Street Vendor Legalization and Student Nutrition in South Los Angeles:

HEALTH IMPACT ASSESSMENT

AUGUST 31, 2015

ROBERT BAIRD, MPL
Acknowledgements

REACH Partners in Health  Partners in Health is a 3-year project to develop and implement replicable and scalable policy, systems and environmental changes that reduce disparities in obesity and hypertension for African-American and Latino residents in South Los Angeles. The project’s core collaborators are Community Health Councils, the Los Angeles County Department of Public Health, Los Angeles Unified School District and the University of Southern California. Project initiatives are funded by a Racial and Ethnic Approaches to Community Health (REACH) Demonstration Grant awarded by the Centers for Disease Control and Prevention.

Community Health Councils (CHC) is a non-profit, community-based health education and policy organization. Established in 1992, our mission is to promote social justice and achieve equity in community and environmental resources to improve the health of underserved populations.

Author
Robert Baird, MPL, Policy Analyst

Steering Committee Participants
Brian Cole, UCLA Fielding School of Public Health
Rudy Espinoza, Leadership for Urban Renewal Network
Janet Favela, East Los Angeles Community Corporation
Dellis Frank, Los Angeles Unified School District
Gregg Kettles, attorney
Matthew Sharp, California Food Policy Advocates
Jacqueline Taylor, LA County Department of Public Health
Mark Vallianatos, Urban and Environmental Policy Institute

REACH Staff/Partner Contributions
Gwendolyn Flynn, Nutrition Resources Policy Director, Community Health Councils
Gabriel Stover, Director of Research and Evaluation, Community Health Councils
David Sloane, Professor, USC Sol Price School of Public Policy
Ruth Bell, LA County Department of Public Health
Tahirah Farris, USC Sol Price School of Public Policy
Robert Akil Bell, Community Health Councils
Zeke Chen, Intern, Community Health Councils
Qianyao Duan, Intern, Community Health Councils
Hector Gutierrez, Community Health Councils
Jaime Martinez, Community Health Councils
Joseph Martinez, Community Health Councils
Tiffany McDaniel, Community Health Councils
Breanna Morrison, Community Health Councils
Lyndsey Nolan, Intern, Community Health Councils
Jonathan Rivas, Intern, Community Health Councils
Andres Rivera, Community Health Councils
Sadio Woods, Community Health Councils

Field Assessors
Stacy Farfan
Stephanie Hedt
Tania Mercado
Jennifer Moore
Denise Payan
Cindy Quijivix
Alison Spindler
Jessica Wackenhut
Street Vendor and Student Nutrition HIA

Report Structure

This assessment employed a comparison of schools located in similar socioeconomic environments, but in jurisdictions with contrasting regulations for street food vendors, to determine differences in street vendor presence near schools and student nutrition behaviors. It also considers whether the presence of street food vendors correlates with differences in pedestrian and bicycle safety near schools. Results begin to quantify the role of street vendors within the wider food resource environment. In accordance with the proposed legislation to legalize sidewalk vending, only vendors selling food and beverages from conveyances (i.e. carts, containers) that are pushed, carried or pedaled into the pedestrian realm were included in the assessment. The proceeding description of the assessment is organized to include the following information:

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Executive Summary

The food environments encountered by South Los Angeles students continue to undermine their chances for a healthy future. Much of their community meets the federal designation of a food desert, and fast food comprises a far greater proportion of restaurants where they live compared to other places. Unsurprisingly, children in South Los Angeles consume more fast food and sugar-sweetened beverages and less fruits and vegetables than other children, and have the highest childhood obesity rate in Los Angeles County.

The food landscape these students navigate is multifaceted and includes convenience stores, food and ice cream trucks, and many channels of formal and informal exchange on campuses and in households. Only in recent years has food provided in schools become a healthier alternative to the surrounding retail food environment. However, close-range competition with outlets selling calorie-dense meals, low-nutrient snacks and sugary beverages is undercutting student demand for more nutritious lunchroom meals and limiting their success.

Sidewalk vending is common in the food environments surrounding schools, and is an informal enterprise providing stabilized income and business incubation for many low-income households. Vendors have struggled for years against business and resident opposition to gain a legally regulated status in Los Angeles, and a City Council vote to permit sidewalk vending could occur in 2015. A wide variety of items (including prepared drinks and homemade meals) are sold by vendors, but the most common sales to students and caretakers in afterschool hours are the cheap and convenient packaged snacks that drive caloric overconsumption.

This assessment considers how legalized sidewalk vending in South Los Angeles could change vendor activity near schools and the nutrition behaviors of students, as well as other environmental changes in the public realm adjacent to schools. Utilizing field observation and student surveys, the assessment compared schools in similar socioeconomic environments, but in jurisdictions with contrasting sidewalk vending regulations.

Despite more comprehensive prohibitions of sidewalk vending, schools in South Los Angeles were as likely to have vendors operating in their proximity as schools in more permissible regulatory environments. Cultural and economic characteristics of surrounding neighborhoods showed some correlation to vendor presence, but were not consistent between all the schools observed. Results point to the enforcement challenges of citywide vendor prohibitions and suggest that a full

HEALTH IMPACT ASSESSMENT RECOMMENDATIONS

- Continue to prohibit sidewalk and mobile food vending within 500 feet of school campuses. Adopt an exemption for vendors selling defined healthy snack and beverage items.
- Promote healthy street vending by offering regulatory incentives and the support of microenterprise and vendor incubation programs.
- Prioritize enforcement resources of sidewalk and mobile vending regulations to the peripheries of school campuses.
- Improve support for healthy food interventions in South LA, including Market Match incentive programs, Neighborhood Market conversions, Grocery Retail development efforts, Healthy Restaurant and Healthy Market recognition programs, Healthy Food Zone adoption, and Healthy Kids Zone adoption.
or partial legalization of sidewalk vending would not likely increase vendor presence near schools.

A significant portion of students reported at least occasional snack and beverage purchases from vendors, at rates comparable with food and ice cream trucks. The patronage rates were significantly less, however, than fast food restaurants and corner stores, while households were the most frequent source of snacks and beverages. Patronage trends also indicate an inverse relationship between sidewalk vendor purchases and both school lunch participation and household snacks and beverages. These results begin to quantify the role of sidewalk vendors within a wider food landscape.

Efforts to improve nutrition within schools will remain stunted if the counterproductive food environment around schools is not addressed. Recommendations in this assessment include limiting unhealthy food near schools through regulation and enforcement, in combination with regulatory and programmatic support for healthy food outlets.
**Section 1  Introduction**

Los Angeles is considering a proposal to legalize sidewalk food vending, following efforts in recent years to organize low-income street vendors against criminalization and barriers to microenterprise. Another ongoing advocacy effort has generated increasing pressure to improve the nutritional quality of meals on public school campuses. As administrators struggle to market healthier meals to students, the counterproductive presence of poor nutrition environments surrounding campuses, which includes street vendors, has come into sharper focus. To highlight the health considerations of this policy reform and inform dialogue regarding new regulatory structures, Community Health Councils (CHC) conducted an assessment of the potential nutrition-related impacts on school-age youth in South LA resulting from legalized sidewalk food vending.

**HIA Purposes and Content**

Health Impact Assessments (HIA) are an increasingly common way for stakeholder groups, advocacy organizations and public agencies to examine the potential health outcomes of policy changes and development proposals on the health of vulnerable populations. By connecting health disparities (based largely on race and income, among other factors) to the physical and economic conditions of marginalized communities, the modern environmental justice movement has generated a sustained scrutiny of local planning and decision-making processes in recent decades, where it had hardly existed before. As stakeholder groups have sought to construct persuasive arguments, refute unsubstantiated rationales and misinformation, and wield influence within the development and policy arena, they have replicated and innovated HIA formats with the flexibility needed to respond to the particular time and analytical demands of specific proposals.

The range of topics that HIA address is broadening as awareness grows of the regulatory and placed-based factors that lead to health disparities. HIA are often introduced into decision-making processes regarding transit investments, infrastructure projects, housing development, sports and entertainment venues, drilling and mining permits, land use updates and zoning revisions, redevelopment initiatives, campus plans, tax proposals, education reforms, and regulatory reforms. Some HIA seek to measure, to the extent possible, the projected impact of a proposal using data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program, or project on the health of a population and the distribution of those effects within the population. HIA provides recommendations on monitoring and managing those effects.

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1 Online HIA repositories are maintained by a number of organizations, including Human Impact Partners: www.humanimpact.org/projects/past-projects/
situations) provide a more generalized discourse of the interests and vulnerabilities of relevant populations concerning a proposal, using primary and secondary sources. HIA with different ranges of analytical depth can be effective in shifting attention towards potential health and socioeconomic impacts that may be overlooked or ignored by conventional analysis and planning processes.

HIA focus on a specific proposal that is or may soon be considered for adoption or implementation within a given geography, and contain findings that are ultimately health-related. Environmental and economic factors often contribute to these findings. It is also widely suggested that HIA give particular consideration to the uneven distribution of health impacts (i.e. disparities) within geographic areas and to specific populations that are vulnerable to environmental or regulatory changes. HIA should also seek to contribute to the public dialogue about a proposal by disseminating findings and recommendations (including submissions to the public record), by seeking meaningful and substantial input from a range of stakeholders, and by drawing constituencies into regular engagement with the decision-making process.2

The production of HIA often advance through a multi-step process that begins with (1) an examination of the feasibility and usefulness of an HIA and (2) the identification of causal pathways, research objectives and assessment methodologies; then progresses to (3) the gathering of quantitative and qualitative information to assess existing conditions and potential impacts and (4) the formulation of recommendations; and ending with (5) the communication of findings and considerations to the public and (6) the monitoring of public discourse, legislative or regulatory outcomes, and policy or project implementation following dissemination of the HIA.

Street Vendor and Student Nutrition HIA: Process Overview

As the work plan for the REACH Partners in Health collaboration was being constructed in 2012, momentum had also begun building within the Los Angeles Food Policy Council to support a motion to legalize food vending on sidewalks throughout the city. At the same time, increased scrutiny of school nutrition environments was leading to major lunchroom reforms within the Los Angeles Unified School District, and the first studies regarding the challenges and opportunities of sidewalk vending near schools had appeared. With school nutrition being one of the primary concerns of Partners in Health, an HIA considering the relationship between vendors and students progressed through the following process:

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2 Human Impact Partners, HIA summary guides, Introduction to HIA (www.humanimpact.org/downloads/hia-steps/)
Screening  CHC determined that an HIA addressing the potential legalization of sidewalk vending in relation to student health could provide a timely contribution to public dialogue about the issue possibly lead to improved access to healthy food in underinvested neighborhoods surrounding schools, and that a range of stakeholders were available to help inform the methodology and findings.

Scoping  A steering committee was formed containing vendor organizers, school nutrition advocates, experts on vendor regulations and economics, representatives of enforcement agencies, school administrators, and HIA practitioners. During a series of meetings, the steering committee considered a broad spectrum of policy variables and environmental factors that correlate to student health, narrowed the scope of the assessment to the most important and feasible metrics, and helped identify the most practical methods of gathering data.

Assessment  Assessors were utilized to perform field observations near selected schools, and coordination with school personnel enabled student surveys to be conducted.

Findings  Analysis of the primary data collected, as well as secondary data from other sources and relevant policy alternatives for consideration, is included in this report.

Reporting  The HIA report will be made available to the public on the CHC website, distributed to relevant decision-makers and to health policy and food policy stakeholders, and submitted for journal publication.

Monitoring  As with many issues related to nutrition environments in South Los Angeles, CHC will reference the conclusions of this HIA as an active participant in future dialogues about sidewalk vending.
Section 2  Background

Student Health Outcomes Related to Street Vending

The dramatic rise of childhood obesity in the last 40 years has become a prominent public health concern because of its relationship with chronic health conditions. South Los Angeles has one of the two highest diabetes death rates (34.1 per 100,000 people), hypertension diagnoses rates (28.4%), and coronary heart disease death rates (178.2 per 100,000 people) in Los Angeles County. South Los Angeles also includes the four City Council districts with the lowest life expectancy rates (75.2-79.1 years), which is 1.3-5.2 years less than the city average. Unhealthy eating habits among children are a concern because they may influence eating habits into adulthood, when dietary adjustments become more essential for some. Conversely, evidence suggests that not only regular meals, but healthy diets in particular, enhance the behavior and learning ability of students.

Child nutrition has been the subject of extensive academic attention, while a small and growing literature has arisen since 2000 considering the regulatory challenges involving street vending. Only a few studies, however, have considered the specific relationship of street food vendors and the health of school-age children. An analysis of three elementary schools in South Los Angeles conducted in 2007 goes the furthest to quantify the snack purchasing patterns of students and to estimate dietary effects related to those purchases.

The study determined that the most common snack purchase from vendors (chips) contains about 300 calories, which accounts for 15-20% of the USDA recommended daily caloric intake for ages 8-11, depending on the child’s physical exertion (i.e. exercise) that day. When a soda is added to the purchase, the average caloric intake rises to 480 calories and 24-31% of the daily recommendation. These measurements led to the finding that students who exercise less than 30 minutes per day (likely most students) may be overconsuming calories by 16% with one chips purchase and 27% with a purchase of chips and soda. The study also noted that many of these calories are “empty,” leading to passive overconsumption caused by unrelieved feelings of hunger. With students often exceeding their daily intake needs by hundreds of calories, the purchase of high-calorie snacks and sugar-sweetened beverages from street vendors can be considered a negative factor towards a childhood obesity rate in South Los Angeles (29%) that is the highest in Los Angeles County. Snacks and beverages sold to students also commonly exceed recommended serving sizes for sodium and sugar, and offer less dietary fiber than recommended.

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4 Office of Health Assessment and Epidemiology, Department of Public Health, Los Angeles County (2013). Key Indicators of health by Service Planning Area (http://publichealth.lacounty.gov/ha/docs/KIR_2013_FinalS.pdf).
9 61% of purchases included more than one item.
10 Many chip and candy items purchased from street vendors have an energy density that is two or three times greater than the 1.5 kcal/g threshold marking passive overconsumption.
Student Nutrition Environments in South Los Angeles

Increasing attention has been given to the issue of school nutrition in Los Angeles since the early 2000s. In response to pressures from parent groups and health advocates, the Los Angeles Unified School District has reformed policy and lunchroom programs in an effort to make school meals healthier, more accessible, and more presentable to students. These reforms are often works-in-progress, attracting continual scrutiny and revision. The process has been driven by a series of resolutions enacted by the Board of Education, including:

- a Motion to Promote Healthy Beverage Sales (2002) prohibiting the sale of sodas and other sugary drinks on campuses (including vending machines and student stores) during school hours

- an Obesity Prevention Motion (2003) setting minimum nutritional standards above USDA requirements for low-nutrient snack foods sold on campuses

- a Cafeteria Improvement Motion (2005) implementing measures to improve the marketability of school food, reduce sodium and fat content and emphasize fruit and vegetable offerings

- an Improving Food Nutrition Policy (2012) that called for minimum lunch periods and improved participation in school breakfast programs

- a Good Food Procurement Policy (2012) that emphasizes local food sourcing, environmental sustainability, fair labor standards, animal welfare and nutrition when negotiating vendor contracts

While on-campus nutrition environments are gradually improving, the food swamps that surround school campuses remain a stubborn health challenge. South Los Angeles hosts three of the city’s five lowest scoring community plan areas for Modified Retail Food Environment Index (mRFEI), which measures the ratio of healthy food outlets to total food outlets. In South Los Angeles, 76% of restaurants employ a limited-service fast food format, compared to 47% in all of Los Angeles County.

The prevalence of liquor stores (8.5 per square mile) and dearth of full-service grocery stores (0.65 per 10,000 people) in South Los Angeles is also well documented, especially in contrast with West Los Angeles (2.0 liquor stores per square mile and 1.74 full-service grocery stores per 10,000 people).

Research links fast food concentration with higher body mass, corner stores with caloric over-
consumption, and grocery store proximity with improved eating behaviors. Also troubling is a demonstrated shift towards less healthy value-menu offerings within the fast food industry, which find more receptive audiences among young and low-income populations. The eating behaviors of children and adolescents in South Los Angeles reflect their challenging environments. Their rates of fast food and sugar-sweetened beverage consumption are substantially higher than the overall county, and their rates of fruit and vegetable consumption are the lowest.

Awareness is growing that mobile food vendors (including sidewalk vendors and food trucks) are a functioning, if challenging to quantify, component of this wider food ecology. There is also a growing awareness that student nutrition advocacy must eventually pivot from campus-oriented interventions towards a wider consideration of resource environments in surrounding communities. Frustration regarding street vendors exists among some school administrators in South Los Angeles, with proactive administrators requesting help from authorities to enforce prohibitions against street vending near schools. As lunchroom operators and patrons (i.e. students) navigate a transition to a new and healthier menu, the possibility that students will negate this effort by purchasing nutrient-poor snacks and sugary beverages is a clear contradiction to many. But street vendors are also contributors to defensible space and sidewalk vitality by providing passive surveillance (“eyes on the street”) and shopping amenities. The benefits of safe and vibrant public spaces include increased physical activity (i.e. bicycling and walking), which has become a noted health priority in South Los Angeles. Furthermore, street vendors represent an opportunity to introduce healthier food (e.g. fresh fruit and vegetables) into communities where major retailers do not provide it.

22 Office of Health Assessment and Epidemiology, Department of Public Health, Los Angeles County (2013). Key Indicators of Health by Service Planning Area (http://publichealth.lacounty.gov/ha/docs/KIR_2013_FinalS.pdf).
25 The relationship is not always antagonistic. Vendors commonly have daily, amicable interactions with parents and school staff.
Street Vending Regulatory Environment

Sidewalk vending (including food sold from street carts) is currently prohibited on a city-wide basis in Los Angeles. It is the only major US city to prohibit the activity on such a comprehensive scale, rather than regulate it as legitimate commercial (and taxable) activity. There is a provision to enact sidewalk vending districts within the city, but only a single district in MacArthur Park has been created, having eventually lapsed due to a lack of effectiveness. A separate ordinance also prohibits vending on a more generalized basis (including sidewalk vendors and mobile food trucks) within 500 feet of school campuses during normal school hours. The latter regulation exists in numerous jurisdictions across the nation, though the specific distances and times vary, and often include other sensitive locations (e.g. libraries, parks). Vending is legal in city parks on a permit basis.

On a countywide basis, street food vendors are required to maintain a food service cart permit, which involves push-carts of a sufficient quality and overnight storage in a commissary. This certification process subjects vendors to permit fees, warehousing fees, higher equipment costs, as well as periodic food handling inspections. While many street vendors take care to maintain hygiene and food safety, certain regulations designed for more conventional food preparers, such as running water and restroom access, can be difficult for street vendor compliance. Already lacking access to commercial vending rights in Los Angeles, some street vendors also choose to operate unpermitted carts or without carts.

Enforcing these regulations involves actions to either cite street vendors (by law enforcement agencies) or confiscate products and equipment (by public health officials), and are sometimes coordinated to involve both. Outcomes from these actions can be as mild as a warning to move on and as severe as an arrest and destruction of property. Although sidewalk food vendors often incur crippling economic consequences from enforcement actions, it is estimated that around 10,000 operate in Los Angeles on a particular day, many having rebounded from previous fines and confiscations. With limited resources available to enforce regulations, these actions take place at arbitrary times and places (often driven by complaints from local merchants, property owners or school administrators) and, rather than discouraging illegal street vending, may actually be trapping people within the city’s shadow economy by eliminating the economic gains that would help them secure a foothold in more legitimized enterprises.

Street Vendor Legalization Campaign

Street vending offers more independence and flexibility than other types of low-skill work, but it also represents a type of survival economy for many people (particularly less-settled immigrants) who struggle to access the formal employment sector or meet Los Angeles’ high cost-of-living demands. Seeking to relieve pressure on these informal...
sector workers and micro-entrepreneurs, dozens of community-based organizations have partnered on a campaign to highlight the legal challenges faced by street vendors and recognize their influence on Los Angeles’ emergent food culture, with the primary objective of legalizing food vending on all or most sidewalks in the city. Doing so would likely necessitate the implementation of a new permitting structure by the city, though advocates have asserted that the details of new regulatory processes can be formulated after the prohibitions have been repealed. The campaign has also supported the use of incentives to encourage vendors who sell healthy foods, the involvement of non-profit entities as a supportive infrastructure to street vendors, the formulation of mutually-beneficial partnerships between street vendors and bricks-and-mortar businesses or farmers’ market operators, and the incorporation of street vendors in land use planning exercises.

The framework that has been outlined so far would require permitted vendors to hold business tax registrations and liability insurance, in addition to the county’s existing food handling certifications, and would designate stationary locations or specific roaming areas for each permit. School-proximal prohibitions of street vending (within 500 feet of campuses) would be maintained if it were to be legalized elsewhere.

The legislative process to consider the legalization of street vending was initiated in November 2013 by a City Council motion referring the issue to its Economic Development committee and calling for the formulation of regulatory alternatives (see appendix 4). The committee received an initial report prepared by the Chief Legislative Analyst (CLA) in May 2014, which provided background on the city’s previous experience with regulated vendor districts, a summary of enforcement actions, and a review of policies in other cities. Responding to calls for more details on potential alternatives, the CLA followed with an additional report in November 2014 describing a new vendor permit typology and roles for various city and county agencies involved in vendor certifications and oversight. While many councilmembers have agreed that the current citywide prohibition of street vending is impractical and in need of at least a partial repeal, reservations about the details of a new regulatory structure has held the issue from moving to a full City Council hearing.

Section 3 Methods

Research Framework

The primary research objective of this HIA is to consider how proposed changes to street vendor regulations could affect student nutrition and health in South Los Angeles. A comparison between the non-permissive regulatory environment in question and a more permissive regulatory environment in Compton is employed to measure differences in street vendor presence, snack and beverage consumption amongst students, and bicyclist/pedestrian presence near selected schools. These jurisdictions have similar socioeconomic conditions (food retail environment, bicyclist/pedestrian safety, cultural characteristics, household income)

34 A list of partner organizations can be found at: http://streetvendorcampaign.blogspot.com/p/partners.html.
35 Public comment provided by Maria Cabildo, East Los Angeles Community Corporation, at Los Angeles City Council (2014 December 2).
that may influence street vendor activity, though Compton allows sidewalk vending at limited times and locations.\footnote{Not within 10 feet of vehicle realm; Not within 50 feet of another pushcart; not within 300 feet of school campuses on school days between 7 AM and 5 PM; not in residential areas between 6 PM standard/ 8 PM daylight and 8 AM (Compton Municipal Code, section 9-26).}

Assessing multiple schools in each jurisdiction provides an (1) environmental perspective and (2) regulatory perspective to interpret the collected data. Results may indicate that certain socioeconomic factors correlate to higher or lower street vendor activity regardless of jurisdiction, suggesting an influence on the student nutrition environment apart from vendor regulations. However, differences between the two jurisdictions that are consistent across socioeconomic factors would suggest that vendor regulations do influence the student nutrition environment.

In developing this methodology, the steering committee identified numerous environmental and behavior changes that have potential correlations to the legalization of sidewalk food vending. These include new vendor permit revenues that could potentially augment food handling enforcement efforts or fund school-based nutrition education programs, leading to improvements in food safety and student nutrition behaviors. Legitimized street vending could also lead to stabilized employment and income for student households and shifts in local sales tax revenue (derived from vendor sales and complimentary bricks-and-mortar business\footnote{The Street Vendor Project, Urban Justice Center (2011). Street Vendors Do Not Compete with Brick-and-Mortar Merchants (http://www.scribd.com/doc/58478966/Vendors-Do-Not-Compete-With-Brick-And-mortars).}), which can be beneficial factors for household food security and the quality of city-funded recreation programs and facilities. However, measuring the potential economic and health effects of these variables is highly challenging due to the time- and resource-intensive effort required and the speculative nature of future programmatic decisions and economic conditions.

This HIA considers three variables (see figure 2) that are closely related to street vendor activity and can be measured using field observations and student surveys. The presence of street vendors in proximity to school campuses provides one measure of how nutrient-poor snacks and sugary beverages are made accessible to students, and how effectual vendor prohibitions are in regulating access. Snack and beverage offerings are also observed for any distinction between more and less healthy vendors. Surveying student/caretaker purchases provides insight on nutrition behaviors in relation to street vendors and, by including other food retail points, assesses the role of street vendors within the wider food resource environment. Street vendors have also been viewed as a safety hazard due to congested sidewalks and a perceived relationship to jaywalking, but also as positive influence on safety in the public realm and traffic calming\footnote{This question is addressed by recording bicyclist/pedestrian activity and sidewalk conditions near the same schools where vendor activity was observed.}. To construct the comparison between the non-permissive and permissive regulatory environments in this HIA, a statistical analysis was first performed to quantify the socioeconomic factors related to street vending that are present in South Los Angeles and to identify jurisdictions that compare most similarly. Spanish-speaking population was used as one comparison point, based on references in local studies that connect street vending with the culture of Latin
American immigrants. In this case, language was preferred as a correlation to street vending, rather than Hispanic/Latino population or foreign-born population, as Latino communities in metropolitan Los Angeles can vary significantly in their immigrant composition, and not every immigrant community in the metropolitan area has prominent Latin American influences. Another comparison point was population living under the poverty level, which relates to the prevailing view that street vending is a fallback enterprise for many people that struggle to generate sufficient incomes within the formal economy.

For South Los Angeles, census block data aggregated within ½-mile circular area profiles (CAPS) was applied at the location of each school included in the REACH scope of work, resulting in a median percentage of Spanish speakers of 46.8% and a median percentage of household incomes under the Federal Poverty Level of 26.8%. For comparison, the equivalent census data was gathered for dozens of jurisdictions near Los Angeles that were found to have regulations concerning street vending (table 1). According to the data, some communities had similar socioeconomic conditions, but offered less comparison environments due to narrow restrictions on street vendor activity. Other jurisdictions provided a more permissive regulatory environment for street vending, but did not provide socioeconomic conditions that were very similar. Ultimately, three jurisdictions (Bell Gardens, Compton and Hawaiian Gardens) were chosen for deeper analysis based on poverty rates that were above 20%, Spanish-speaking populations that were at least as high as South Los Angeles, and the existence of more permissive vendor regulations.

There remains significant socioeconomic variety within the cohort of REACH schools, as well as schools in comparison jurisdictions. The statistical analysis was, therefore, extended to the level of specific schools in order to identify the closest matches for specific environmental variables. The ½-mile CAPS aggregations were applied to schools in the three comparison jurisdictions to generate census data. For clarification, the CAPS aggregations reflect socioeconomic characteristics of residents living in proximity of the applicable school campus, not students attending that school or their households. Modified Retail Food Environment Index (mRFEI) scores were collected for the applicable census tract of each school in the analysis, utilizing 2011 data made available by the Centers for Disease Control and Prevention.
Table 1 Socioeconomic and Street Vending Regulatory Conditions of Comparative Jurisdictions

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Regulatory Status</th>
<th>Spanish-Speaking Population (%)</th>
<th>Population &lt; Poverty Level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH schools (median)</td>
<td>Prohibited</td>
<td>46.8</td>
<td>26.8</td>
</tr>
<tr>
<td>Bell Gardens</td>
<td>Permitted</td>
<td>92.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Compton</td>
<td>Permitted</td>
<td>61.3</td>
<td>24.9</td>
</tr>
<tr>
<td>Hawaiian Gardens</td>
<td>Permitted</td>
<td>67.4</td>
<td>21.8</td>
</tr>
<tr>
<td>Huntington Park</td>
<td>Highly Restricted</td>
<td>93.2</td>
<td>25.5</td>
</tr>
<tr>
<td>Inglewood</td>
<td>Highly Restricted</td>
<td>45.8</td>
<td>21.0</td>
</tr>
<tr>
<td>South Gate</td>
<td>Highly Restricted</td>
<td>87.9</td>
<td>19.6</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>Permitted</td>
<td>9.1</td>
<td>10.7</td>
</tr>
<tr>
<td>Culver City</td>
<td>Permitted</td>
<td>19.9</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Source: Missouri Census Data Center, Circular Area Profiles (CAPS), ACS version (2007-11); US Census Bureau (2007-11), American Community Survey (ACS)

(CDC)\(^{50}\) The aggregate number of bicyclist and pedestrian collisions within ½-mile of each school for 2007-09 was also collected using the Safe Routes to School mapping tool\(^{51}\).

At the level of schools, Compton emerged as the ideal comparison environment because it was the only jurisdiction to offer close matches to REACH schools for each of the environmental variables. An elementary school from the former was then matched with a comparison school from the latter based on close similarities for one of the following variables: Spanish-speaking population, poverty, retail food environment, and bicyclist/pedestrian safety. Middle schools and high schools were also matched when close similarities for a variable were present. In every match, student age ranges were made as comparable as possible, because the ability to make purchase choices varies considerably based on the age students.

Field Observations

The most feasible method for gathering primary data on vendor-related activity was to deploy field assessors that observed environments near schools during afternoon hours. The 14 schools selected for the assessment (see table 2) were observed in March-April 2014, each for a 60-minute period beginning at the closing bell, which prior studies documented as the time when street vendors make the majority of their sales near schools\(^{52}\). To approximate the most average day for student-vendor interactions, observations only took place on midweek days (Tuesday-Thursday) and days with irregular bell schedules were avoided. In most cases, observations for matching schools (based on environmental criteria detailed above) took place on the same day.

\(^{47}\) Vendors are limited to 10 minutes of activity in one location (Huntington Park Municipal Code, section 4-7.1612).
\(^{48}\) Vending is prohibited outside any place of public assemblage (Inglewood Municipal Code, section 5-18.2).
\(^{49}\) Sidewalk vending only permitted in commercial zones (South Gate Municipal Code, section 5.10.010).
\(^{50}\) Modified Retail Food Environment Index (mRFEI) data is accessible at: http://www.cdc.gov/obesity/resources/reports.html.
\(^{51}\) Safe Transportation Research and Education Center (SafeTREC), Transportation Injury Mapping System (TIMS), Safe Routes to School (SRTS) collision map viewer (2007-09), accessed November 2013.
\(^{53}\) A portion of the observation for Elementary S3 was delayed two weeks due to unanticipated staffing constraints.
day or on consecutive days, so that conditions between the comparison schools would be most similar. Significant weather differences (i.e. rain) between comparison schools would have warranted rescheduled observations, but none were necessary.

Preliminary observations of the 14 school environments helped to identify anticipated pedestrian pathways for students and caretakers leaving campuses and the likeliest locations of street vendors. During each observation period, a Spanish-speaking assessor walked the periphery of the school campus and adjacent streets within a 2-block radius to record any street food vendors that were present. When encountering vendors, the assessor communicated their purpose and requested permission to briefly note the inventory of snacks and beverages available. Two to four additional assessors were placed at key observation points as needed to tally the number of pedestrians and bicyclists present during the observation period. Assessors carried information sheets about the HIA to give to people in the field who inquired about their activity.

During each observation period, field assessors completed an observation grid containing information specific to their task. Vendor observers noted the general content of snacks and beverages offered by each street vendor, the location (in relation to school gates) and travel method (pushed/carried or pedaled) of each vendor, and how congested sidewalks were near vendors. Products available for purchase were grouped into seven categories (see appendix 1): unhealthy snack food (e.g. chips, cookies, candy, ice cream, elote), fruits and vegetables, hot/prepared foods (e.g. tamales), other foods, sugar-sweetened beverages (e.g. soda, fruit punch, sports drink, energy drink, aguas frescas), healthy beverages (e.g. 100% fruit juice, water) and other beverages. Though not a focus of the study, ice cream trucks and food trucks operating within the observation area were also tallied, so that any correlation with higher/lower street vendor activity might be assessed. The peripheral observers noted four types of circulation at their specific location (see appendix 1): student pedestrians, adult pedestrians, student bicyclists, and adult bicyclists. Vehicle traffic conditions were also noted, in order to assess any possible correlation between vendor activity and road congestion.

A training session took place before the observations to prepare assessors from the University of Southern California and the CHC Community Researcher Development and Training (CReDT) program for the study protocols and anticipated interactions that could occur in the

Table 2 School Comparison Matches Based on Environmental Criteria

<table>
<thead>
<tr>
<th>South Los Angeles</th>
<th>Criteria Match</th>
<th>Compton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary S1</td>
<td>58.2 %</td>
<td>59.4 %</td>
</tr>
<tr>
<td>Middle S1</td>
<td>47.2 %</td>
<td>49.3 %</td>
</tr>
<tr>
<td>Elementary S2</td>
<td>22.9 %</td>
<td>22.5 %</td>
</tr>
<tr>
<td>Elementary S3</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Middle S3</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Elementary S4</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>High S5</td>
<td>9-12</td>
<td>9-12</td>
</tr>
</tbody>
</table>

source: Missouri Census Data Center, Circular Area Profiles (CAPS), ACS version (2007-11); Centers for Disease Control & Prevention, Children’s Food Environment State Indicator Report (2011); Safe Transportation Research and Education Center (SafeTREC), Transportation Injury Mapping System (TIMS), Safe Routes to School (SRTS) collision map viewer (2007-09), accessed November 2013

Data is representative of general population and environment within ½-mile vicinity of school campus.
Particular instruction was given on the sometimes unclear distinction between sidewalk food vendors and other types of street and mobile vendors (e.g. food trucks, toy vendors, apparel vendors), and recognition of the variety of conveyances that street vendors utilize.

**Student Surveys**

Conducting in-school surveys of students was a preferable method for gathering primary data on nutrition behaviors, for a number of reasons. It was more efficient than tracking snack and beverage purchases from street vendors at the point-of-sale, which could allow for higher accuracy, but would also require much more observer staffing and coordination with vendors willing to be observed. Surveys also allowed for the collection of other information useful to this assessment, including purchases from a broader range of access points not limited to street vendors, frequency of school meal participation, and motivating factors for street vendor purchases.

The surveys were administered in October-December 2014, at the four elementary schools in South Los Angeles where field observation had occurred previously. CHC was not able to coordinate with Compton Unified School District personnel to administer surveys at the comparison schools included in this assessment, so findings on student nutrition behaviors are necessarily limited to data collected in South Los Angeles. Because data from field observation showed negligible vendor presence at middle schools and high schools, these were also left out of the survey portion of the assessment.

Survey questions related to this HIA were included in a larger survey form that included questions about exercise and nutrition pertinent to other REACH objectives (see appendix 2). Students indicated the general frequency (never/often/sometimes) for which they obtained snacks from eight types of access points that are known to commonly exist within the wider nutrition environment (vending machines, school store, sidewalk vendor, food trucks, corner store, fast food restaurant, from home, from someone else). They indicated the general frequency for how often they obtained items from sidewalk vendors from five categories: unhealthy snack food (e.g. chips, cookies, candy, ice cream, elote), fruits and vegetables, hot/prepared foods (e.g. tamales, sandwiches, other homemade food), sugar-sweetened beverages (e.g. soda, sports drink, fruit punch, hot chocolate, other sweet drinks), and water or natural fruit juice. Students also indicated whether convenience, price or selection influenced their decisions to obtain snack/beverage items from sidewalk vendors. To assess any possible correlation between off-campus snack/beverage consumption and school nutrition programs, students indicated how often per week they ate lunch or snacks provided at school. Regarding the assessment’s bicyclist/pedestrian considerations, students indicated their most common transportation methods for getting to school, how safe they felt riding a bicycle in the street, and how safe they felt walking across a street or driveway.

School personnel helped to identify the classrooms and times when surveys would be completed, and respondents were 4th- and 5th-grade students whose identities remained anonymous. Students received passive consent forms in advance of the survey period, which caretakers could return signed if they wished for their student not to participate. During the survey period, students completed the survey form at their desk, with instructions given by REACH staff from the front of the classroom. Survey administrators were prepared to give clarification and guidance to students wherever questions were difficult to interpret.
### Results

#### Table 3 Observed Sidewalk Food Vendors Near Schools

<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th>Observed Vendors</th>
<th>Students Per Vendor^55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary S1</td>
<td>LA</td>
<td>8</td>
<td>104</td>
</tr>
<tr>
<td>Elementary S3</td>
<td>LA</td>
<td>6</td>
<td>126</td>
</tr>
<tr>
<td>Elementary C1</td>
<td>C</td>
<td>4</td>
<td>136</td>
</tr>
<tr>
<td>Elementary C4</td>
<td>C</td>
<td>3</td>
<td>211</td>
</tr>
<tr>
<td>Elementary C2</td>
<td>C</td>
<td>2</td>
<td>202</td>
</tr>
<tr>
<td>Elementary C3</td>
<td>C</td>
<td>1</td>
<td>466</td>
</tr>
<tr>
<td>Elementary S2</td>
<td>LA</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Elementary S4</td>
<td>LA</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Middle S1</td>
<td>LA</td>
<td>1</td>
<td>454</td>
</tr>
<tr>
<td>Middle C1</td>
<td>C</td>
<td>1</td>
<td>518</td>
</tr>
<tr>
<td>Middle S3</td>
<td>LA</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Middle C3</td>
<td>C</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>High S5</td>
<td>LA</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>High C5</td>
<td>C</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: HIA field assessments; California Department of Education, DataQuest (2013-14)

#### Street Vendor Presence Near Schools

Primary data collected from field observations in this HIA do not indicate that regulatory factors correlate to differences in the presence of sidewalk food vendors near schools. Of the eight elementary schools assessed, the highest and lowest vendor presence was observed near schools in South Los Angeles (see table 3), the more prohibitive environment. Each elementary school in Compton, the less prohibitive environment, had some vendor presence during observation periods, but was neither the highest nor the lowest. When the analysis is narrowed to only matched schools for each socioeconomic factor (see table 4), substantive differences in vendor presence are apparent, but these differences do not lean towards one jurisdiction more than the other.

No vendors were observed near the two high schools in this assessment, and only two vendors were observed near the four middle schools assessed. Considering the generally higher degree of mobility and purchasing independence available to older students, this may point to a market niche for street vendors that diminishes as students move through higher grades. Comparisons between the various school levels is, therefore, less warranted and narrows the focus of the analysis to only elementary schools.

#### Table 4 Observed Sidewalk Food Vendors By Environmental Criteria Matches

<table>
<thead>
<tr>
<th>Criteria Match</th>
<th>South Los Angeles</th>
<th>Observed Vendors</th>
<th>Compton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish-speaking population</td>
<td>Elementary S1</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Elementary C1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>population &lt; poverty level</td>
<td>Elementary S2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Elementary C2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mRFEI score</td>
<td>Elementary S3</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Elementary C3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bicycle/pedestrian collisions</td>
<td>Elementary S4</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elementary C4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: HIA field assessments

^55 Calculated based on 2013-14 enrollment statistics (available at http://dq.cde.ca.gov/dataquest/).
Analyzing primary vendor data with socioeconomic factors give some indication that poverty and language are two environmental characteristics that may influence the presence of street vendors near schools (see table 5). Elementary S1 and Elementary S3 had both the highest household poverty rates in their vicinity (31.5-32.1%) and the highest vendor presence (6-8) when observed. The remaining six elementary schools, in comparison, had local household poverty rates of 22.5-26.8% and 0-4 vendors present. Elementary S2 and Elementary S4 had the lowest Spanish-speaking populations in their vicinity (42.6-46.8%) and were also the only schools where no vendors were observed during field assessments. The other elementary schools, in comparison, had Spanish-speaking populations of 54.2-74.6% and 1-8 vendors present. Vendor presence had a strong correlation coefficient with poverty (0.78) and a moderate correlation with language (0.37). However, survey responses by students indicate that Elementary S2 (which has the lowest poverty rate and Spanish-speaking population amongst South LA schools) may encounter a higher typical street vendor presence than what was observed in this assessment, due to rates of vendor purchases that are quite similar to those at Elementary S3 (see tables 7-8).

Relationships were less apparent between street vendors and retail food environment or bicyclist/pedestrian safety. It could be expected that underdeveloped food retail environments might correlate to higher street vendor activity, but schools in this assessment with the highest local mRFEI scores (Elementary C2 and Elementary C4) had only moderate vendor presence (2-3 observed), while schools with the lowest local mRFEI scores (Elementary S4 and Elementary S1) had highly differentiated vendor presence (0-8 observed). Another expectation could be that higher vendor presence leads to safer or less safe bicyclist/pedestrian environments, but schools with the lowest local collision rates (Elementary C2 and Elementary C1) had moderate vendor presence (2-4 observed), and schools with the highest local collision rates (Elementary S1 and Elementary S3) had the highest vendor presence (6-8 observed).
collision rates (Elementary S1 and Elementary S2) had highly differentiated vendor presence (0-8 observed). Vendor presence had a moderate positive correlation with bicyclist/pedestrian safety (0.53) and a weak negative correlation with retail food environment (-0.09).

The presence of mobile food trucks near the assessed schools showed one clear difference between the two jurisdictions. Ice cream trucks that sold similar snack and beverage items (i.e. chips, soda, candy) as street vendors were present in the vicinity of every elementary school assessed in South Los Angeles, but were not present at any schools in Compton (see table 6). While it is prohibited for these vehicles to conduct vending operations in proximity of schools in either jurisdiction, it is possible that more recent or consistent enforcement could have discouraged the activity in Compton. Though it appears that the presence of mobile food trucks may have influenced the product offerings of sidewalk vendors (explained in the following section), it did not correlate to a higher or lower presence near schools. Elementary S3 and Elementary S2 had the highest presence of mobile food trucks (2-3 observed), but had a highly differentiated sidewalk vendor presence (0-6 observed).

In both jurisdictions, vendors were about four times more likely to utilize a pushcart or handheld container (9-12 observed) in their operations, compared to a pedaled cart (2-3 observed). Nearly all sidewalk vendors observed in field assessments were located directly adjacent to or across the street from school gates (see appendix 3).

### Student Nutrition Behaviors in Relation to Street Vending

Survey responses indicate that 62.8% of students at least occasionally obtain snacks and beverages from sidewalk vendors, and 11.9% of students frequently do so. While these rates represent a significant patronage between students/caretakers and sidewalk vendors, it is not among the most utilized food access points within the wider nutrition environment (see tables 7-8). By comparison, 84.1% of students patronize fast food restaurants at least occasionally and 25.4% do so frequently, while 76.7% patronize corner stores at least occasionally and 21.5% do so frequently. These are two access points that are routinely highlighted as a source of high-calorie food and sugary beverages in underdeveloped food retail environments.²⁷⁻²⁸ Though snack and beverage purchasing trends vary somewhat between schools, sidewalk vendors appear to compete for student/caretaker patronage on relatively close terms with mobile food trucks, which offer many of the same items, and with vending machines, which are healthier food sources in some cases due.

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to tighter inventory regulations at schools and other public facilities. Survey responses also indicate that households remain a highly prevalent source of snacks and beverages consumed by students, though the nutritional quality of these items is speculative.

Survey data describing the frequency of snack and beverage purchases from sidewalk vendors is consistent with the degree of vendor presence observed in field observations. As vendor presence moved from a high of eight observed at Elementary S1 to zero observed at Elementary S2 and Elementary S4, the rate of at least occasional student patronage also fell from 84.5% to 40%, and the rate of frequent student patronage fell from 12.4% to 10.9%. Responses from occasional and frequent vendor patrons indicated that liking product offerings was the most influential reason for purchasing snacks and beverages from street vendors, followed by low cost and convenience (see table 9).

Student responses also indicate an inverse relationship between sidewalk vendors and two other food access points: school meal programs and snacks/beverages obtained from students’ households. Just 42.9% of students reported to eat school lunches at least three times per week (i.e. at least occasionally) and 21.6% reported to eat school lunches daily. However, the rate of at least occasional school lunch patronage rose within the school sample as sidewalk vendor patronage decreased. This relationship held true for rates of daily school lunch patronage, as well. While Elementary S4 had the highest rate of frequent snacks/beverages obtained from home (72.9%), it also had the lowest rate of at least occasional sidewalk vendor patronage (40%) and the lowest rate of at least occasional fast food restaurant patronage (78.6%). Conversely, Elementary S1 had the lowest rate of frequent snacks/beverages obtained from home (34%), and had the far highest rates of at least occasional sidewalk vendor patronage (84.5%) and occasional fast food restaurant patronage (92.8%).

As seen in prior studies, unhealthy snack food (e.g. chips, cookies, candy, ice cream, elote) was the far likeliest item sold by street vendors in this assessment (see table 10). Sugar-sweetened beverages (e.g. soda, sports drink, fruit punch, hot chocolate, other sweet drinks) were offered by just half of the observed vendors, all

<table>
<thead>
<tr>
<th>Access Point</th>
<th>Elementary S1 (%)</th>
<th>Elementary S3 (%)</th>
<th>Elementary S2 (%)</th>
<th>Elementary S4 (%)</th>
<th>Overall (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Home</td>
<td>90.7</td>
<td>91.8</td>
<td>95.4</td>
<td>93.2</td>
<td>92.5</td>
</tr>
<tr>
<td>Fast Food Restaurants</td>
<td>92.8</td>
<td>80.7</td>
<td>83.9</td>
<td>78.6</td>
<td>84.1</td>
</tr>
<tr>
<td>Corner Stores</td>
<td>77.3</td>
<td>80.7</td>
<td>72.9</td>
<td>71.2</td>
<td>76.7</td>
</tr>
<tr>
<td>Mobile Food Trucks</td>
<td>66.0</td>
<td>78.4</td>
<td>63.5</td>
<td>60.3</td>
<td>69.3</td>
</tr>
<tr>
<td>Vending Machines</td>
<td>62.9</td>
<td>72.8</td>
<td>66.3</td>
<td>66.7</td>
<td>68.0</td>
</tr>
<tr>
<td>Sidewalk Vendors</td>
<td>84.5</td>
<td>59.7</td>
<td>58.1</td>
<td>40.0</td>
<td>62.8</td>
</tr>
<tr>
<td>Someone Else</td>
<td>43.3</td>
<td>57.7</td>
<td>56.0</td>
<td>56.4</td>
<td>53.5</td>
</tr>
<tr>
<td>School Lunch</td>
<td>36.5</td>
<td>40.9</td>
<td>48.9</td>
<td>49.2</td>
<td>42.9</td>
</tr>
<tr>
<td>School Snack</td>
<td>36.5</td>
<td>30.7</td>
<td>31.8</td>
<td>44.6</td>
<td>34.6</td>
</tr>
<tr>
<td>School Stores</td>
<td>5.2</td>
<td>46.7</td>
<td>22.0</td>
<td>39.3</td>
<td>29.9</td>
</tr>
</tbody>
</table>

Source: HIA student surveys

Table 7: At Least Occasional Student/Caretaker Patronage of Food Access Points
Table 8  Frequent Student/Caretaker Patronage of Food Access Points

<table>
<thead>
<tr>
<th>Access Point</th>
<th>Elementary S1 (%)</th>
<th>Elementary S3 (%)</th>
<th>Elementary S2 (%)</th>
<th>Elementary S4 (%)</th>
<th>Overall (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Home</td>
<td>34.0</td>
<td>55.5</td>
<td>70.1</td>
<td>72.9</td>
<td>56.0</td>
</tr>
<tr>
<td>Fast Food Restaurants</td>
<td>36.1</td>
<td>18.7</td>
<td>21.8</td>
<td>30.4</td>
<td>25.4</td>
</tr>
<tr>
<td>School Lunch</td>
<td>12.5</td>
<td>24.0</td>
<td>22.7</td>
<td>27.7</td>
<td>21.6</td>
</tr>
<tr>
<td>Corner Stores</td>
<td>17.5</td>
<td>18.7</td>
<td>23.5</td>
<td>32.2</td>
<td>21.5</td>
</tr>
<tr>
<td>School Snack</td>
<td>15.6</td>
<td>15.0</td>
<td>15.9</td>
<td>23.1</td>
<td>16.7</td>
</tr>
<tr>
<td>Mobile Food Trucks</td>
<td>21.6</td>
<td>9.5</td>
<td>10.6</td>
<td>12.1</td>
<td>13.1</td>
</tr>
<tr>
<td>Sidewalk Vendors</td>
<td><strong>12.4</strong></td>
<td><strong>12.1</strong></td>
<td><strong>11.6</strong></td>
<td><strong>10.9</strong></td>
<td><strong>11.9</strong></td>
</tr>
<tr>
<td>Vending Machines</td>
<td>5.2</td>
<td>6.6</td>
<td>8.1</td>
<td>7.4</td>
<td>6.7</td>
</tr>
<tr>
<td>Someone Else</td>
<td>2.1</td>
<td>4.0</td>
<td>3.6</td>
<td>20.0</td>
<td>5.7</td>
</tr>
<tr>
<td>School Stores</td>
<td>1.0</td>
<td>4.7</td>
<td>3.7</td>
<td>3.6</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: HIA student surveys

but two of which were found in South Los Angeles. Hot/prepared foods (e.g. tamales) and healthy beverages (e.g. 100% fruit juice, water) were only offered by vendors at one school (Elementary S3). A possible explanation for the broader product offerings in South Los Angeles is that competition from mobile food trucks encouraged the sale of more specialty or made-to-order items, such as raspados (flavored ice drinks) or homemade tamales, by street vendors. Despite the popularity of fruterios throughout the city, fruits or vegetables were not offered by vendors at any schools observed in this assessment.

These product offerings observed during field assessments provide a somewhat contradictory view of the snack and beverage consumption sourced from street vendors, when compared with information provided by students. As expected, survey responses indicated that unhealthy snack food was purchased at least sometimes by 92.3% of occasional vendor patrons, and purchased often by 60.9% of frequent vendor patrons (see table 11). However, each of the above product categories was purchased at least sometimes by 72.8% of occasional vendor patrons, and purchased often by 39.1-56.5% of frequent vendor patrons, including such products as fruits/vegetables and hot/prepared foods, which were rarely or never observed during field assessments. It is possible that a lack of question clarity or recall difficulty may have skewed survey response data towards a less accurate depiction of snack and beverage purchases from street vendors.

Table 9  Student Motivations for Snack And Beverages Purchases From Sidewalk Vendors

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>they sell what I like</td>
<td>85.9 %</td>
</tr>
<tr>
<td>it’s quick and easy</td>
<td>63.9 %</td>
</tr>
<tr>
<td>it’s cheaper</td>
<td>53.9 %</td>
</tr>
</tbody>
</table>

Source: HIA student survey (limited to responses indicating occasional or frequent sidewalk vendor purchases)

Bicyclist/Pedestrian Presence in Relation to Street Vending

Field assessments indicated that half of the street vendors observed near schools caused

59 Survey respondents could select none or multiple answers that applied.
sidewalk congestion amongst pedestrians (due to the crowding of waiting customers) and that sidewalk congestion was not present near the rest of vendors (see table 12). This rate of congestion was true in both South Los Angeles and Compton. In no instance did observers note that vendor-related congestion caused pedestrians to walk into the street or otherwise come into conflict with vehicles. A range of vehicle traffic conditions (light to heavy) were noted on streets where vendors operated, but no relationship to a high or low presence of street vendors was apparent.

Survey responses by students indicated that cars (49.7-77.3% of respondents) were the most common travel method to/from elementary schools in South Los Angeles (see table 13), with walking as the primary alternative (43.3-51.1%). Bicycling (2.1-12.1%), school buses (0.7-6.6%) and Metro rail/bus services (0.6-1.1%) were far less common travel methods. This data provides a somewhat more balanced view of student travel than what field assessments of pedestrian and bicycle activity near schools depicted. Observations indicated that a range of 22-82.5% of students at each elementary school walked home and 0-11 students bicycled home at the conclusion of the school day (see table 14). During each observation period, 38-271 adult pedestrians (the majority of whom accompanied exiting students) and 1-9 adult bicyclists were noted in the vicinity of school campuses. Approximately 62.2% of elementary school students in Compton walked home, compared to only 39% in South Los Angeles. Despite these differences, schools with higher street vendor presence in either jurisdiction were not likelier to have more or less pedestrians or bicyclists active in their vicinity. Schools with the lowest student pedestrian rates (Elementary S4 and Elementary S3) had highly differentiated vendor presence (0-6 observed), while schools with no vendor presence (Elementary S4 and Elementary S2) had highly differentiated student pedestrian rates (22-82.5% of school enrollment). Schools with moderate vendor presence (Elementary C4 and Elementary C1) had highly differentiated student bicyclist rates (0-11 observed). Vendor

Table 10: Observed Sidewalk Vendor Inventories

<table>
<thead>
<tr>
<th>Item</th>
<th>South LA</th>
<th>Compton</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendors Present</td>
<td>15</td>
<td>11</td>
<td>26</td>
</tr>
<tr>
<td>Unhealthy Snack Food</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Fruits And Vegetables</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hot/Prepared Foods</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Sugar-Sweetened Beverages</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Healthy Beverages</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: HIA field assessments

Table 11: Reported Snack and Beverage Purchase Frequency By Item Category

<table>
<thead>
<tr>
<th>Item</th>
<th>Occasional Vendor Patrons</th>
<th>Frequent Vendor Patrons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Purchased =/&gt; Sometimes (%)</td>
<td>Purchased Often (%)</td>
</tr>
<tr>
<td>Unhealthy Snack Food</td>
<td>92.3</td>
<td>12.4</td>
</tr>
<tr>
<td>Fruits And Vegetables</td>
<td>72.8</td>
<td>25.6</td>
</tr>
<tr>
<td>Hot/Prepared Foods</td>
<td>77.3</td>
<td>17.5</td>
</tr>
<tr>
<td>Sugar-Sweetened Beverages</td>
<td>81.3</td>
<td>18.8</td>
</tr>
<tr>
<td>Healthy Beverages</td>
<td>85.3</td>
<td>38.7</td>
</tr>
</tbody>
</table>

Source: HIA student survey (Limited to responses indicating occasional or frequent sidewalk vendor purchases)
presence had a moderate negative correlation coefficient with student pedestrians (-0.46) and adult bicyclists (-0.39), but a weak correlation with adult pedestrians (0.09) and student bicyclists (-0.04).

In response to survey questions regarding safety (see table 15), most students in South Los Angeles indicated that they felt somewhat safe crossing a street or driveway (52.8% of respondents) and somewhat safe riding a bicycle in the street (54.2%). Similar proportions of students felt very safe crossing a street or driveway (26.6%) as felt unsafe (20.7%), though they were more likely to indicate feeling unsafe riding a bicycle in the street (30.1%) than very safe (15.7%). Differences between schools regarding these safety perceptions showed no correlation with differences in street vendor presence. However, reported street vendor patronage by students does show a correlation with pedestrian safety perceptions. Elementary S4 was the only elementary school in South Los Angeles where fewer than half the students at least occasionally obtained snacks and beverages from sidewalk vendors, and it was also the only school more students felt unsafe (23.1%) crossing a street or driveway than felt very safe (15.4%). Conversely, other elementary schools in South Los Angeles had vendor patronage rates of 58.1-84.5% and more students that felt very safe (23.5-30.3%) crossing a street or driveway than felt unsafe (16.7-23.5%).

<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th>Sidewalk Vendors</th>
<th>Sidewalk Congestion</th>
<th>Vehicle Traffic Conditions (At Peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>No Obstruction</td>
<td>Obstruction</td>
</tr>
<tr>
<td>Elementary S1</td>
<td>LA</td>
<td>8</td>
<td>•••</td>
<td>••••••</td>
</tr>
<tr>
<td>Elementary S3</td>
<td>LA</td>
<td>6</td>
<td>••••</td>
<td>••</td>
</tr>
<tr>
<td>Elementary C1</td>
<td>C</td>
<td>4</td>
<td>••</td>
<td>••</td>
</tr>
<tr>
<td>Elementary C4</td>
<td>C</td>
<td>3</td>
<td>•</td>
<td>••</td>
</tr>
<tr>
<td>Elementary C2</td>
<td>C</td>
<td>2</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Elementary C3</td>
<td>C</td>
<td>1</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Elementary S2</td>
<td>LA</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary S4</td>
<td>LA</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle S1</td>
<td>LA</td>
<td>1</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Middle C1</td>
<td>C</td>
<td>1</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>Middle S3</td>
<td>LA</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle C3</td>
<td>C</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>26</strong></td>
<td><strong>13</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Source: HIA field assessments

Light: occasional cards passing, moderate: consistent vehicle flow with a number of cards on the road, heavy: frequent slowing due to vehicle congestion
### Table 13  Reported Student Travel Methods To/From School

<table>
<thead>
<tr>
<th>Travel Method</th>
<th>Elementary S1 (%)</th>
<th>Elementary S3 (%)</th>
<th>Elementary S2 (%)</th>
<th>Elementary S4 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>57.7</td>
<td>49.7</td>
<td>61.4</td>
<td>77.3</td>
</tr>
<tr>
<td>Walking</td>
<td>45.4</td>
<td>43.3</td>
<td>51.1</td>
<td>47.0</td>
</tr>
<tr>
<td>Bicycling</td>
<td>2.1</td>
<td>5.7</td>
<td>3.4</td>
<td>12.1</td>
</tr>
<tr>
<td>Metro</td>
<td>-</td>
<td>5.1</td>
<td>2.3</td>
<td>6.1</td>
</tr>
<tr>
<td>School Bus</td>
<td>-</td>
<td>1.3</td>
<td>1.1</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Source: HIA student surveys

### Table 14  Bicyclists/Pedestrians and Sidewalk Vendors Observed Near Schools

<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th>Sidewalk Vendors</th>
<th>Pedestrians</th>
<th>Bicyclists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Students (%)</td>
<td>Adults</td>
</tr>
<tr>
<td>Elementary S1</td>
<td>LA</td>
<td>8</td>
<td>35.7</td>
<td>156</td>
</tr>
<tr>
<td>Elementary S3</td>
<td>LA</td>
<td>6</td>
<td>27.5</td>
<td>122</td>
</tr>
<tr>
<td>Elementary C1</td>
<td>C</td>
<td>4</td>
<td>40.0</td>
<td>100</td>
</tr>
<tr>
<td>Elementary C4</td>
<td>C</td>
<td>3</td>
<td>73.9</td>
<td>271</td>
</tr>
<tr>
<td>Elementary C2</td>
<td>C</td>
<td>2</td>
<td>52.7</td>
<td>62</td>
</tr>
<tr>
<td>Elementary C3</td>
<td>C</td>
<td>1</td>
<td>80.3</td>
<td>216</td>
</tr>
<tr>
<td>Elementary S2</td>
<td>LA</td>
<td>0</td>
<td>82.5</td>
<td>165</td>
</tr>
<tr>
<td>Elementary S4</td>
<td>LA</td>
<td>0</td>
<td>22.0</td>
<td>38</td>
</tr>
</tbody>
</table>

Vendor Presence Correlation:\(^6\)\(^1\)  -0.46  0.09  -0.04  -0.39

Source: HIA field assessments

### Table 15  Student Bicycle/Pedestrian Safety Perceptions by Vendor Presence and Purchase Frequency

<table>
<thead>
<tr>
<th>School</th>
<th>Sidewalk Vendors</th>
<th>=/&gt; Occasional Purchases (%)</th>
<th>Crossing Street /Driveway</th>
<th>Riding Bicycle in Street</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unsafe (%)</td>
<td>Some-what Safe (%)</td>
</tr>
<tr>
<td>Elementary S1</td>
<td>8</td>
<td>84.5</td>
<td>17.6</td>
<td>58.8</td>
</tr>
<tr>
<td>Elementary S3</td>
<td>6</td>
<td>59.7</td>
<td>23.5</td>
<td>45.4</td>
</tr>
<tr>
<td>Elementary S2</td>
<td>0</td>
<td>58.1</td>
<td>16.7</td>
<td>53.0</td>
</tr>
<tr>
<td>Elementary S4</td>
<td>0</td>
<td>40.0</td>
<td>23.1</td>
<td>61.5</td>
</tr>
<tr>
<td>Overall</td>
<td></td>
<td>20.7</td>
<td>52.8</td>
<td>26.6</td>
</tr>
</tbody>
</table>

Source: HIA field assessments and student surveys

\(^6\)\(^1\) Measures the statistical relationship or dependence between sidewalk vendors and bicyclist/pedestrian presence.
Limitations

This HIA utilizes available resources to measure differences between contrasting regulatory environments on the activity of sidewalk food vendors, and to consider relationships between student nutrition behaviors, food resource environments and other socioeconomic factors using available data. Future studies can improve the understanding of street vending as a commercial activity and component of the environment with access to a broader school and student sample and more detailed transaction data.

Schools were included in the assessment with the purpose of creating a diverse sample of off-campus environments found in two jurisdictions. However, single observation periods of four elementary schools provide a small picture of the vendor transactions that occur in each community. Differences in vendor activity and nutrition behaviors between schools can be random and hard to rationalize, and may change during the course of a school year for uncertain reasons. Assessing a greater proportion of school environments in each jurisdiction, and conducting repeated observations at each location, has the potential to reveal more consistent trends and clearer relationships. Including more jurisdictions to the assessment can also provide additional comparison opportunities based on differing regulatory and socioeconomic factors.

Studies that can coordinate willing vendors and ample observer staffing have the potential to gather data that more directly measures the nutritional content of snacks and beverages purchased by students and caretakers. The current political sensitivity of the issue made it difficult to outreach to vendors for purposes of research. Instead, the assessment relied on a contrast of observed vendor inventories and student survey responses to draw nutrition-related conclusions regarding these transactions. While helpful, the available observation data does not capture the bundling of products within individual transactions that may be driving the severe end of caloric overconsumption amongst the most frequent vendor patrons. Tracking sales for individual vendors and, perhaps, the purchase history of segmented consumer groups can help determine the proportion of students who are only supplementing their daily nutrition needs through vendor snacks and beverages, and those that may be skewing their diets away from healthier options.

Gathering primary data at the point-of-sale would also provide more reliable information on street vendor transactions than what can be gathered through survey responses. While classroom surveys employed by this assessment where helpful in outlining a general student perception of the off-campus nutrition environment, answers regarding individual purchases and preferences were subject, like most surveys, to a variety of inaccuracies. Some respondents could have struggled to accurately interpret questions, recalled inaccurate information from their past experience, or not given full attention to questions due to survey fatigue. Although students completed surveys anonymously and were encouraged to give honest answers, some respondents may still have been more motivated to give socially desirable answers.

Conclusions

The evidence gathered for this assessment does not suggest that citywide prohibitions against sidewalk food vending are functioning as a protection of quality nutrition environments surrounding school campuses. Whether enforcement resources are inadequate to consistently enforce the prohibitions, or the income-generation needs of low-income people are acute enough to justify the risks, school environments in South Los Angeles appear as likely to include an abundance of street vendors selling snacks and beverages as other places. Evidence also suggests a higher presence of street vendors where residents have a more tenuous foothold in the formal
economy and where the cultural context is more accustomed to informal enterprise in the public realm. It is reasonable, therefore, to consider whether legitimized forms of sidewalk vending would be adaptable and socioeconomically beneficial in many sections of Los Angeles. Because the prohibition does not appear to discourage vendor activity near schools, permitted sidewalk vending would not likely amplify the hazards from nutrient-poor snacks and sugary beverages that already exist within the wider food ecology occupied by students.

Evidence from this assessment does not suggest that sidewalk vendors are an occasional or consistent generator of vehicle-pedestrian conflicts in their vicinity. It is not clear from this assessment whether sidewalk vendors have a positive effect on bicycle/pedestrian safety or the creation of defensible space. However, unsubstantiated views persist that the presence of street vendors contributes to unsafe and unkempt conditions in a neighborhood. More specific evidence is needed to assess the relationship of street vendors to a variety of environmental factors, such as crime prevention, food safety, and ancillary business activity.

Reforming the regulatory environment of street vending does offer an opportunity to focus closer on the food access challenges faced by students and caretakers in South Los Angeles. To address the child obesity epidemic locally, a comprehensive policy and programmatic approach is evolving that includes restrictions on the proliferation of unhealthy food sources (e.g. fast food density limitations) and development initiatives to scale the presence of healthier food sources (e.g. corner store conversions, nutrition benefits matching, food retail financing initiatives). Both of these approaches have implications for the regulation of street vending.

While vendors in many areas make authentic and valued contributions to the city’s emergent food culture, observations confirmed that students and caretakers represent a market niche that is served by vendors with largely unhealthy snack and beverage choices. Survey evidence suggest that a majority of elementary school students in South Los Angeles participate in this market on part-time basis, and a sizeable minority of students participate on a near-daily basis. Though exercise can mitigate some of the negative health effects from these snack and beverage purchases, in many cases they are contributing to varying degrees of caloric overconsumption.62

The continued prohibition of this sidewalk vending mode in proximity to school campuses should, therefore, be a distinct consideration from the wider legalization of street vending. New permitting structures that would be implemented with these regulatory reforms may also include revenue sources that can be allocated for more consistent enforcement. If these resources are applied with student nutrition as a primary concern (as opposed to business concerns), they could make school-proximal regulations of street vending more effective than yet seen.

However, vendors that elect to sell healthy food (most likely fruit and water, but possibly homemade meals and certain packaged snacks) provide a compelling reason for allowing approved modes of street vending near schools that compliment campus-based nutrition efforts. Research suggests that this type of health-oriented street vendor can be sustained independently,63 but their economic prospects could be significantly enhanced if granted exclusive access to a regulated environment near schools, if offered other regulatory incentives (e.g. fee waivers, permit expediting), and if supported by a public or philanthropic vendor incubation initiative.

The assessment’s data on student nutrition behaviors


does provide outlines of a multifaceted food resource environment containing multiple challenges to healthy eating. Based on the patronage rates indicated in student surveys, the presence and product offerings of fast food restaurants and convenience stores may be more imperative to address than street vending, while ice cream trucks operating near schools are a similar or greater source of non-nutritious snacks and sugary beverages. It is also speculative whether curtailing street vendor activity near schools or transforming their product offerings would actually improve student nutrition behaviors, or whether this demand would only shift to food access points that are unregulated or where nutrition content is less of a regulatory concern. It is plausible that both changes would occur to some extent.

Elementary school students, who appear to be the primary consumer base of street vendors operating near school campuses, are more dependent on the choices of caretakers to patronize certain food access points. While some older students may have the ability to obtain snack and beverage items on their own from convenience stores and fast food restaurants, other students would only do so if their caretakers chose to. A prior group of students surveyed suggested that 44% would purchase snacks and beverages from other retail outlets in lieu of street vendors, while 37% would forego those purchases.\textsuperscript{64} Caretaker choices may depend on whether convenience stores and fast food restaurants match the locational advantages of street vendors along the primary pedestrian routes leading from schools. Not matching this proximity could influence caretakers to rely more on household food supplies or encourage their students to eat more food provided at school.

If their activity near schools continues to be inconsistently enforced, ice cream trucks would also be well positioned to absorb the snack and beverage demand of street vendors. Furthermore, anecdotal insights do suggest that an informal snack market operated by students and adults, motivated by enterprise or concern, does exist within wider school communities. More than half of surveyed students indicated that they at least occasionally obtain snacks and beverages from “someone else” (see tables 7-8). While considerate of nutritional needs in some cases, this market usually replicates (or sometimes innovates upon) the offerings that are proven popular (e.g. chips and candy) within the wider marketplace. In the same way that this market has counterbalanced improvements in school meal offerings, it also has potential to offset changes in sidewalk and mobile vendor activity near school campuses.

Successes in making school food more nutritious and appetizing can help to limit the demand for sidewalk food vendors that is generated from hungry students at the close of the school day. But as recent experience with lunchroom reforms indicate, established tastes are hard to counter.\textsuperscript{65} Recognition of the highly nimble demand for popular snacks and beverages, which can move between established retail businesses to multiple channels of informal exchange, underscores the challenge of regulating the presence and character of food retail in a community. It also points to the key role that nutrition and consumer awareness plays in addressing child obesity. Building the conviction to forgo the unhealthy food available in a neighborhood appears to be as important to community health as the effort to bring healthier and affordable food to a neighborhood. Some of the most integral efforts to form this awareness are occurring at schools, where more students than before are learning about urban agriculture, the origins and production processes of our food, and the food access disparities in their community.


### Appendix 1  Field Observation Grid

**REACH Partners in Health**  
**STREET FOOD VENDOR HEALTH IMPACT ASSESSMENT**  
field observation grid – vendor section

1. Indicate the items available from each vendor observed.

<table>
<thead>
<tr>
<th>Item (mark X when available)</th>
<th>Vendor 1</th>
<th>Vendor 2</th>
<th>Vendor 3</th>
<th>Vendor 4</th>
<th>Vendor 5</th>
<th>Vendor 6</th>
<th>Vendor 7</th>
<th>Vendor 8</th>
<th>Vendor 9</th>
<th>Vendor 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unhealthy Snack Food (e.g. chips, cookies, candy, ice cream, elote)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits and Vegetables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot/Prepared Foods (e.g. tamales)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Foods list:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sugar-Sweetened Beverages (e.g. soda, fruit punch, sports drink, energy drink, aguas frescas)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy Beverages (e.g. 100% fruit juice, water)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Beverages list:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

school  
date  
assessor
2. Indicate the location and pedestrian conditions for each vendor observed.

<table>
<thead>
<tr>
<th>Location (mark one for each vendor)</th>
<th>Vendor 1</th>
<th>Vendor 2</th>
<th>Vendor 3</th>
<th>Vendor 4</th>
<th>Vendor 5</th>
<th>Vendor 6</th>
<th>Vendor 7</th>
<th>Vendor 8</th>
<th>Vendor 9</th>
<th>Vendor 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between school gates and street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Across the street from school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within 2 blocks of school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farther than 2 blocks from school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vendor travel method (mark one for each vendor)</th>
<th>Vendor 1</th>
<th>Vendor 2</th>
<th>Vendor 3</th>
<th>Vendor 4</th>
<th>Vendor 5</th>
<th>Vendor 6</th>
<th>Vendor 7</th>
<th>Vendor 8</th>
<th>Vendor 9</th>
<th>Vendor 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pushed or carried</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedaled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sidewalk congestion (mark one for each vendor)</th>
<th>Vendor 1</th>
<th>Vendor 2</th>
<th>Vendor 3</th>
<th>Vendor 4</th>
<th>Vendor 5</th>
<th>Vendor 6</th>
<th>Vendor 7</th>
<th>Vendor 8</th>
<th>Vendor 9</th>
<th>Vendor 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groupings did not generally obstruct sidewalk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groupings often made sidewalk passage difficult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groupings caused passersby to walk in the street</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Indicate the number of food trucks or ice cream trucks that were present during the observation period? ________

school
date
assessor
1. **Describe car traffic conditions where vendors were present during the observation period (chose one option)?**
   - □ light (occasional cars passing)
   - □ medium (consistent vehicle flow with a number of cars on the road)
   - □ heavy (frequent slowing due to vehicle congestion)

2. **How many pedestrians were present during the observation period?**
   - Students
     - __________________________
   - Adults
     - __________________________

3. **How many bicyclists were present during the observation period?**
   - Students
     - __________________________
   - Adults
     - __________________________
Appendix 2  Student Survey

Only questions 7-8 and 10-13 and 15-16 are pertinent to the Street Food Vendor HIA.

1. What grade are you in?  □ 4th  □ 5th

2. How old are you? I’m _____ years old.
   □ 8 or younger  □ 9  □ 10

3. Are you:  □ Male  □ Female  □ Other

4a. Are you Hispanic/Latino/Spanish?
   □ Yes, Mexican
   □ Yes, Central American (Guatemala, El Salvador, Belize, Nicaragua, etc.)
   □ Yes, South American or other (Dominican Republic, Puerto Rico, Cuba, etc.)
   □ No, Not of Hispanic, Latino, or Spanish

4b. What is your primary ethnicity/racial background? (Mark all that apply)
   □ Black or African American
   □ White
   □ American Indian or Alaska Native
   □ Asian/Native Hawaiian or Other Pacific Islander
   □ Other _______________

5. In general, how is your health?
   □ Excellent  □ Very Good  □ Good  □ Fair  □ Poor
Elementary School

**Physical Activity**

1. Is being physically active important to you?
   - [ ] Yes
   - [ ] No
   **If YES, what do you do to stay physically active?**
     - [ ] Running/Jogging/Walking
     - [ ] Bicycle/Skateboard/Scooter
     - [ ] Team Sports
     - [ ] Dance/Cheerleading
     - [ ] Fitness Workout

   **If NO, indicate the following reasons.**
     - [ ] I don’t want to get dirty and smelly.
     - [ ] I don’t want to mess up my hair.
     - [ ] I’m too busy
     - [ ] There’s no place to be physically active around me
     - [ ] Other: __________________

2. How do you prefer to participate in physical activity?
   - [ ] In a Group/Team
   - [ ] Individually
   - [ ] I prefer not to participate at all

3. When do you prefer to be physically active?
   - [ ] Before School
   - [ ] During School
   - [ ] Lunch Time
   - [ ] After School
   - [ ] Weekends
   - [ ] In the evening

4. Where do you prefer to be physically active?
   - [ ] At school
   - [ ] Outside of school
   - [ ] I prefer not to exercise
### REACH STUDENT QUESTIONNAIRE

#### 5. What other physical activities would you participate in if they were offered at school?

- [ ] Wii Sports
- [ ] Swimming
- [ ] Ultimate Frisbee
- [ ] Zumba/Dance
- [ ] Field Hockey
- [ ] Martial Arts
- [ ] Fitness Workout
- [ ] Other: ________________

#### Healthy Eating

6. Is eating healthy food important to you?

- [ ] Yes
- [ ] No

7. How many times a week do you eat school lunch?

- [ ] 0 Never
- [ ] 1-2 Times per week
- [ ] 3-4 Times per week
- [ ] 5 Times per week
- [ ] More than 5 times per week

8. How many times a week do you eat school snack?

- [ ] 0 Never
- [ ] 1-2 Times per week
- [ ] 3-4 Times per week
- [ ] 5 Times per week
- [ ] More than 5 times per week
### Elementary School

#### REACH STUDENT QUESTIONNAIRE

9. When choosing to eat food from the cafeteria, what matters to you the most?  
   
   [ ] The food tastes good to me
   [ ] The food looks good to me
   [ ] It is something I have eaten before
   [ ] My friends also eat the food
   [ ] The food is healthy
   [ ] Other:

10. Mark how often you get snacks from the following places?

   - Vending machines: never/sometimes/often
   - School store: never/sometimes/often
   - Sidewalk vendor: never/sometimes/often
   - Food trucks: never/sometimes/often
   - Corner store: never/sometimes/often
   - Fast food restaurant: never/sometimes/often
   - From home: never/sometimes/often
   - Someone else: never/sometimes/often

11. Mark how often you buy these snacks from sidewalk vendors?

   - Chips, cookies, candy, ice cream, elote: never/sometimes/often
   - Fruits and vegetables: never/sometimes/often
   - Tamales, sandwiches or other homemade food: never/sometimes/often
   - Soda, Gatorade, fruit punch, hot chocolate, or other sweet drinks: never/sometimes/often
   - Water or natural fruit juice: never/sometimes/often
12. Why do you buy snacks from sidewalk vendors?

- It's quick and easy: Yes No
- It's cheaper: Yes No
- They sell what I like: Yes No

**Safety**

13. How do you usually get to school?

- ___ Walk
- ___ Bike
- ___ School Bus
- ___ Metro (bus or train)
- ___ Car
- ___ Other (skateboard, scooter, etc.)

14. Rank the method of transportation to school from safest to the least safe.

(Rank from 1 to 6; 1 = the safest, 6 = least safe)

- ___ Walk
- ___ Bike
- ___ School Bus
- ___ Metro (bus or train)
- ___ Car
- ___ Other (skateboard, scooter, etc.)

15. If you ride a bike to school, how safe does it feel to ride in the street?

(Choose one answer)

- Very safe
- A little safe
- Not Safe
- I don’t ride a bike to school

16. If you walk to school, how safe does it feel to cross a street or driveway?

(Choose one answer)

- Very safe
- A little safe
- Not safe
- I don’t walk to school

**THANK YOU!**
## Appendix 3 Additional Data

### Table A Sidewalk Vendors Near Schools by Observed Travel Method

<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th>Sidewalk Vendors</th>
<th>Pushed or Carried</th>
<th>Pedaled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary S1</td>
<td>LA</td>
<td>8</td>
<td>••••••</td>
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<td>Elementary S3</td>
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<td>••</td>
</tr>
<tr>
<td>Elementary C1</td>
<td>C</td>
<td>4</td>
<td>•••</td>
<td>•</td>
</tr>
<tr>
<td>Elementary C4</td>
<td>C</td>
<td>3</td>
<td>••••</td>
<td></td>
</tr>
<tr>
<td>Elementary C2</td>
<td>C</td>
<td>2</td>
<td>•••</td>
<td>•</td>
</tr>
<tr>
<td>Elementary C3</td>
<td>C</td>
<td>1</td>
<td>••</td>
<td></td>
</tr>
<tr>
<td>Elementary S2</td>
<td>LA</td>
<td>0</td>
<td>••</td>
<td></td>
</tr>
<tr>
<td>Elementary S4</td>
<td>LA</td>
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<td>•••••</td>
<td></td>
</tr>
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<td>••••••••••</td>
<td></td>
</tr>
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</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td><strong>Total</strong></td>
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<td>21</td>
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</table>

Source: HIA field assessments

### Table B Sidewalk Vendors Near Schools by Observed Location

<table>
<thead>
<tr>
<th>School</th>
<th>City</th>
<th>Sidewalk Vendors</th>
<th>Inside School Gates</th>
<th>Between School Gates and Street</th>
<th>Across Street From School</th>
<th>Within Two Blocks of School</th>
<th>Beyond Two Blocks of School</th>
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<tbody>
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</tr>
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<td></td>
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</tr>
<tr>
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<tr>
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Source: HIA field assessments
Appendix 4  City Council Motion (CF 13-1493)

13-1493
NOV 6, 2013

MOTION

Street vending on the City right-of-way and sidewalk is illegal. In the average year, there are hundreds of tickets written to vendors, and several hundred arrests. Yet thousands of vendors continue to operate in an underground marketplace, selling a wide variety of food and merchandise on the sidewalks of Los Angeles.

Street vending largely falls within two categories, food street vending and merchandise (non-food) street vending, each with their own complexities. Street vending is permitted in various forms by most other large cities. New York, San Francisco, Houston, Portland and Chicago are among the cities that have established a regulatory system for selling merchandise and/or food on city sidewalks.

In Los Angeles, a more comprehensive legal framework is required to effectively address sidewalk vending. An effective regulatory system has the potential to protect health and increase public safety and economic activity. Such a policy should also consider the rights and investments of brick-and-mortar businesses, including opportunities to expand and promote their businesses through street vending and with the overall goal of enhancing economic growth and the viability of neighborhoods.

I THEREFORE MOVE, that the CLA, along with Bureau of Street Services and in consultation with other Departments as needed, the City Attorney and the County of Los Angeles, be instructed to prepare and present a report within 90 days with recommendations on possible regulation that could effectively permit and regulate food street vending on City sidewalks and parkways. This report should include the following: the history and status of the Special Sidewalk Vending District program administered by the former Community Development Department; a review of policies in other jurisdictions; recommendations to improve public safety; and ways to ensure street food vendors provide safe and healthy food options.

I FURTHER MOVE, that the CLA, along with Economic and Workforce Development Department, City Attorney and Bureau of Street Services, and in consultation with other Departments as needed, be instructed to prepare and present a report within 90 days with recommendations on possible regulation of merchandise and non-food street vending in the City of Los Angeles. This report should include the following: information on the number of citations that have been issued over the past year and where the citations were issued; the current regulations on street vending and how the regulations are enforced; potential legal constraints for regulating street vending; and a review of policies in other jurisdictions.

PRESENTED BY:
JOSE HUIZAR
Councilmember, District 14

SECONDED BY:

CURREN D. PRICE, JR.
Councilmember, District 9
Appendix 5  Proposed Sidewalk Vending Ordinance

(LA Street Vendor Campaign)

The Core Elements of a Los Angeles Sidewalk Vending Ordinance

A Proposal by LA Street Vendor Campaign

1. A citywide permit system.
   • Vendors should be given an opportunity to apply for and obtain a permit to legally vend on sidewalks and in parks in the City of Los Angeles.
   • Permits should be granted for food vending and merchandise vending.
   • The permitting process should be inclusive and easy to navigate.
   • Vending permits should include reasonable permit fees, with lower or waived permit and renewal fees for veterans and healthy food vendors.
   • Permitted vending should be allowed citywide and permits should be granted to all applicants who comply with application requirements.

2. Permitting requirements to protect health and safety.
   • A valid County Health Permit and proof of commissary usage should be required for any applicant seeking to sell food.
   • Merchandise vendors should be prohibited from selling pirated or counterfeit merchandise.
   • A state sellers permit, business tax registration and liability insurance should be required.

3. Reasonable restrictions on location.
   • The Sidewalk Vending Ordinance should not create designated vending zones or districts. Instead, the ordinance should impose reasonable rules to limit the over-concentration of vending operations in any one area, without unnecessarily restricting the flexibility of vendors to respond to changing markets or undermining the inherent mobile characteristics of the trade.
   • Vendors should be prohibited from blocking access to residences and businesses; vending should not impede pedestrian passage and should maintain at least 5 feet of clear sidewalk space at all times; vending should be prohibited within 500 feet of schools (except for healthy food vending); and vending should not be allowed on any part of the public right-of-way that is improved with flowers, plants or decorative landscaping.

4. Reasonable rules concerning vending equipment and debris.
   • Food vendors should be required to comply with all equipment certification requirements of the California Food Retail Code. Merchandise vending operations should not exceed 4 feet x 8 feet.
   • The Sidewalk Vending Ordinance should require that vendors provide a trash receptacle for the use of customers and should require vendors to pick up and dispose of any trash or litter left by customers before leaving the vending location.

5. Meaningful Incentives for healthy food vending.
   • Vendors should be encouraged to sell fresh fruit, produce, water and healthy snacks. “Healthy Food Vendors” should be granted incentives such as reduced permit fees, special access to events sponsored by the City, and exclusive preferential vending areas, such as locations closer to schools, in front of hospitals, and in designated Healthy Food Corners.

6. Technical Assistance
   • The City should assist community-based organizations to provide technical assistance, education, financial support and other capacity building services to vendors.

7. Responsible and humane enforcement.
   • The Sidewalk Vending Ordinance should include a tiered compliance regime, with a warning for a first violation, followed by a “fix-it-ticket,” and reasonable fines for subsequent violations.
   • Violations should be treated either as a warning or as an infraction. No violation should result in a misdemeanor or be subject to the Administrative Citation Enforcement (ACE) program.
   • Suspension of a permit should occur only after 4 violations in one year, with an opportunity to appeal.
   • The Sidewalk Vending Ordinance should include a phased-in enforcement program to accommodate a period of public education about the new regulations and requirements.

Source: streetvendorcampaign.blogspot.com (accessed September 2015)