmers' markets are open year-round. Phat Beets farmers' market in Oakland, CA, for example, is only open September through June. Most farmers' markets are open once or twice a week. Similarly, Market Match programs tend to have limited seasons and dates. For example, the PCFMA Market Match program and the Agricultural Institute of Marin program only offer incentives during the summer months, while the Alchemist CDC program only offered incentives from January through March in 2015.^{65 66 67} These limitations may make shopping at farmers' markets less convenient, contributing to less demand than would otherwise occur.

Increasing Purchase and Consumption of Fruits and Vegetables

⁶⁵ PCFMA Market Listing. Web. 20 Mar. 2015. <<http://www.pcfma.com/market-listing.html>>

⁶⁶ Alchemist CDC Market Match. Web. 20 Mar. 2015. <<http://www.alchemistcdc.org/market-match/>>.

⁶⁷ Alchemist CDC will begin offering Market Match year round in 2015.

By definition, the majority of goods sold at farmers' markets are fresh fruits and vegetables, although other products such as herbs, honey, jams and jellies, cheese, and vinegars are also often sold.⁶⁸

Therefore, it stands to reason that an increase in SNAP participants who shop at farmers' markets will result in greater spending of SNAP dollars on fruits and vegetables.

The lowest income individuals are also the least likely to shop at farmers' markets. In a USDA Food and Nutrition Service (FNS) study on the shopping patterns of SNAP participants, those with annual household incomes below \$10,000 were about 14 percent less likely to shop at farmers' markets than participants with higher annual household incomes. While shopping patterns depend on a variety of factors, it appears an expansion of Market Match into all farmers' markets will not target the most low-income populations.

However, the same study also showed that SNAP participants who knew that some farmers' markets offered financial incentives to those who redeemed their benefits there were 40 times more likely to shop at farmers' markets.⁶⁹ Additionally, almost 50 percent reported that they would be more likely to shop at a farmers' market if an incentive were offered. Therefore, expanding incentives to more farmers' markets may bring in new EBT shoppers to purchase fruits and vegetables.⁷⁰

For low-income customers who already use a significant amount of their SNAP budget on fruits and vegetables at farmers' markets, the impact of a Market Match expansion may be limited. For these shoppers, a Market Match program is unlikely to lead to a significant increase in produce purchases. Instead, it will act as a cash transfer, raising their overall budget and allowing them to increase their purchases of other goods.

Increase in Farmers' Market Participation in Market Match

68 "2014 Market Season - USDA Farmers Market Rules and Operating Guidelines." U.S. Department of Agriculture, 2014. Web. <<http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3002978>>.

69 Nutrition Assistance in Farmers Markets: Understanding the Shopping Patterns of SNAP Participants." Food and Nutrition Service, Office of Policy Support (2014): p.42. Food and Nutrition Services. USDA, Oct. 2014. Web. <www.fns.usda.gov/sites/default/files/FarmersMarkets-Shopping-Patterns-Summary.pdf>.

70 Ibid.

The current reach of Market Match is fairly limited. California has over 870 farmers' markets, 764 of which are certified and registered by USDA. Of those, 399 currently accept SNAP (52 percent).⁷¹ Of the 399 farmers' markets that accept SNAP, only 153 currently offer the Market Match program.^{72 73} Additionally, Market Match is currently only offered in 23 of the 58 counties in the state.⁷⁴

Furthermore, the farmers' markets that currently offer Market Match are not necessarily the markets with the highest volumes of EBT transactions. For example, until this year, the Heart of the City Farmers' Market in San Francisco's Civic Center - which accounts for nearly 70 percent of all EBT purchases made at farmers' markets in the city - was unable to participate in Market Match due to insufficient funds. In fact, none of the five markets in San Francisco with the most EBT transactions participated in Market Match in 2014.⁷⁵

However, the California Market Match Consortium (CMMC) has noted that with increased funding its network has the capacity for growth. The 2015 federal Food Insecurity Nutrition Incentive (FINI) grant awarded to the Ecology Center will allow the Heart of the City market to begin providing Market Match incentives to its customers. The FINI grant will also allow Market Match to expand to 234 farmers' markets, farm stands, CSA locations and Mobile Market stops.^{76 77}

At the farmers' markets where Market Match has been offered, increased funding has been shown to significantly increase total EBT transactions. In a 2013 study by the Pacific Coast Farmers' Market Association of sales within its network, this increase ranged from 130-700 percent in EBT transactions, which would mean that every dollar spent in Market Match benefits resulted in a \$1.30 to \$7 increase in total EBT purchases on fruits and vegetables.^{78 79} This range can be attributed to any number of differences between farmers' markets, such as the number of EBT-eligible individuals in the market

71 "EBT: Learn About SNAP Benefits at Farmers' Markets." Web. <www.fns.usda.gov/ebt/learn-about-snap-benefits-farmers-markets>.

72 USDA Farmers Markets Directory - Agricultural Marketing Service. U.S. Department of Agriculture, n.d. Web. 29 Apr. 2015. <search.ams.usda.gov/farmersmarkets/>.

73 Ecology Center. Farmers' Market Finder. Web. <ecologycenter.org/fmfinder/>.

74 Ecology Center. Partners. Web. <ecologycenter.org/partners/>.

75 Cattell, Lindsay, Nicole Danna, Marina Fisher, and Terra Rose. San Francisco Healthy Food Supplement Program. Pg. 20., 2014. Print.

76 Correspondence with Carle Brinkman, The Ecology Center.

77 Ibid.

78 Farmers' Markets America. "Market Match: SNAPing Up Benefits for Farmers & Shoppers." (2014): n. pag. Market Match Report: SNAPing Up Benefits for Farmers and Shoppers. Roots of Change. Web. 25 Mar. 2015. <ecologycenter.org/wp-content/uploads/2014/12/ROC-final-upload-2.pdf>.

79 Limitations to these calculations will be discussed in the final draft.

community, the size of the market, the operating structure of the market (year-round versus seasonally), the level of marketing and outreach conducted, and local institutional support. Nonetheless, the study suggests that even a small increase in funding can lead to a significant increase in EBT purchases, which presumably signals increased fruit and vegetable consumption.

Effectiveness of Expansion to All Grocery Retailers

Expanding to all grocery retailers is an effective way to reach the vast majority of low-income individuals.

Increase in Individual Participation in Market Match

Little research has been conducted on nutrition incentive programs at grocery retailers. The two most notable studies are USDA's HIP project along with the Fair Food Network's Double Up Food Bucks Grocery Project. Results from both studies indicated fruit and vegetable consumption significantly increases when nutrition incentive programs are implemented at grocery retailers.

The HIP report found that, overall, the incentives caused participating households to spend more than non-HIP households on targeted fruits and vegetables in participating grocery retailers. In supermarkets and superstores specifically, HIP households on average spent \$1.19, or 11.5 percent, more on fruits and vegetables than non-HIP households. Similar significant results were not found in farmers' markets, perhaps because the large majority of SNAP purchases of fruits and vegetables took place in supermarkets and superstores.⁸⁰

The Fair Food Network's Double Up Food Bucks Grocery Project found similar results. The Grocery Project was offered in Detroit from August 1 to November 30, 2014 and operated in two types of grocery stores: one in four independently-owned grocery stores and another in two of SpartanNash's corporate Family Fare banner stores. Overall, 90 percent of customers reported purchasing more fruits and vegetables because of the program, 85 percent of customers reported eating more fruits and vegetables because of

80 "Evaluation of the Healthy Incentives Pilot (HIP) Final Report." Food and Nutrition Service (2014): pg. 126-128. U.S. Department of Agriculture, Sept. 2014. Web. <<http://www.fns.usda.gov/sites/default/files/HIP-Final.pdf>>.

the program, and 68 percent of customers reported purchasing fewer chips, candy, and cookies for snacks.⁸¹

SNAP and food-insecure households shop at the same types of stores as nonparticipating and food secure households, and these are predominantly supermarkets and superstores. Of all SNAP households, roughly 90 percent do their primary grocery shopping at supermarkets and supercenters.⁸²

Only 5 percent of households do their main shopping at other retailers, and less than 1 percent of households shop at farmers' markets^{83 84}, which suggests that grocery retailers will be more effective at reaching SNAP and food-insecure households. This is significant because while supermarkets and supercenters make up only 14.81 percent of the firms in the U.S. that accept SNAP, they redeem over 80 percent of the total SNAP benefits.⁸⁵

In terms of specifically purchasing fruits and vegetables, over 75 percent of SNAP households buy fresh fruits and vegetables at supermarkets and large grocery stores at least once a week. About 88 percent of SNAP shoppers considered good specials or deals and the prices of all groceries when deciding where to buy fresh fruits and vegetables, while low prices combined with acceptance of SNAP benefits were important factors for 83 percent.⁸⁶

When asked about why they do not shop at farmers' markets, about 73 percent of SNAP participants stated that it was easier to buy all of their groceries in one location, while 42 percent stated that it was not

⁸¹ Interview with Rachel Chadderdon Bair and Noah Fulmer, Fair Food Network.

⁸² Nutrition Assistance in Farmers Markets: Understanding the Shopping Patterns of SNAP Participants." Food and Nutrition Service, Office of Policy Support (2014): p.42. Food and Nutrition Services. USDA, Oct. 2014. Web. <www.fns.usda.gov/sites/default/files/FarmersMarkets-Shopping-Patterns-Summary.pdf>.

⁸³ USDA. SNAP Retailer Management 2013 Annual Report. Web. 2 February 2015. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

⁸⁴ Ver Ploeg, Michele et al. "Access to Affordable and Nutritious Food-Measuring and Understanding Food Deserts and Their Consequences: Report to Congress." *Access to Affordable and Nutritious Food-Measuring and Understanding Food Deserts and Their Consequences: Report to Congress*. USDA ERS, June 2009. Web. 06 June 2015. <<http://www.ers.usda.gov/publications/ap-administrative-publication/ap-036.aspx>>. "Supermarkets are defined as food stores that provide a full range of foods and have \$2 million or more in annual gross sales. Large groceries have annual sales between \$500,000 and \$2 million, while small grocery stores have annual sales of less than \$500,000. Convenience stores provide a more limited range of foods. Examples of other store types include nonprofit food buying co-op stores and combination grocery/other stores. While convenience stores are the most prevalent source of food shopping, the majority of SNAP benefits are spent in supermarkets or other large stores."

⁸⁵ USDA. SNAP Retailer Management 2013 Annual Report. pg. 2. Web. 2 February 2015. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

⁸⁶ Ibid.

easy to get to farmers' markets. Approximately one third said that the prices at farmers' markets were too high.⁸⁷

These findings suggest that a Market Match program will reach the most SNAP participants if implemented in supermarkets and large grocery stores, due to the high prevalence of SNAP customers, convenience of access, and the fact that the majority of SNAP customers visit these stores already to purchase fruits and vegetables.

Increase in Purchase and Consumption of Fruits and Vegetables

In addition to demonstrating that participants increased their fruit and vegetable consumption, the HIP and Fair Food Network studies also shed light on the extent to which the programs will attract participants in the first place.

Retailers who participated in the HIP study only experienced a small increase in SNAP purchases at their stores. The difference in SNAP purchases between HIP and non-HIP households was about \$4.30, and this effect was larger for supermarkets, superstores, and grocery retailers compared to convenience stores. One explanation for the relatively small increase in SNAP purchases overall was lack of awareness of the program. The study concluded that the participation rate would be considerably larger if the financial incentive were expanded into a permanent program for the full SNAP population.

However, an alternative explanation may be because the majority of SNAP participants already shop at supermarkets, superstores and grocery stores, so the potential for increase in SNAP purchases is smaller than the potential for increase in other venues. Furthermore, the HIP study found that HIP did not lead households to change their shopping patterns—where they purchased groceries or how frequently they shopped—to any great extent. While other studies have found otherwise, the HIP report suggests that the majority of those who currently shop at supermarkets, superstores, and grocery stores will continue to do so, despite nutrition incentives being offered at other stores or, perhaps, farmers' markets.⁸⁸

Increase in Retailer Participation in Market Match

⁸⁷ Ibid.

⁸⁸ "Evaluation of the Healthy Incentives Pilot (HIP) Final Report." Food and Nutrition Service (2014): p. 117. U.S. Department of Agriculture, Sept. 2014. Web. <www.fns.usda.gov/sites/default/files/HIP-Final.pdf>.

Little research has been done on the impact on grocery retailers of providing nutrition incentive programs, though there is some information contained in the HIP report. The study noted that at the outset of the pilot, some retailers, particularly smaller stores, were concerned that HIP might increase the time and effort required to process SNAP purchases. However, according to store managers, this does not appear to have been the case. In addition, few retailers reported problems during the pilot. Of those who did, the most common problems and questions concerned identifying HIP-eligible items and identifying customers who could earn incentives.

Overall, the vast majority of supermarkets, superstores, and grocery stores reported that they were satisfied with HIP. In contrast, only one-third of convenience store managers were satisfied; the rest were neither satisfied nor dissatisfied. The study also indicates that initial implementation may be difficult for smaller retailers and convenience stores. Unlike farmers' market managers who already have some experience with nutrition incentive programs, store managers may be less comfortable with implementing Market Match. This is likely the result of confusion around identifying Market Match-eligible items and identifying eligible customers who could earn incentives. Furthermore, if convenience stores carry relatively few Market Match-eligible items, it may limit their potential benefits and therefore their likelihood to participate in and promote such a program. It is possible that grocery retail expansion effectiveness will depend on the size and type of retailer.

For example, The Fair Food Network piloted an incentive program with three independent grocery stores in Detroit in 2013 and expanded it to include larger grocery chains in 2014. The results have shown promise but also indicate that implementing the incentive in grocery stores can be more complicated than at farmers' markets for at least three reasons: the difficulty of identifying local produce, complex cash register technology, and the greater number of staff involved at grocery stores.⁸⁹

This was illustrated in the Double Up Food Bucks (DUFb) Grocery Project study, where differences in redemption rates seem to have depended on the type of grocery retailer. For example, in the four participating Detroit independent stores, \$37,280 in DUFb cards were distributed to customers and \$21,476 in DUFb was spent on Michigan-grown produce, a 58 percent redemption rate. However, in the two participating SpartanNash Family Fare stores, \$81,752 in DUFb credits was loaded onto customer store loyalty cards, and \$13,093 in DUFb was redeemed for Michigan-grown produce, resulting in only a 16

89 "Healthy Food Within Reach." SPUR Report. SPUR, Feb. 2015. Web. <www.spur.org/sites/default/files/publications_pdfs/SPUR_Healthy_Food_Within_Reach.pdf>.

percent redemption rate. Reasons for these differences in redemption rates are unknown. However, explanations may include the fact that SpartanNash stores have a larger staff to train, use, and promote the nutrition incentive program. Additionally, SpartanNash chose to internally train their staff in implementing the program, while the Fair Food Network trained workers at the independent stores.⁹⁰

On the other hand, supermarkets and larger grocery stores have streamlined payment technology and locations across the state, which means that while initial implementation may be difficult, replication can be seamless and scalability will be simple. The relative ease with which to participate in the Market Match program may incentivize supermarkets and large grocery stores to not only participate, but to promote the program to potential shoppers.

⁹⁰ Interview with Noah Fulmer, Fair Food Network.

XI. ANALYSIS OF BUDGETARY COSTS

In this section, we analyze the budgetary cost of the two alternatives - expanding to farmers' markets and expanding to grocery retailers. We describe different methodologies we used to calculate the costs of each alternative and provide upper and lower bounds of each estimate, both in the initial year of expansion and projected into the future. There is a significant difference in the total cost between the two options. The annual cost of expanding to farmers' markets ranges from \$1.4 million to \$6.2 million, while the annual cost range of expanding to all retailers is \$152 million to \$392 million.

Cost of Expansion to All Farmers' Markets

Based on the methodologies used below, we expect the cost for expansion to all farmers' markets to be between \$1.4 million and \$6.2 million annually.

Given our selected program design (see Figure 7), the major cost drivers of expanding Market Match to farmers' markets are initial expansion costs, ongoing costs, and ongoing program incentive costs. Using correspondence and data from the Heart of the City Farmers' Market (HOCFM), The Ecology Center, the Pacific Coast Farmers' Market Association (PCFMA), the Agricultural Institute of Marin, and Coastside Farmer's Markets, we provide estimates for different components of initial and ongoing costs.

Initial Expansion Costs

The primary initial expansion costs come largely from farmers' markets acquiring the necessary equipment, conducting participant outreach, and training staff to institute the program.

Necessary materials include EBT POS devices and tokens for transactions. The EBT Point of Sale (POS) device processes SNAP benefits electronically and costs an average of \$1,000 each.⁹¹ It is important to note that the California Department of Social Services (CDSS) provide these machines for free to a farmers' markets that applies and is approved to accept EBT by Food and Nutrition Services (FNS).⁹²

⁹¹ Schumacher, August, Suzanne Briggs, and George Krumbhaar. "Wireless Card Services: Supporting SNAP (Food Stamp), WIC and Senior Farmers Market Nutrition Programs." Farmers Market Coalition, 30 May 2009. Web.

⁹² "The Simple Guide for Market Managers: EBT Access at Farmers' Markets." The Ecology Center, 09 December 2014. <ecologycenter.org/wp-content/uploads/2013/10/Simple-Guide-for-Market-Managers-10.28.13.pdf>.

Although the device is considered a state expense, we do not include it in our cost calculations because CDSS has already made prior commitment to provide them free of charge.

The tokens are the physical currency SNAP participants receive to spend at the market. They receive both SNAP tokens and Market Match tokens to spend on fruits and vegetables at the farmers' stalls. Having two distinct tokens allows the farmers' market manager to track SNAP benefits and Market Match incentive separately, which facilitates data collection. For most markets, 1,000 to 5,000 tokens are suitable and cost \$150-\$350 depending on quantity and design.⁹³ For the purpose of this report, we used \$350 to provide conservative cost estimates.

Additionally, new incentive programs require investing in participant outreach to aid the program's success. This outreach includes marketing materials to distribute throughout the community, such as flyers, posters, and pamphlets. In some farmers' markets, staff have even provided customer training. Since not all farmers' markets already have access to EBT, a market that is newly authorized to accept EBT would need to make potential customers aware that they accept it in addition to promoting Market Match. Based on data acquired from multiple markets, participant outreach is expected to cost each farmers' market \$1,000.⁹⁴

Finally, a 10-hour training is necessary to teach the staff how to process EBT transactions and distribute SNAP and Market Match tokens. For most farmers' markets, a current employee will be trained to manage the program. In larger farmers' markets, it may be necessary to hire a SNAP and Market Match program manager. The average hourly wage for market staff for the markets we contacted is \$16 an hour, so we can estimate the training totals \$160.⁹⁵ In sum, initial expansion costs are estimated to be \$1,510.

⁹³ Ibid.

⁹⁴ Based on analysis of data provided through interviews with multiple CA Market Match Consortium market managers, March - May 2015

⁹⁵ Ibid.

Table 4. Initial Expansion Costs

Category	Expenditure	Cost
Materials and Supplies	SNAP and Market Match Incentive Tokens	\$350
Participant Outreach	Marketing Materials and Community Outreach	\$1,000
Staff Training	One-time Weekend Training	\$160
Total		\$1,510

Ongoing Administrative Cost

Ideally, markets that newly implement Market Match would hire a SNAP and Market Match program manager to oversee SNAP transactions, provide tokens to customers, and orient new customers. The manager would also track the number of EBT transactions and Market Match incentives redeemed. The cost of hiring an employee for this position is estimated to be \$12,900 annually.⁹⁶ However, it is likely that smaller farmers' markets cannot afford this cost, and instead would need to incorporate additional hours that staff would have to spend to manage the program. Looking at averages from multiple markets, the additional staff cost per market to run Market Match is \$6,000.⁹⁷ This includes processing the transaction at the market manager's booth, distributing and redeeming tokens, and other accounting duties.

Additional ongoing costs are the necessary supplies to keep the program running, such as SNAP machine receipt paper (\$100) and more participant outreach materials (\$250).⁹⁸ In total, assuming that a farmers' market adds in extra staff hours to manage the program, ongoing costs are estimated to be \$6,350 annually per market.

Table 5. Ongoing Administrative Costs

Category	Expenditure	Cost
Materials and Supplies	SNAP Machine Receipt Paper	\$100
Ongoing Participant Outreach	Marketing Materials	\$250
Additional Staff Hours	SNAP and Market Match Program Manager	\$6,000
Total		\$6,350

⁹⁶ Heart of the City Farmers' Market (HOCFM) FINI Grant Application: 3

⁹⁷ Based on analysis of data provided through interviews with multiple CA Market Match Consortium market managers, March - May 2015

⁹⁸ Heart of the City Farmers' Market (HOCFM) FINI Grant Application: 11

Program Incentive Costs

Methodology A for Farmers' Markets: Cost Estimates Based on Average Usage of Market Match at Farmers' Markets

In Methodology A, we used historical Market Match data from the Ecology Center to calculate the amount of program incentives required to expand to a single farmers' market. In 2014, \$551,924 of Market Match incentives were redeemed across 153 farmers' markets, meaning the average amount of incentives redeemed per market was around \$3,600.⁹⁹

Methodology B for Farmers' Markets: Cost Estimates Based on Statewide SNAP Usage at Farmers' Markets

We provide two different estimates in Methodology B, one in which we assume that all SNAP spending at farmers' markets would be matched and the other estimate having a \$10 cap on Market Match incentives per transaction.

To estimate the average program incentive cost for each market, given that all EBT benefits would be matched, we relied on CDSS data. Through our correspondence with CDSS, we obtained the amount of CA SNAP redeemed at farmers' markets in FY 2012 (\$3,094,431), which covers the months of June 2012 through May 2013.¹⁰⁰ Using monthly DFA-256 reports from CDSS, we also found the total amount of CA SNAP spent in FY 2012 (\$7.5 billion).¹⁰¹ From these values, we calculated that 0.041% of all SNAP benefits were used at farmers' markets.

Similarly, we used monthly CDSS DFA-256 reports to find that the total amount of SNAP spent in the 2014 calendar year was \$7.6 billion. Using the percentage of SNAP spending at farmers' markets (0.041 percent) in FY 2012, we estimated the total amount of SNAP spending in 2014 to be \$3,111,902. We then divided this amount by 400, which is the number of farmers' markets in California that accept EBT.

⁹⁹ Market Match Internal Data. Correspondence with Carle Brinkman, The Ecology Center.

¹⁰⁰ Public Records request. Correspondence with Joyce Bullivant, California Department of Social Services.

¹⁰¹ California Department of Social Services. DFA-256 reports. June 2012 to May 2013. Web. <www.cdss.ca.gov/research/PG352.htm>.

Therefore, the average program incentive cost of matching all CA SNAP purchases at farmers' markets at a dollar-to-dollar ratio is \$7,780 per market.

We used additional data from the Ecology Center to estimate the average program incentive cost for each market, given that \$10 is a common maximum cap per market visit at many markets,. According to the Ecology Center, the average EBT transaction at farmers' markets is \$16.24. If Market Match incentives are capped at \$10, the percentage of the average EBT transaction amount that will be matched is 61.58 percent. Using this percentage, we calculated that the average program incentive cost per market with a \$10 incentive cap is \$4,790. This serves as our lower bound estimate within Methodology B.

Total Program Cost Estimates

Combining the initial expansion, ongoing, and program incentive costs from previous sections, we estimate that the total annual cost of expanding Market Match to a single farmers' market is \$5,090 using Methodology A. Using Methodology B, we estimate that the total annual costs for expanding with and without an incentive cap are \$6,280 and \$9,270, respectively.

For the purpose of this report however, it is important to keep program incentive costs, which the state would potentially fund, separated from the initial and ongoing costs, expenses likely to be borne by farmers' markets. Solely using the estimated program incentive costs per farmers' market, we are able to calculate the cost of expanding Market Match according to the following three scenarios:

1. Expand to 400 farmers' markets that currently have access to EBT systems.
2. Expanding to 600 farmers' markets, if there is a modest increase in the number of farmers' markets that install EBT systems due to the program's potential success.
3. Expanding to all 800 farmers' markets in California.

The three scenarios allow us to not only to compare the cost estimates between Methodology A and B, but also give us a range of costs within each method.

Table 6. Total Program Cost Estimates

Methodology	Program Incentive Cost Per Farmers' Market	Lower Bound (400 FM's)	Middle Bound (600 FM's)	Upper Bound (800 FM's)
A - Based on Average Usage of Market Match Per Farmers' Market	\$3,600	\$1,440,000	\$2,160,000	\$2,880,000
B - Based on California Statewide SNAP Usage at Farmers' Market	\$7,780	\$3,112,000	\$4,668,000	\$6,224,000
B with \$10 cap - Based on California Statewide SNAP Usage at Farmers' Markets	\$4,790	\$1,916,000	\$2,874,000	\$3,832,000

Future Program Cost Projections

Due to the lack of Market Match and statewide farmer's market data over time, we are not able to make viable cost projections for the scenarios of expanding to 400, 600, and 800 farmers' markets. Thus, project national figures on current California statistics.

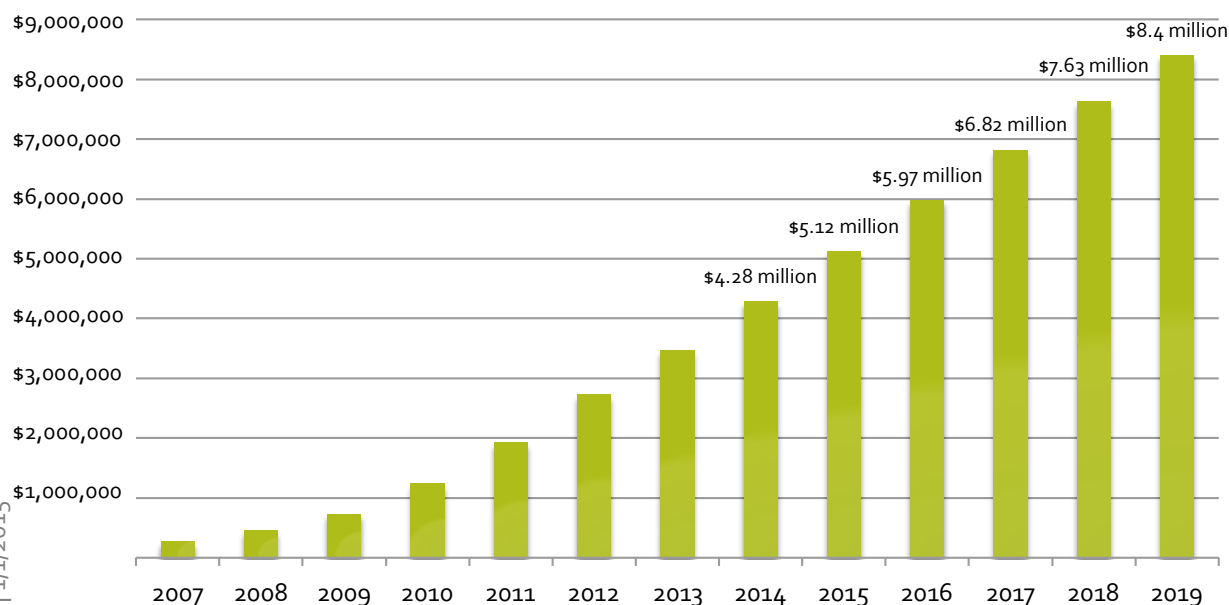
Since 2007, the amount of SNAP benefits used at farmers' markets has increased yearly at the national level. As more farmers' markets become EBT accessible, it is likely that this trend will continue but taper off over time. SNAP spending at farmers' markets grew an average of 54.26 percent each year from 2007 to 2013, with the earlier years experiencing the highest rate of growth.^{102 103} However, while the total spending increased each year, the annual growth in spending decreased at a rate of 15.40 percent. This means that even though SNAP spending at farmers' markets is increasing over time, it is doing so at a decreasing rate. We used this growth trend to extrapolate a five-year cost projection both at the national level and in California, which makes up 16.4 percent of the national SNAP spending at farmers' markets.¹⁰⁴ Since we are assuming a \$1/\$1 match, this means that all SNAP spending at farmers' markets equates to the amount of program incentive costs.

¹⁰² SNAP Retailer Management 2013 Annual Report (2013): 10. USDA, 2013. Web. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

¹⁰³ Supplemental Nutrition Assistance Program: USDA Food and Nutrition Service Benefit Redemption Division 2011 Annual Report (2011): 9. USDA, 2011. Web. <<http://www.fns.usda.gov/sites/default/files/2011-annual-report-revised.pdf>>.

¹⁰⁴ "SNAP Redemptions at Farmers Markets in 2010 and 2011." Food and Nutrition Services. Web. <farmersmarketcoalition.org/wp-content/uploads/2015/02/SNAP-Redemption-in-Farmers-Markets-2011.png>.

Figure 9. Estimated Value of Farmers' Market SNAP Redemption



Cost of Expansion to All Grocery Retailers

Based on the methodologies used below, we expect the cost for expansion to all grocery retailers to be between \$138 million and \$383 million annually.

The Massachusetts HIP program is the best model for a statewide grocery retailer expansion, so we use many of the estimates from that report to project budgetary costs.¹⁰⁵ Further, the incentive structure used in the HIP program was very similar to our chosen program design.¹⁰⁶ Participants were eligible to receive program incentives when they purchased targeted fruit and vegetables using their SNAP benefits. Participants used their EBT card at grocery retailers to receive program incentives. Not all grocery retailers were included, but given that HIP was available in a large percentage of retailers within a geographic area, the HIP report offers grounds for estimating the large-scale startup and implementation costs, most of which are technology-based.

We can also use the HIP findings to extrapolate the cost of incentives redeemed if such a program were available in all grocery retailers. The primary difference between the HIP incentive structure and the one

¹⁰⁵ The only other comparable program is Michigan's Double Up Food Bucks, which focused more selectively on local retailers and locally-grown produce.

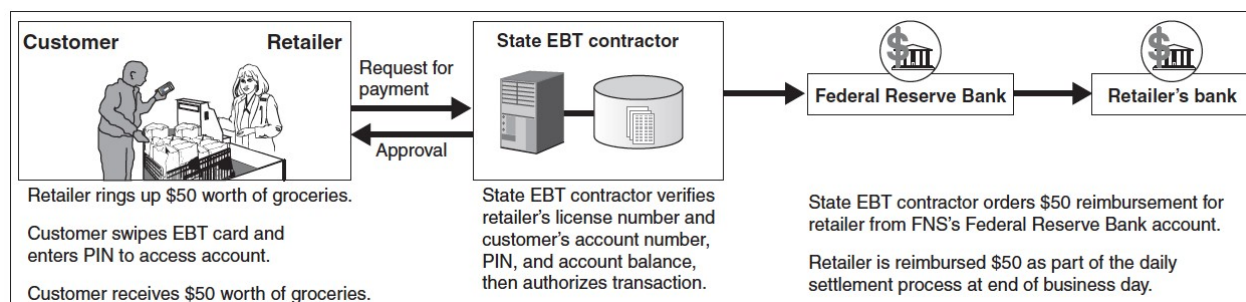
¹⁰⁶ The HIP program included a cap of \$60 of incentives per month, primarily to combat fraud. Very few participants approached the monthly cap, so we did not include one in our analysis of expansion to grocery retailers.

we have chosen to analyze is the match amount. HIP used a \$0.30/\$1 match, while our analysis uses a \$1/\$1 match. To account for this difference, we project HIP estimates on a \$1/\$1 match to estimate the total incentive costs.

Initial Expansion Costs Estimate

The technological integration of the incentive program into the EBT system makes up the majority of the initial one-time expansion costs.¹⁰⁷ In order for participants to have access to program incentives at all grocery retailers, every processor system involved in an EBT transaction needs to be modified and tested.

Figure 10. Example of an EBT Transaction¹⁰⁸



California's EBT contractor is Xerox,¹⁰⁹ and its central EBT processing system software will need to be updated, along with the point-of-sale (POS) terminals at every grocery retailer. These terminals engage with the central system through a third party processor (TPP), and there are hundreds of unique TPPs and POSs used by different retailers throughout California.¹¹⁰ For example, Safeway uses the same TPP and POS terminal in all of their stores, but those configurations are different than the ones used at Raley's and many of the other chain or independent grocery retailers. Each different system needs a unique set of technical specifications developed and tested in order for SNAP users to have access to program

¹⁰⁷ The HIP program spent \$4.4 million in total. 55 percent (\$2.4 million) was systems design.

¹⁰⁸ "Food Stamp Program: Options for Delivering Financial Incentives to Participants for Purchasing Targeted Foods." Government Accountability Office, July 2008. Web. <www.gao.gov/new.items/do8415.pdf>.

¹⁰⁹ Xerox was also the contractor in Massachusetts during the HIP program.

¹¹⁰ Note: If a business is formerly licensed to accept SNAP, they have the option to accept EBT at no cost through commercial equipment provided by a third-party processor. However, retailers that become SNAP-authorized after March 21, 2014, must pay for their own EBT equipment and service (Source: SNAP provisions of the Agricultural Act of 2014).

incentives when making a purchase. In the HIP program, both the modification of the central EBT system and the development of technical specifications for retailers' systems were done centrally by Xerox.

The majority of the initial costs relate to these technical modifications. Additional expenditures include managing the program implementation, and notifying and training SNAP staff, retailers, and participants. In total, the HIP report estimates these centralized costs to be \$2.18 million.^{111 112} However, state officials believe this is likely to be higher in California given the size of the state. California has 10 percent of the nation's retailers that accept SNAP,¹¹³ which is five times more than the average state. Therefore, we multiply the HIP report's estimate of centralized costs by five, which is \$11.1 million.

The HIP report also estimates the per-retailer cost of expansion to be \$386,¹¹⁴ totaling \$2.67 million when expanded to all of California's 6,905 grocery retailers that accept SNAP. Combined with the centralized costs, this results in an estimated total implementation cost of \$13.8 million.

Program Incentive Costs

Since the HIP program offered a \$0.30/\$1 match, compared to the \$1/\$1 incentive in our program design, we need to project how that change in incentive structure may alter consumption of fruits and vegetables. To estimate this impact, we developed two methodologies to calculate the potential range of incentives likely to be earned by participants.¹¹⁵

Methodology A: Cost as a Percentage of Total SNAP Expenditures

HIP participants who received the \$0.30/\$1 match spent an average of 5.1 percent of their SNAP benefits on eligible fruits and vegetables.¹¹⁶ In 2014, California's total SNAP benefit expenditure was \$7.4 billion.¹¹⁷ If we assume the same 5.1 percentage is spent on fruits and vegetables, it would mean that California SNAP users spend about \$378 million on eligible produce annually. If they receive thirty cents for each dollar spent, the cost of the program incentives would be \$113 million.

¹¹¹ Ibid, pg. 183.

¹¹² The HIP report estimated that the cost of expanding their program structure to another state would be \$2.18 million, but interviews with California SNAP officials lead us to believe the technological costs for expanding to California would be higher.

¹¹³ SNAP Retailer Management 2013 Annual Report (2013): USDA, 2013. Web. <www.fns.usda.gov/sites/default/files/snap/2013-annual-report.pdf>.

¹¹⁴ HIP Report, pg. 187.

¹¹⁵ Full details of the methodologies and calculations can be found in Appendix 2.

¹¹⁶ Ibid, pg. 105.

¹¹⁷ "Supplemental Nutrition Assistance Program Benefits." U.S. Department of Agriculture, 10 Apr. 2015. Web. <[www.fns.usda.gov/sites/default/files/pd/17SNAPfyBEN\\$.pdf](http://www.fns.usda.gov/sites/default/files/pd/17SNAPfyBEN$.pdf)>.

When the incentive structure is changed from \$0.30/\$1 match to a \$1/\$1 match, we can calculate an upper bound cost estimate by expecting families to spend the same percentage of their SNAP benefits on fruits and vegetables. For instance, a family consuming \$100 of fruits and vegetables would spend \$77 of their SNAP benefits under the HIP program, and receive \$23 in incentives. If their match was raised to \$1/\$1 and they spent \$77 still, they would now consume \$144 of produce each month. Since the new match amount allows families to consume 44 percent more, we do not expect them to spend more of their SNAP benefits on fruits and vegetables. Essentially, this means that the upper bound estimate assumes a dollar-for-dollar match for 5.1 percent of California's SNAP expenditures, which totals \$378 million.

To calculate the lower bound estimate for Methodology A, we use an USDA/ERS estimate of the impact of a price discount on the amount of fruits and vegetables purchased. Their research found that a 10 percent decrease in price led to a 6-7 percent increase in purchases.¹¹⁸ Since a shift from a \$0.30/\$1 match to a \$1/\$1 match is akin to a shift from a 23.1 percent discount (spending \$77 to get \$100 worth) to a 50 percent discount, the additional 26.9 percent discount received would result in a 17.5 percent increase in fruit and vegetable purchases. 17.5 percent more than the \$113 million spent in HIP equals a total incentive cost of \$138 million.

Methodology B: Cost Using Per-SNAP-Household Expenditure

The average household that participated in HIP earned \$3.65 in incentives per month, and the report estimated that had HIP been available at all grocery retailers,¹¹⁹ the average would have been \$6.90 per household per month.¹²⁰ In 2014, there were 2,310,439 California households receiving SNAP benefits, so if a program using the HIP incentive structure were available at all retailers in California, those households would redeem \$191 million in incentives per year.

The upper and lower bounds are calculated using similar approaches as in Methodology A. The upper bound cost estimate assumes the average amount spent on fruits and vegetables by households is unchanged even as the match increases to one dollar for each dollar spent. HIP households spent an

¹¹⁸ Dong, Diansheng, and Biing-Hwan Lin. *Fruit and Vegetable Consumption by Low-income Americans: Would a Price Reduction Make a Difference?* Washington, D.C.: USDA Economic Research Service, Report No. 70. Jan. 2009. USDA ERS. Web. May 2015. <<http://www.ers.usda.gov/media/185375/err70.pdf>>.

¹¹⁹ The HIP report used a multiplier based on the percentage of SNAP benefits participants used at retailers where the incentive program was offered.

¹²⁰ Ibid, pg. 180.

average of \$12.18 per household per month,¹²¹ which would total \$338 million annually in incentives for all SNAP users in California. The lower bound for Methodology B is calculated by expecting the amount of consumption under the \$0.30/\$1 match to increase by 17.5 percent, which would cost \$225 million.

Total Program Cost Estimates

Combining the implementation cost with the program incentive cost estimates gives us our total program cost estimates.

Table 7. Year One Cost Estimates

	Projecting to \$1/\$1 Match	
	Upper Bound	Lower Bound
Methodology A	\$391,787,415	\$151,906,811
Methodology B	\$352,050,016	\$238,584,357

Future Program Cost Projections

To calculate the program incentive costs, we used California's current amount of SNAP expenditures and current amount of SNAP households. However, these numbers are likely to change in the future, so we use two different methods to estimate a lower bound and an upper bound projection. For the lower bound, we use federal SNAP cost projections from the Congressional Budget Office (CBO)¹²² because the CBO projects that SNAP costs and participation will decline in the coming decade. Using these figures, we assume that California's trends in SNAP expenditures and participation will mirror those of the nation as a whole. Methodology A is a function of overall benefits cost, so we use the CBO benefits cost projections to estimate lower bounds for 2015 through 2025. Methodology B is a function of participating households, so we similarly use CBO's projections of national SNAP participation in our estimates.

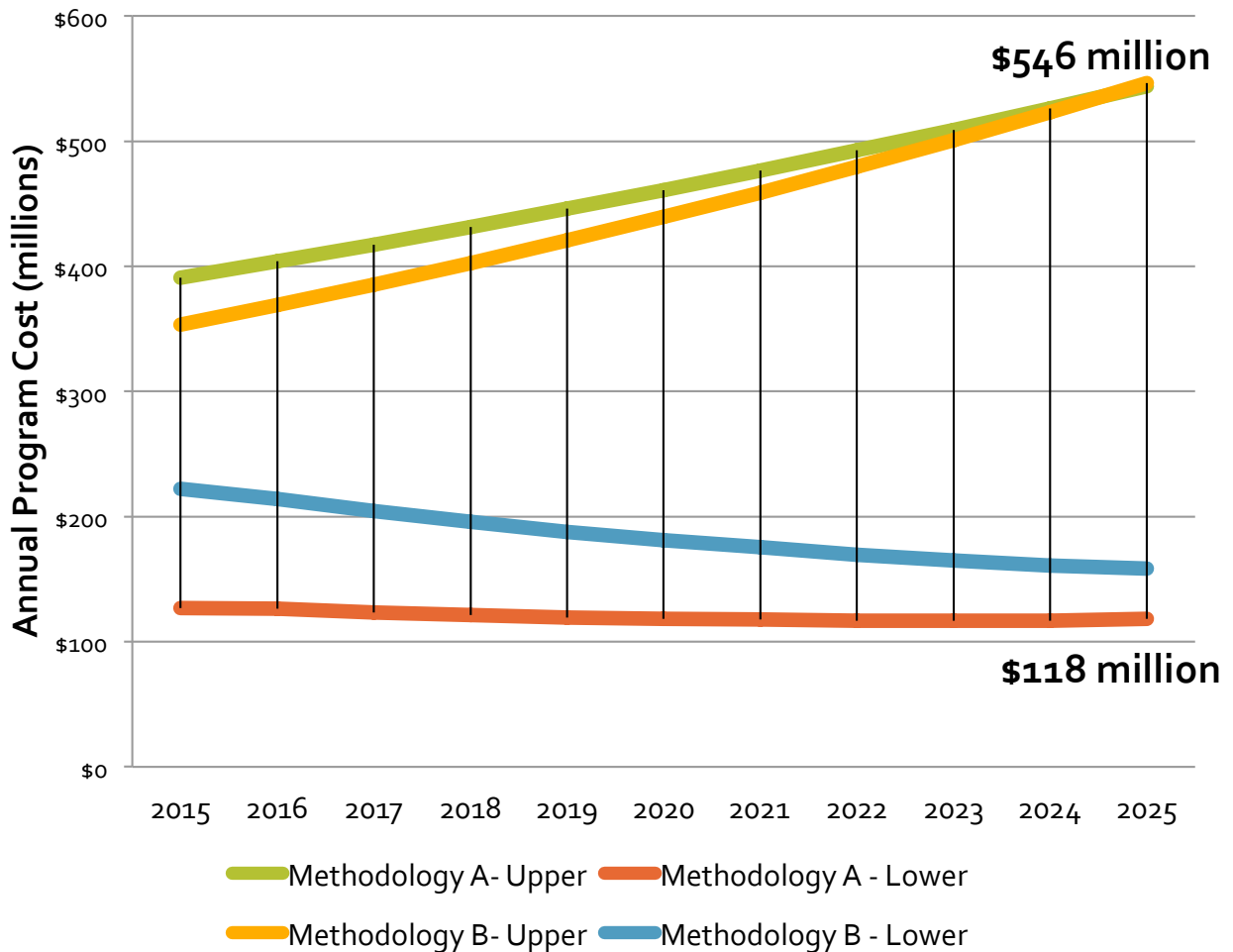
However, states are moving heterogeneously in terms of SNAP participation levels, with California one of only five states where the number of SNAP households increased in the last year. So even with national SNAP costs and participation expected to decline in the coming decade, California is likely to see those

¹²¹ Ibid, pg. 107.

¹²² "Supplemental Nutrition Assistance Program - CBO's March 2015 Baseline." Congressional Budget Office, 2015. Web. <www.cbo.gov/sites/default/files/cbofiles/attachments/44211-2015-03-SNAP.pdf>.

numbers rise. We use California's growth rates of SNAP expenditure and participation over the past two years, and we project that growth forward to calculate our upper bounds.

Figure 11. Program Cost Projections, 2015-2025



Given the opposing directions of national SNAP trends and California SNAP trends, our upper and lower bound estimates grow further apart over time. By 2025, we project the cost of program incentives to be between \$544 million and \$118 million.

XII. ANALYSIS OF FEASIBILITY

The political feasibility of a farmers' market expansion will depend on assembling a strong enough political coalition that is able to overcome Governor Jerry Brown's reluctance to spend money on new programs.

The political feasibility of expanding into all grocery retailers is not likely in the near future. The costs will require new revenue sources and the state legislature is unlikely to raise taxes, particularly given its current makeup.

Political Feasibility of Expansion to All Farmers' Markets

Given the relatively low cost of expansion to farmers' markets, funding may be possible by reallocating money from the state's general fund, and would not require additional revenue sources. Securing this funding requires a strong coalition of advocacy groups that are able to persuade legislators of the program's merits. Advantageously, this expansion already enjoys support from a broad range of advocacy groups in the state. For instance, Assembly Bill 2385, which called for broadening the Market Match program using federal money, garnered the support of over 50 state advocacy groups in 2014. These included health groups, farm groups, nutrition groups, anti-hunger groups, farmers' market organizations, community groups, homeless advocacy groups, and religious organizations (refer to Appendix 5 for full list of supporters).¹²³

Further, this bill garnered support in the legislature. It was sponsored by Assemblymember Phil Ting, who is now Chair of the Committee on Revenue and Taxation, and unanimously passed through the Assembly Agriculture Committee, gaining the support of both committee Democrats and Republicans. While this bill never made it to the Assembly floor for a full vote, a future bill may also unite a bipartisan coalition of legislators. Those from both more urban areas of the state, representing a large share of SNAP users, and from rural areas, representing agricultural interests, have reason to support this program.

¹²³ "AB 1321 (Ting) & Budget Proposal Synopsis." Roots of Change. Web. <www.rootsofchange.org/wp-content/uploads/AB1321Synopsis_3.17.15.pdf>.

However, should a bill pass through the legislature, the Brown administration has a history of vetoing spending bills.¹²⁴ In his 2013 State of the State speech, Brown said, "Fiscal discipline is not the enemy of our good intentions but the basis for realizing them. It is cruel to lead people on by expanding good programs, only to cut them back when the funding disappears."¹²⁵ Interviews with experts also support the contention that Brown is not interested in funding new initiatives, as he is more interested in creating long-term financial stability. Since California's property tax revenue is also limited by Proposition 13, stability requires saving money when the economy is strong because income tax revenues - which the state relies on heavily - fall dramatically when the economy is poor. This is why Brown was a strong supporter of Proposition 2 in 2014, which requires that 1.5 percent of revenues in the general fund be put into a "state budget stabilization account"¹²⁶

Despite the governor's resistance to funding new programs, the relatively low cost of expanding to farmers' markets could allow the program to be absorbed into the general fund budget without a dedicated funding source, particularly given that state revenues have been exceeding projections in recent years. According to experts on the state budget, Governor Brown agreed last year to roughly \$500 million in additional spending to fund key legislative priorities after his revised budget projected an additional \$2.4 billion in revenues over the three year budget window from 2012-13 to 2014-15.¹²⁷ Allocating state revenues to the farmers' market expansion this year would require advocacy groups to convince powerful legislators to make this a spending priority.

Therefore, even though expanding into all farmers' markets is politically feasible, the likelihood is hard to gauge. It depends on the ability of advocacy groups to convince a strong enough coalition of legislators to both support Market Match and work to overcome the Governor's reluctance to fund new

124 "Governor Brown Issues Legislative Update." Office of Governor Edmund G. Brown Jr. - Newsroom. N.p., 29 Sept. 2014. Web. 30 Apr. 2015. <gov.ca.gov/news.php?id=18741>.

125 "Governor Brown Issues Legislative Update." Office of Governor Edmund G. Brown Jr. - Newsroom., 29 Sept. 2014. Web. 30 Apr. 2015. <gov.ca.gov/news.php?id=18741>.

126 "California Proposition 2, Rainy Day Budget Stabilization Fund Act (2014)." Ballotpedia. 2014. Web. <ballotpedia.org/California_Proposition_2,_Rainy_Day_Budget_Stabilization_Fund_Act_(2014)>.

127 "Governor's Budget: May Revision 2014-2015." Web. <www.ebudget.ca.gov/2014-15/pdf/Revised/BudgetSummary/Introduction.pdf>.

spending programs. The fate of AB 1321, an updated version of AB 2385 that requests \$5 million in general funds for Market Match expansion, will be a good indicator of advocacy groups' ability to generate legislative support.

Political Feasibility of Expansion to All Grocery Retailers

An expansion of Market Match into all retailers across the state is likely to enjoy political support from nearly all the advocacy groups who supported the expansion into farmers' markets, with the probable exception of farmers' market organizations, who will not benefit from this expansion. However, this proposal would likely get significant support from grocers, specifically the California Grocers Association, as the benefits from the program would be spent in their stores.

Given the large amount of money necessary to expand to all grocery retailers, new revenue sources would be required. Several experts on California politics agree that there is almost no chance that the legislature will vote to raise taxes to fund this type of program, especially after the Democrats lost their supermajority in the 2014 election.

Given the two-thirds majority requirement to raise revenues mandated by Proposition 13, Republican votes would be necessary.¹²⁸ However, the California Republican Party's platform declares both taxes and spending in the state too high,¹²⁹ making the political chances of statewide expansion into all retailers extremely unlikely until at least after the 2016 election, when the makeup of the legislature may be changed.

¹²⁸"What Is Proposition 13?" California Tax Data. Web. <www.californiataxdata.com/pdf/Prop13.pdf>.

¹²⁹Pruner, Mark. California Republican Party Platform. Place of Publication Not Identified: Republican State Central Committee, 1988. Web. <www.cagop.org/wp-content/uploads/2014/05/2012-2016-Platform.pdf>.

Legal Feasibility

It is likely that Market Match will receive the necessary waiver from USDA regulations to expand the program throughout the state.

The likelihood of expanding Market Match is subject to rules and regulations established by the USDA.¹³⁰ The most relevant statute is section (C) 1(ii) of FNS' regulation (7 CFR 272.3), entitled "Equal treatment for coupon customers," which mandates that food coupons, such as SNAP benefits, shall be accepted for eligible foods "at the same prices and on the same terms and conditions applicable to cash purchases of the same foods at the same store."¹³¹ While this regulation exists to protect SNAP users against discrimination and stigmatization, it also applies to healthy incentive programs that offer bonus dollars specifically for EBT users, as is the case with Market Match.

However, USDA has the capacity to approve programs that do not meet regulations. There are three ways that healthy food incentive projects have been able to operate despite this general restriction:

1. Blanket farmers' market waiver

Market Match faces smaller legal hurdles in expanding to new farmers' markets because farmers' markets are not required to seek approval to operate incentive programs through their respective state.¹³² This flexibility emerged in 2010 when the USDA announced that farmers' markets that secure non-federal funding for healthy incentive programs automatically become eligible to receive a "blanket waiver" to administer the program.

Although they are not required to apply for a waiver, farmers' markets that plan to operate a nutrition incentive program must inform the USDA that they are conducting such a program.¹³³

¹³⁰Specifically, the Food and Nutrition Service (FNS) is the agency within the USDA that writes rules and regulations around EBT and SNAP use. See www.fns.usda.gov/snap/regulations for further information on FNS' SNAP regulations.

¹³¹"Participation of Retail Food Stores." Legal Information Institute. Cornell University Law School, Web. 30 Apr. 2015. <<https://www.law.cornell.edu/cfr/text/7/278.2>>.

¹³²Stacy. "Food & Nutrition Service Takes Steps to Streamline SNAP Procedures for Farmers' Markets Menu." Farmers Market Coalition. 25 Feb. 2010. Web. 30 Apr. 2015. <www.farmersmarketcoalition.org/snap_memo_feb_2010/>.

¹³³"EBT: Bonus Incentives." Food and Nutrition Services. USDA, 13 Jan. 2014. Web. 30 Apr. 2015. <www.fns.usda.gov/ebt/bonus-incentives>.

2. Blanket waiver for any project receiving FINI funding

Organizations that receive approved nutrition incentive proposals with funding from the Food Insecurity Nutrition Incentive Grant Program (FINI) are automatically granted a waiver of the equal treatment regulations. Waivers for FINI-backed programs apply in in both expansion for Farmer's Markets or grocery retailers. The USDA specifies that incentive use must in some way incentivize fruit and vegetable consumption.

3. Individual waivers granted to operate pilot programs

The USDA grants individual waivers to SNAP state agencies when it determines that the waiver will ensure either "more effective and efficient administration," or "accommodate unique local conditions."¹³⁴

This exception is used when expanding healthy incentive programs into grocery retailers. It has been granted for pilot programs in Detroit and Seattle, as well as locations throughout Texas and Minnesota.

Although information on waiver requests and approvals is limited, we examined a sample of approved waivers from USDA and identified key components that are important to waiver decisions. These components included the organization's former experience operating incentive programs, and the organization's proposed use of reports, data, and impact evaluations to support their efforts.¹³⁵ Given the information from this sample, the established presence of Market Match in California and their historical use of data position the program as a strong candidate for receiving waivers.

Moreover, there has never been an application for a statewide waiver to retailers so it is impossible to know with certainty how the USDA would respond to statewide expansion into retail stores. However, given the USDA's past willingness to grant waivers to pilot programs, as well as their clear interest in nutrition incentive programs as evidenced by the FINI grants, we feel California is likely to receive a waiver should the state want to expand Market Match to all retailers.

¹³⁴To examine USDA waivers more closely, see www.fns.usda.gov/snap/waivers-rules.

¹³⁵ Correspondence with Andrew Reisenberg, USDA Western Regional Office.

Table 8. Summary of Waiver requirements

	Blanket Farmer's Market Waiver	Blanket Waiver for FINI Grantees	Individual Waivers granted to
Audience	Farmer's Markets	FINI Grantees	Retailers with healthy incentive pilots
Requirements	Inform the Federal Nutrition Service that such a program is being operated in the farmers' market.	Incentive has to be restricted to fruits and vegetables.	<p>Waiver application required. Components of application must include:</p> <ul style="list-style-type: none"> • Name and contact information of program administrator(s) • Explanation of how the program will be operated • Sources of funding • Methods of data collection

XIII. RECOMMENDATIONS

We find that expanding into all grocery retailers across the state will allow a far greater number of SNAP recipients to participate in the Market Match program. Therefore, we recommend working to build a political coalition to pursue the financial resources necessary to make grocery retail expansion feasible in the long term.

Given that the overwhelming majority of SNAP participants shop at grocery retailers, we find that, while costly, grocery retailer expansion will reach a vastly larger population of SNAP users. Additionally, expanding to grocery retailers will capture a population of SNAP users who most need affordable healthy food options. Therefore, we recommend expanding Market Match to all grocery retail locations in California.

While there are benefits to expanding to all farmers' markets, the trajectory for this expansion has already been put into place. Market Match in farmers' markets has experienced continued growth since its inception in 2009, and the CMMC is now a robust network of nonprofits and farmers' market operators that has the capacity for growth.

With a \$3.7 million FINI grant, CMMC now also has significant financial resources in the short term. Further, several organizations are already working to pass Assembly Bill 1321, which could help secure funding for the long term. Given this trajectory, we recommend that the current level of support for expanding Market Match to farmers' markets is continued.

Though funding for grocery retailer expansion may be unlikely in the short term, several interviewees with experience relating to California's budget and politics have suggested long term plans that could eventually lead to full funding. Additionally, we recommend creating a pilot program to garner institutional support and test the effects of Market Match in grocery retailers in California. The following section will outline two options we have identified as potential long term funding strategies, as well as historical, political and legal considerations for creating a pilot program.

XIV. FUNDING AND IMPLEMENTATION STRATEGIES FOR EXPANSION TO ALL GROCERY RETAILERS

Option 1 - Use of Grocery Store Fees to Partially Fund Program

Should a political shift occur in the future that makes tax increases or a new spending program more feasible, charging a fee to grocery stores who participate in the program may be a way to decrease costs to the state. The model for this idea is the California Hospital Fee Program, which charges hospitals a fee in order to draw federal matching funds.¹³⁶ That money is then used to pay hospitals that serve medi-Cal and uninsured patients.¹³⁷ The reason that all California hospitals support this fee imposed on them is that the federal funds allow them to make more money back than they pay out.

A similar program design could be used with grocery stores. Grocers could be charged a fee based on their size, or how many SNAP customers they serve. If that fee were then matched by state taxpayers, or through a federal grant (though the size of that grant would be far larger than any incentive-related grant to date), the grocers may be willing to cover a substantial percentage of the program's cost, since the vast majority of the money would be spent back in their stores.

Option 2 - Soda Tax Ballot Measure

Another potential revenue source may be from a soda tax. The University of Connecticut's Rudd Center estimates that a penny per ounce tax on soft drinks in California would raise \$1.1 billion annually.¹³⁸

136 "Hospital Fee Program." California Hospital Association. Web. 30 Apr. 2015. <www.calhospital.org/hospital-fee-program>.

137 Hospital Quality Assurance Fee Program." Hospital Quality Assurance Fee. California Department of Health Care Services, n.d. Web. 30 Apr. 2015. <www.dhcs.ca.gov/provgovpart/Pages/HQAF.aspx>.

138 "Revenue Calculator for Sugar-Sweetened Beverage Taxes." UConn Rudd Center for Food Policy and Obesity. Jan. 2014. Web. 30 Apr. 2015. <www.uconnruddcenter.org/revenue-calculator-for-sugar-sweetened-beverage-taxes>.

This could be instituted through either legislative action, which is extremely unlikely (see political feasibility section), or through a ballot measure approved by a majority California voters. Momentum for a soda tax seems to be building in at least parts of the state. Ballot initiatives in 2014 in Berkeley and San Francisco garnered 76 and 56 percent of the vote respectively.^{139 140}

There also appears to be support for a soda tax outside of the liberal Bay Area. A 2013 poll, for example, found that 68 percent of California residents would support such a tax if the money were spent on programs benefiting children's nutrition and physical activity programs.¹⁴¹ However, advocates of the soda tax view that poll number as somewhat misleading since only 48 percent reported being "strongly" in favor.¹⁴² In their view, those who only weakly support the measure and even some of those who now strongly support it are likely to vote against it after the campaign, given that the beverage industry will spend a significant amount of money to change minds. The industry spent over \$10 million to oppose the Berkeley and San Francisco measures in 2014.¹⁴³

That said, earmarking one half of projected soda tax revenue for the Market Match program may be a shrewd political strategy for the initiative's supporters. Opposition to a soda tax will likely be strongest in the more conservative parts of the state, but those parts also produce large amounts of fruits and vegetables. For instance, Fresno, Tulare, and Kern counties are the three largest producers of fruits and tree nuts in the state¹⁴⁴ and majorities in all three supported Romney in 2012.¹⁴⁵

139 "City of Berkeley Sugary Beverages and Soda Tax Question, Measure D (November 2014)." Ballotpedia. N.p., Nov. 2014. Web. 30 Apr. 2015.

140 Even though the San Francisco measure won 56 percent of the vote, the measure did not pass as it fell short of the two-thirds supermajority required.

<ballotpedia.org/City_of_Berkeley_Sugary_Beverages_and_Soda_Tax_Question,_Measure_D_%28November_2014%29>.

"City of San Francisco Sugary Drink Tax, Proposition E (November 2014)." Ballotpedia. N.p., Nov. 2014. Web. 30 Apr. 2015.

<ballotpedia.org/City_of_San_Francisco_Sugary_Drink_Tax,_Proposition_E_%28November_2014%29>.

141 Palmer, Chris, and Ryder Diaz. "New California Field Poll Shows Support for 'soda Tax'" Mercury News. San Jose Mercury News, 14 Feb. 2013. Web. <www.mercurynews.com/ci_22586019/new-statewide-field-poll-shows-support-soda-tax?source=infinite>.

142 "2012 TCE-Field Childhood Obesity Prevention Survey: Tabulations." (n.d.): n. pag. Field Research Corporation, 14 Feb. 2013. Web. <media.sacbee.com/smedia/2013/02/13/18/38/PT3iP.So.4.pdf>.

143 Steinmetz, Katy. "Big Soda Fights Bay Area Tax Proposals." TIME. N.p., 3 Nov. 2014. Web. <time.com/3552008/soda-tax-san-francisco-berkeley/>.

144 "California Top 10 Agriculture Counties." See California. N.p., n.d. Web. 30 Apr. 2015.

<www.seecalifornia.com/farms/california-top10-agriculture-counties.html>.

145 "2012 California Presidential Results." POLITICO. N.p., 19 Nov. 2012. Web. 30 Apr. 2015.

<www.politico.com/2012-election/results/president/california/>.

Additionally, more than 30 percent of the tomatoes in the United States¹⁴⁶ and 15 percent of the state's overall¹⁴⁷ vegetable production¹⁴⁸ comes from Fresno County. Given that Market Match ensures additional spending on these products, a link from the revenue of a soda tax to an increase in purchases of fruits and vegetables may weaken opposition from typical adversaries.

Table 9. Top Agricultural Counties in California

Top 5 Agricultural Counties in California	Percent Voted for Romney in 2012
1. Fresno	50.6
2. Tulare	57.9
3. Monterey	31.9
4. Kern	58.4
5. Merced	46.3

A major benefit to this approach is that should the measure pass, the funding is extremely stable. One half of \$1.1 billion annually is more than our largest projection for yearly costs. While soda taxes are inherently regressive, as lower income people spend a higher percentage of their income on consumption goods, using the revenue for Market Match does ensure that low-income residents receive benefits from the funds.

Pilot Program

As the aforementioned funding strategies are pursued, a regional pilot that expands Market Match into grocery retailers should be created to build institutional support for a statewide expansion. In addition, a pilot will provide further information on the program's effectiveness, given that no research has been conducted to date on the impacts of Market Match in grocery retailers in California.

Historical Considerations

¹⁴⁶ Park, Alex, and Julia Lurie. "It Takes How Much Water to Grow an Almond?!" Mother Jones. 24 Feb. 2014. Web. 30 Apr. 2015. <www.motherjones.com/environment/2014/02/wheres-californias-water-going>.

¹⁴⁷ "Summary of Agricultural Commissioners' Reports." California Agricultural Statistics Service, 2000. Web. <<http://aic.ucdavis.edu/research1/III.4.pdf>>.

¹⁴⁸ Ibid.

Previous efforts in support of a healthy incentive pilot point to California's building momentum around nutrition incentive programs and offer lessons for a pilot moving forward. For instance, in 2006, Assembly Bill 2384 passed a Healthy Food Purchase Pilot that, much like HIP, would test financial incentives delivered by EBT. Despite its passage, the program did not get funded by the state due to ongoing budget constraints.¹⁴⁹ Nevertheless, the state continued its efforts and submitted an application for HIP through USDA, in response to a provision in the 2008 Farm Bill that allocated funds for a nutrition incentive pilot study. The 2010 application identified Santa Clara County as the ideal pilot site in the state for reasons including having a local agency that had the capacity to administer the program and a large retailer environment. Unfortunately, California was not selected as the pilot site, but the application is worth revisiting for insights into potential design considerations.¹⁵⁰ The region where the pilot takes place should reflect California's overall demographics, SNAP population, and food accessibility.

Political Considerations

While full funding may be extremely unlikely in the short term, a well-constructed pilot program may begin the process of generating the institutional support necessary to pass legislation creating a statewide program in the long run. In order to attract institutional interests, a potential strategy would be to look for unallocated funds in the budgets of the California Department of Food and Agriculture and the California Department of Public Health to help fund a pilot program in the state. In theory, these agencies would then become invested in the program and unite with advocacy groups, including potentially the California Grocers Association, to help pass statewide legislation.

Legal considerations

Seeking USDA support to waive SNAP regulations is necessary to institute a pilot program. Therefore, we strongly encourage partnering with an organization that has experience in administering nutrition incentive programs, and ensuring that sufficient data is collected and analyzed.

¹⁴⁹ Bill text: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB2384&search_keyw%20ds=

¹⁵⁰ Correspondence with Joyce Bullivant at CDSS

XV. CONCLUSION

To date, healthy food incentive programs, including Market Match, have seen broad, if small-scale, success in improving low-income consumption of fruits and vegetables. Both at farmers' markets and in pilot programs at grocery retailers, these incentive programs have shown to be effective in increasing participants' consumption of fruits and vegetables. To provide a recommendation on how best to expand the reach and financial stability of a fruit and vegetable incentive program in California, we evaluated two alternatives. We examined program effectiveness, budgetary cost, and feasibility in order to compare expansion to all California farmers' markets and expansion to all grocery retailers in California.

An expansion to all California farmers' markets would be an effective way to reach more of the low-income families who are able to access farmers markets, but the limitations of farmers markets, such as their variable location and schedule, make them inconvenient or inaccessible for many low-income families. In contrast, a large majority of SNAP households make their fruit and vegetable purchases at grocery stores, making an expansion to all California grocery retailers the more effective option. Our analysis of the budgetary costs revealed a large discrepancy between the two alternatives. Our estimates for the cost of expanding to all farmers markets is roughly a tenth as much as our estimated cost of expanding to all grocery retailers. The feasibility of each alternative again depends on their relative size. With a broad and dedicated coalition, we believe that expanding to all farmers' markets would be feasible, even in California's current political climate of fiscal conservatism. The political realities make the expansion to all grocery retailers politically infeasible in the short term, given the current makeup of California's legislature and the need to raise taxes to fund a program of this size.

Despite the challenges involved in a large-scale expansion, we recommend dedicating the time, strategic planning, and resources to laying the groundwork for expanding a fruit and vegetable incentive program to all grocery retailers in California. Availability at all grocery retailers would allow far more low-income families access and would likely lead to greater changes in consumption patterns

among participants. In order to address financial and political hurdles, we offer funding and implementation recommendations.

Our final recommendation is the creation of a grocery pilot within California to demonstrate how a fruit and vegetable incentive program would work in a California context and to provide evidence-based support for a statewide expansion. We believe a pilot to be the most appropriate next step towards the long-term goal of expanding a fruit and vegetable incentive program to all grocery retailers in California.

APPENDIX 1. CALIFORNIA STATISTICS

California Statistics	
Households on EBT (Dec. 2014)	2,310,439
<ul style="list-style-type: none"> DFA 256 - Food Stamp Program Participation and Benefit Issuance Report, December 2014 	
Number of SNAP participants (Dec. 2014)	4,438,624
<ul style="list-style-type: none"> DFA 256 - Food Stamp Program Participation and Benefit Issuance Report, December 2014 	
Estimated number of SNAP applicable grocery stores (see estimation method below)	6,905
Total SNAP Benefit Expenditures in 2014	\$ 7,411,483,685
<ul style="list-style-type: none"> USDA FNS – Supplemental Nutrition Assistance Program Benefits (Data as of April 10, 2015) 	
California Firms accepting SNAP	25,862
<ul style="list-style-type: none"> USDA FNS Snap Retailer Management 2013 Annual Report 	
National % of Firms - Large Grocery Store	1.46%
- Medium Grocery Store	4.65%
- Small Grocery Store	5.78%
- Super Store	7.43%
- Supermarket	7.38%
Total	26.70%
Estimated number of California Grocery Stores accepting SNAP	6,905
National Firms accepting SNAP	252,962
<ul style="list-style-type: none"> USDA FNS Snap Retailer Management 2013 Annual Report 	
% CA	10.22%
CA retailer multiplier (compared to average state)	5.11

APPENDIX 2.FARMERS' MARKET PROGRAM INCENTIVE COSTS

Methodology A - Based on Average Usage of Market Match Per Farmers' Markets

	2012	2013	2014
Food Assistance Benefits Spent at Participating Markets	\$725,436	\$1,227,999	\$1,665,952
Market Match Redeemed	\$153,695	\$238,441	\$551,924
Total Purchases	\$879,131	\$1,466,440	\$2,217,876

Number of Participating Farmers' Markets	134	139	153
Average Market Match Redeemed Per Market	\$1,146.98	\$1,715.40	\$3,607.35

Source: Ecology Center – Market Match Data

Methodology B - Based on California Statewide SNAP Usage at Farmers' Markets

CA SNAP Spent at Farmers' Markets (06/12 to 05/13)	% Of CA SNAP spent at Farmers' Markets
\$3,094,431	0.041%*

FISCAL YEAR 2012	CALENDAR YEAR 2014
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FISCAL YEAR 2012		CALENDAR YEAR 2014	
Monthly Total CA SNAP Spent ⁴ (06/12 to 05/13)		Monthly Total CA SNAP Spent (01/14 to 12/14)	
Jun 2012	\$604,957,667	Jan 2014	\$622,637,904
Jul 2012	\$609,760,245	Feb 2014	\$623,196,668
Aug 2012	\$614,545,679	Mar 2014	\$626,363,604
Sep 2012	\$613,450,672	Apr 2014	\$626,550,529
Oct 2012	\$622,629,035	May 2014	\$627,345,855
Nov 2012	\$617,936,795	Jun 2014	\$626,999,003
Dec 2012	\$621,268,048	Jul 2014	\$627,672,050
Jan 2013	\$642,102,018	Aug 2014	\$628,445,174
Feb 2013	\$640,714,872	Sep 2014	\$624,080,717
Mar 2013	\$648,264,624	Oct 2014	\$644,323,423
Apr 2013	\$643,737,603	Nov 2014	\$641,660,691
May 2013	\$645,093,271	Dec 2014	\$647,667,323
Total (06/12 to 05/13)	\$7,524,460,529	Total (01/14 to 12/14)	\$7,566,942,941

Sources: CDSS – Pubic Records Request, Monthly CDSS DFA-256 Reports

*The % Of SNAP spent at Farmers' Markets was calculated using CA SNAP Spent at Farmers' Markets in FY2012 and dividing it by Total CA SNAP Spent at Farmers' Markets in FY2012.

Estimated Cost of Market Match at each market if all EBT is matched \$1/\$1	Number of Farmers' Markets Accepting EBT in 2014	Estimated CA SNAP spent at Farmers' Markets in 2014
\$3,111,902	400	\$7,780
Total CA SNAP spent in 2014 multiplied by % of CA SNAP spent at farmers' markets in 2014 (0.041%)	Source: USDA-FNS: SNAP Authorized Farmers' Markets Spreadsheet	\$3,111,902 divided by 400 farmers' markets that accept EBT in 2014

Methodology B - Based on California Statewide SNAP Usage at Farmers' Markets (with \$10 cap)

Average EBT Transaction at a Farmers' Market	% Of Average EBT Transaction Matched If Market Match is Capped at \$10	Estimated Cost of Market Match at each market if all EBT is matched \$1/\$1	Estimated Program Incentive Cost Per Market if Market Match Capped at \$10
\$16.24	61.58%*	\$7,780	\$4,791

Source: Ecology Center – EBT Transaction Data

*\$10 cap / \$16.24 Average EBT Transaction = 61.58%

APPENDIX 3. FARMERS' MARKET COST PROJECTIONS

The estimates for farmers' market SNAP redemption in California are extrapolated from national SNAP spending specifically at farmers' markets. To apply the national growth trends to the California context, we multiplied the national amount spent at farmers' markets for any given year by 16.41%, which was the percentage of nationwide SNAP spent at California farmers' markets in FY2011. The increase in SNAP spending at farmers' markets due to the growing number of markets with EBT access is implicitly accounted for. We used the average rate of growth of the %-Growth in SNAP Redemption at the Farmers' Market (-15.4%) to extrapolate future cost projections.

Year	Estimated Value of Farmers' Markets SNAP Redemption (CA)	Value of Farmers' Markets SNAP Redemption (US)	% Growth in SNAP Redemption at Farmers' Market	Rate of % Growth
2007	\$265,840	\$1,620,344	-	-
2008	\$449,575	\$2,740,236	69.11%	-
2009	\$727,786	\$4,435,985	61.88%	-10.46%
2010	\$1,238,197	\$7,547,028	70.13%	13.33%
2011	\$1,923,705	\$11,725,316	55.36%	-21.06%
2012	\$2,723,180	\$16,598,255	41.56%	-24.93%
2013	\$3,471,778	\$21,161,091	27.49%	-33.85%
2014	\$4,279,229	\$26,082,646	23.26%	-15.40%
2015	\$5,121,248	\$31,214,897	19.68%	-15.40%
2016	\$5,973,806	\$36,411,386	16.65%	-15.40%
2017	\$6,815,184	\$41,539,731	14.08%	-15.40%
2018	\$7,627,284	\$46,489,621	11.92%	-15.40%
2019	\$8,396,188	\$51,176,226	10.08%	-15.40%

% Of National SNAP Spending Used in CA in 2011	Average %-Growth	Average rate of %-Growth
16.41%	54.26%	-15.40%

Sources: 2007-2008 Value of Farmers' Markets SNAP Redemption is from SNAP USDA-FNS 2011 Annual Report. Additionally, 2009-2013 Value of Farmers' Markets SNAP Redemption from is USDA SNAP Retailer 2013 Annual Report.

APPENDIX 4. RETAILER EXPANSION COSTS

Initial Expansion Costs	
System design, development, and testing * CA retailer multiplier	\$11,136,357
• USDA Evaluation of the Healthy Incentives Pilot Final Report	
Retail expansion cost (\$386 per retailer)	\$2,665,389
Subtotal	\$13,801,747
Note: Because expansion costs have a specific per-retailer cost, it is possible these costs could be partially or entirely borne by retailers.	

Price elasticity calculation	
Price elasticity of fruits and vegetables	-0.65
• USDA ERS Report: Can Food Stamps Do More to Improve Food Choice?	
Additional discount (price change) received shifting from \$0.30/\$1 to \$1/\$1	-26.9%
Predicted change in fruits and vegetables consumed	17.5%

Incentives costs			
Methodology A: Cost as a Percentage of Total SNAP Expenditures (5.1% of benefits were spent on targeted F&V)			
Stage One			
5.1% of all SNAP benefits spent in one year *	\$113,395,700		
\$0.30/\$1 match amount			
Stage Two			
<i>Total Cost Estimates (including initial expansion)</i>		<i>(solely incentives)</i>	
<i>Lower Bound</i>	\$151,906,811	\$133,239,948	
<i>Upper Bound</i>	\$391,787,415	\$377,985,668	
Methodology B: Cost Using Per-SNAP-Household Expenditure (HIP estimates (\$0.30/\$1 match) of incentive earned per household)			
Stage One			
Incentives earned (\$6.90) per month	\$15,942,029		
Estimated incentives earned per year	\$191,304,349		

Incentives costs			
Stage Two			
Total Cost Estimates (including initial expansion)		(solely incentives)	
Lower Bound		\$238,584,357	\$224,782,610
Upper Bound		\$352,050,016	\$338,248,270

Grocery Retailer Expansion Methodologies

*the following methodologies use the numbers reflected in the table above

Methodology A

Stage One (applying HIP results to California data)

(Annual CA SNAP benefits)

* (% of SNAP benefits spent on eligible fruits and vegetables by HIP participants)

* (\$0.30/\$1 match amount)

Stage Two (adjusting for the change in incentive structure to \$1/\$1)

Lower Bound

Stage one estimate * (1 + predicted % change in fruits and vegetables consumed)

Upper Bound (assuming a linear relationship between price and consumption)

Stage one estimate * (1/match amount)

Methodology B

Stage One (applying HIP results to California SNAP households data)

CA households receiving SNAP benefits

* (estimated amount of incentives earned by HIP participants per month) * 12

Stage Two (adjusting for the change in incentive structure to a \$1/\$1 match)

Lower Bound (using price elasticity to estimate the impact on consumption of a change to the match amount)

Stage one estimate * (1 + predicted % change in fruits and vegetables consumed)

Upper Bound (assuming the amount spent per household on fruits and vegetables does not change)

CA households receiving SNAP benefits

** (mean amount spent by HIP participants per month on fruits and vegetables) * 12*

APPENDIX 5. COST PROJECTIONS

Program Cost Projections (all numbers in millions)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Methodology A - Upper Bound	\$391	\$404	\$417	\$431	\$446	\$461	\$476	\$492	\$509	\$526	\$544
Methodology A - Lower Bound	\$127	\$126	\$124	\$121	\$119	\$118	\$118	\$117	\$117	\$117	\$118
Methodology B - Upper Bound	\$353	\$369	\$386	\$403	\$421	\$439	\$459	\$479	\$501	\$523	\$546
Methodology B - Lower Bound	\$222	\$214	\$204	\$196	\$188	\$181	\$175	\$170	\$165	\$161	\$158

Methodology A

Amount of national SNAP spending

• CBO - Supplemental Nutrition Assistance Program - CBO's March 2015 Baseline	\$70,601	\$70,217	\$68,724	\$67,437	\$66,458	\$65,725	\$65,416	\$65,030	\$64,942	\$65,104	\$65,824
<i>Lower Bound (using CBO projections)</i>											
CA SNAP spending on benefits	\$7,057.72	\$7,019.33	\$6,870.08	\$6,741.42	\$6,643.56	\$6,570.28	\$6,539.39	\$6,500.81	\$6,492.01	\$6,508.20	\$6,580.18
<i>Upper Bound (using CA SNAP trend)</i>											
Amount of CA SNAP spending on benefits	\$7,660.71	\$7,918.32	\$8,184.60	\$8,459.82	\$8,744.30	\$9,038.35	\$9,342.29	\$9,656.45	\$9,981.17	\$10,316.81	\$10,663.74

Methodology B

Number of SNAP participants in U.S.

• CBO - Supplemental Nutrition Assistance Program - CBO's March 2015 Baseline	46	44	42	41	39	38	36	35	34	33	33
<i>Lower Bound (using CBO projections)</i>											
Number of CA SNAP households	2.28	2.20	2.10	2.01	1.93	1.86	1.80	1.74	1.69	1.65	1.63
<i>Upper Bound (using CA SNAP trend)</i>											
Number of CA SNAP households	2.41	2.52	2.63	2.75	2.87	3.00	3.14	3.27	3.42	3.57	3.73

APPENDIX 6. LIST OF INTERVIEWEES

	Name	Organization
1.	Allen Moy	Pacific Coast Farmers' Market Association
2.	Andrew Reisenberg	USDA
3.	Carle Brinkman	Ecology Center
4.	Eric Lai	USDA
5.	Frank Martinez Nocito	Healthy Incentives Pilot and Department of Transitional Assistance
6.	Fred Silva	California Forward
7.	Hilary Hoynes	University of California, Berkeley
8.	Jared Call	California Food Policy Advocates
9.	Jeff Lasiter	California Department of Social Services
10.	Joyce Bullivant	California Department of Social Services
11.	Justin Rausa	Roots of Change
12.	Larry Magid	UC Berkeley
13.	Lenny Goldberg	California Tax Reform Association
14.	Nicole Anderson	Health Bucks NYC
15.	Noah Fulmer	Fair Food Network
16.	Rachel Chadderdon Bair	Fair Food Network
+	Sarah Palmer	California Association of Food Banks
18.	Scott Graves	California Budget Project
19.	Erin Tormey	Coastside Farmer's Markets
20.	Sarah Darcey-Martin	Agricultural Institute of Marin
21.	Allen Moy	Pacific Coast Farmer's Market Association
22.	Craig Watson	Safeway
23.	Kate Creps	Heart of the City Farmer's Market
24.	Chris Logan	Abt Associates
25.	Harold Goldstein	California Center for Public Policy
26.	Oksana Jaffe	Assembly Revenue Committee

APPENDIX 7. RELEVANT LEGISLATION

AB 1321 (2015, in Committee) - Would establish a framework for appropriating \$5 million per year from the state General Fund to create a statewide consumer incentive program for purchasing healthy fruits and vegetables within the Department of Food & Agriculture. AB 1321 would also include pilot expansion of incentives into retailers such as individually owned neighborhood markets and corner stores, but not large grocery stores.

AB 2385 (2014, did not pass Appropriations Committee) - Would have created the Market Match Nutrition Incentives Program at the Department of Food and Agriculture. The program would have awarded grants to Certified Farmers' Markets, Certified Farmers' Market associations, and non-profit organizations for the operation of a Market Match program.

AB 2384 (Chapter 236, Statutes of 2006) - Required the Department of Public Health, with the Departments of Social Services and Food and Agriculture, to conduct a pilot project (Healthy Food Purchase Pilot Program) to increase the consumption of fruits and vegetables by contracting with small grocers in low-income communities, offering increased financial incentives to food stamp recipients who purchased fresh fruits and vegetables, and conducting evaluation. However, implementation was blocked due to a lack of funds approved by the United States Legislature.

Food, Nutrition and Conservation Act (Farm Bill, 2008) - Enacted changes to the nutrition component of the Farm Bill, which included changing the name of the Food Stamp Program to the Supplemental Nutrition Assistance Program (SNAP), increasing SNAP benefits, improving eligibility requirements, and increasing funding to the Fresh Fruit and Vegetable Program (FFVP). The Farm Bill of 2008 also authorized \$20 million under the Healthy Incentives Pilot to pilot and evaluate health promotion projects within SNAP to determine if point-of-purchase incentives will increase the purchase and consumption of fruits, vegetables, and other healthy foods among SNAP participants.

Agricultural Act (Farm Bill 2014) - Made several changes to federal spending priorities, most notably an \$8 billion cut to SNAP benefits. The bill also authorized the Food Insecurity Nutrition Incentive (FINI) Grant Program. The goal of the FINI program is to incentivize different stakeholders in the food system to collaborate and create innovative programs to improve the nutrition and health status of SNAP households.

APPENDIX 8. SUPPORTERS OF AB 2385 (TING)

1. Adams/Vermont & Gardena CFMS
2. Agriculture and Land-based Training Association (ALBA), Salinas
3. Alchemist Community Development Corporation
4. California Alliance with Family Farmers
5. California Alliance of Farmers' Markets
6. California Food Policy Advocates
7. California Hunger Action Coalition
8. California Partnership
9. California State Grange
10. Center for Food Safety, San Francisco
11. Charles Drew University of Medicine and Science
12. City of Compton - Blue Line Farmers' market
13. City of Santa Monica - Pico Farmers' Market
14. City Slicker Farms, Oakland
15. Coastside Farmers' Markets
16. Community Health Councils, Inc., Los Angeles
17. Contra Costa Certified Farmers' Markets
18. Craig McNamara, CA State Board of Food and Agriculture
19. Crescent City Farmers' Market
20. CUESA, San Francisco
21. Ecology Center, Berkeley
22. Farm Fresh to You and Capay Organic
23. Farm to Pantry
24. Food Chain Workers Alliance, Los Angeles
25. Full Belly Farm
26. Harbor Area Farmers' markets
27. Heart of the City Farmers' Market, San Francisco
28. Homeless Healthcare Los Angeles
29. Heart of the City Farmers' Market, San Francisco
30. Hunger Action Los Angeles
31. Innercity Struggle
32. Jess Peterson, individual
33. Kern County Network for Children Locally Delicious, Humboldt County
34. Los Angeles Community Action Network Mar Vista Farmers' Market
35. Marin Food Policy Council
36. McGrath Farm
37. Oakland Food Policy Council
38. Orange County Food Access Coalition
39. People's Grocery
40. Phat Beets Produce
41. Point Reyes Farmers' Market
42. Public Health Institute
43. Richard E. Rominger, farmer
44. Roman Catholic Diocese of Fresno
45. Roots of Change (Sponsor)
46. San Diego Markets
47. Santa Barbara Food Alliance
48. Social Justice Learning Institute
49. Sprouts of Promise, Monterey Park
50. St. Anthony Foundation, San Francisco
51. St. Paul's Episcopal Church, Bakersfield
52. Thai Community Development Center, Los Angeles
53. The Farmers Guild
54. The Greener Good Farmers' Markets, Long Beach
55. The Hens Roost
56. United Way of Kern County
57. Valley Farmers' Market Association
58. VELA, Inc.
59. Visalia Farmers' market
60. Women Organizing Resources, Knowledge, and Services (WORKS)