

# Methods to stimulate community action using GIS mapping with local data collection to assess food availability and marketing in low-income neighborhoods



**CX<sup>3</sup>** Communities of Excellence in Nutrition,  
Physical Activity and Obesity Prevention

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**Alyssa Ghirardelli, MPH, RD**

*Network for a Healthy California*

Cancer Prevention & Nutrition Section



# CX<sup>3</sup> Defined

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- Documents the physical environment and empowers local action to change the environment to support individual behaviors
- A planning model that involves assessing communities in relation to a variety of obesity prevention benchmarks known as community indicators and assets.
- Based on California Tobacco Control Section initiative, CX (Communities of Excellence)
- **3** = nutrition, physical activity and obesity prevention

# CX<sup>3</sup> Goals

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- Empower communities
  - Assess a community's strengths, assets, gaps & weaknesses
  - Evidence-based priority setting
  - Develop strategic local data-driven action plans
  - Broaden participation at local level
  - Evaluate progress
- Development of community level education strategies
- Local Policy action

# CX3 Standardized Indicators and Assets

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- Indicators organized into 6 Community Environments:
  - Neighborhood
  - Preschool
  - School
  - After-school
  - Worksite
  - Government

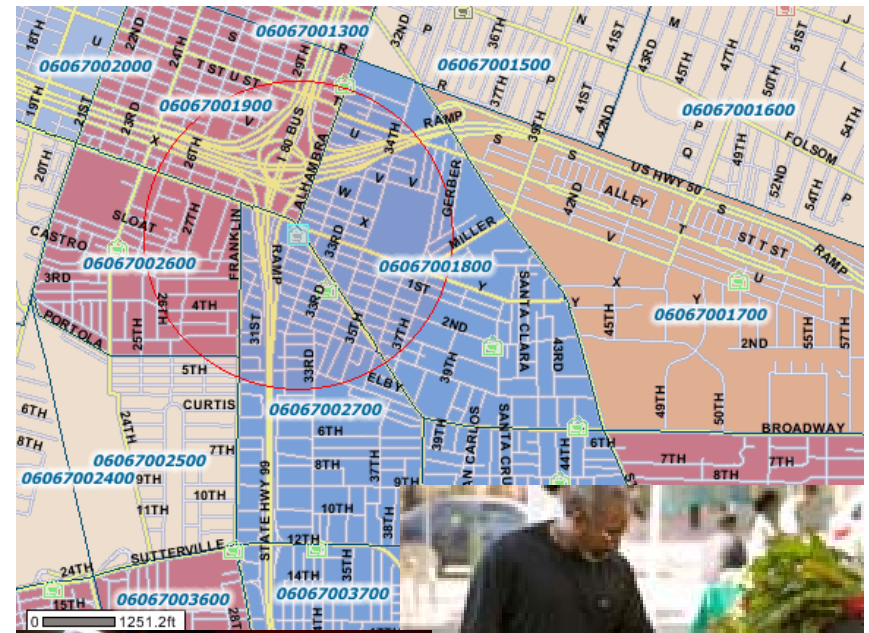
- Assets organized into:
  - Health department infrastructure
  - Political will
  - Community infrastructure

# CX<sup>3</sup> Data: 3-6 low-income neighborhoods

## *Neighborhood Environment*

### #1: Mapping

- Access to Supermarkets
  - Markets with >20 employees
  - ½ mile service area
  - Transit to supermarkets
- Farmers Markets
- Density of Fast Food
  - Fast food chain/not chain
  - Pizza
  - Deli



# CX<sup>3</sup>: Use of On-line GIS Map Viewer

http://www.cnngis.org - Network for a Healthy California Map Viewer - Microsoft Internet Explorer

California Department of Public Health

Overview Map Print This Map Data Info Need Help? Contact Us Admin Tools About This Site

Zoom In Zoom Out Last View Full View Pan Get Info Select Clear Clear Theme Query Measure Save Map Load Map

Map Layers Locate Advanced Census Buffer Measure

**Distance measurement form**

Total Distance:

Run Clear

Refresh the Map

Current Map Tool: Measure Distance

**Jump to a new location**

Counties: -----Counties-----  
Reg. Networks: -----Regional Networks-----  
Census Tract: -----Census Tracts-----  
Cities: Sacramento  
Zip Code: Find Zip

**Summarize Data**

Summarize data from map layers in the current view. Select a layer from the list below and press GO.

Am. Cancer Society Offices Go  
 Current View  Current Selection

# CX<sup>3</sup> Data: 3-6 low-income neighborhoods

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## *Neighborhood Environment*

### #2: Field Surveys

- ❑ Grocery stores and small markets
  - Availability and quality of fruits and vegetables, other healthy foods
  - Fruit and vegetable prices
  - Marketing of healthy/unhealthy foods
- ❑ Fast food around schools
  - Availability of healthy options
  - Menu labeling
  - Marketing
- ❑ Outdoor marketing around schools



# CX<sup>3</sup> Sites:

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- ❑ 61 Local Health Departments in California (58 counties, 3 cities)
- ❑ Implementation with Network for a Healthy California
  - 6 Pilot Sites in 2006
  - 16 Additional Sites in 2007
- ❑ 12 TCE (The California Endowment) sites-trained
  - Mini-grants
  - Central California Regional Obesity Prevention Projects
- ❑ 34 Total Health Departments trained
- ❑ Dense urban, suburban, rural, and remote areas



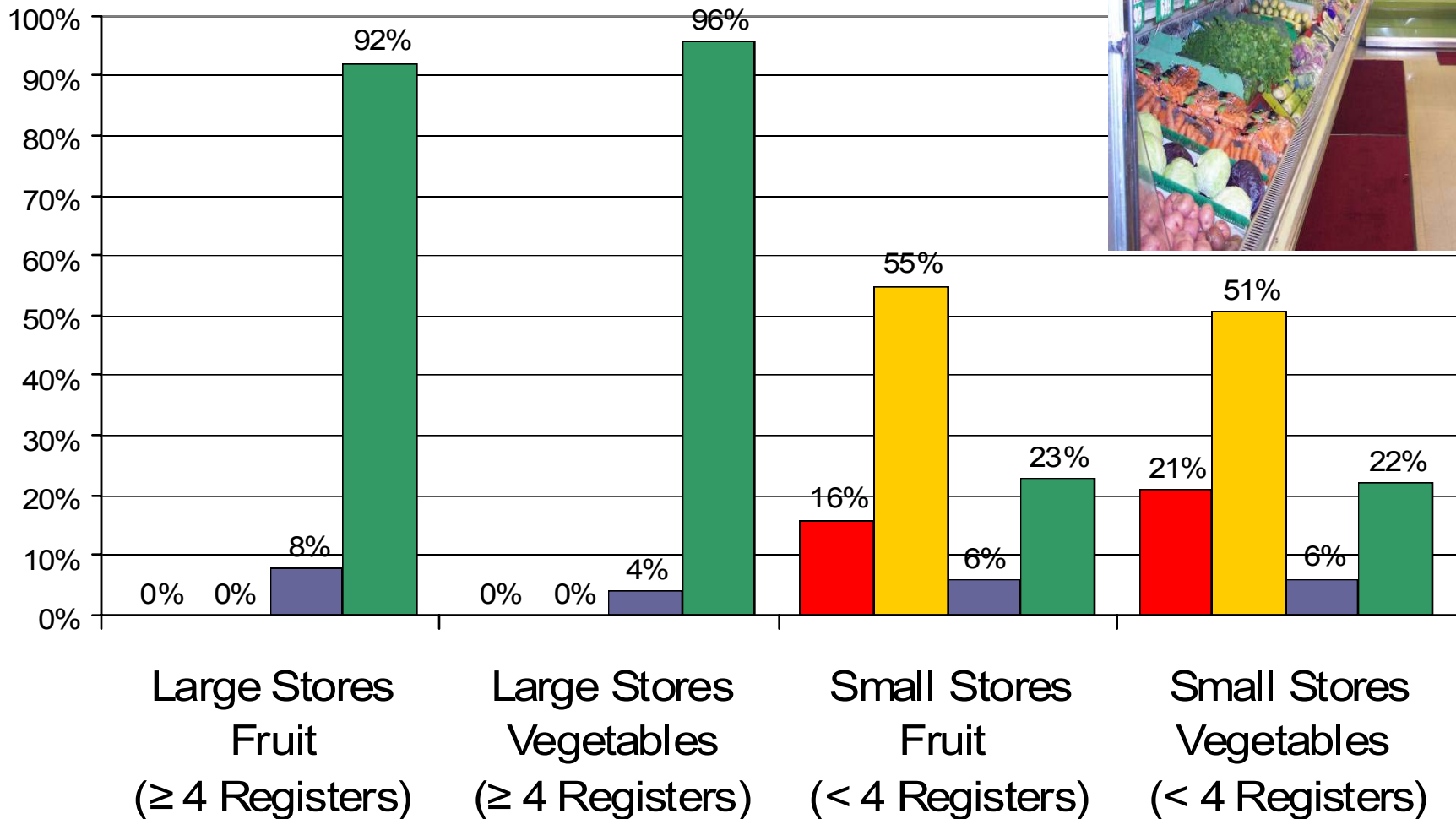
# *CX<sup>3</sup> Neighborhood Selection: Network for a Healthy California*

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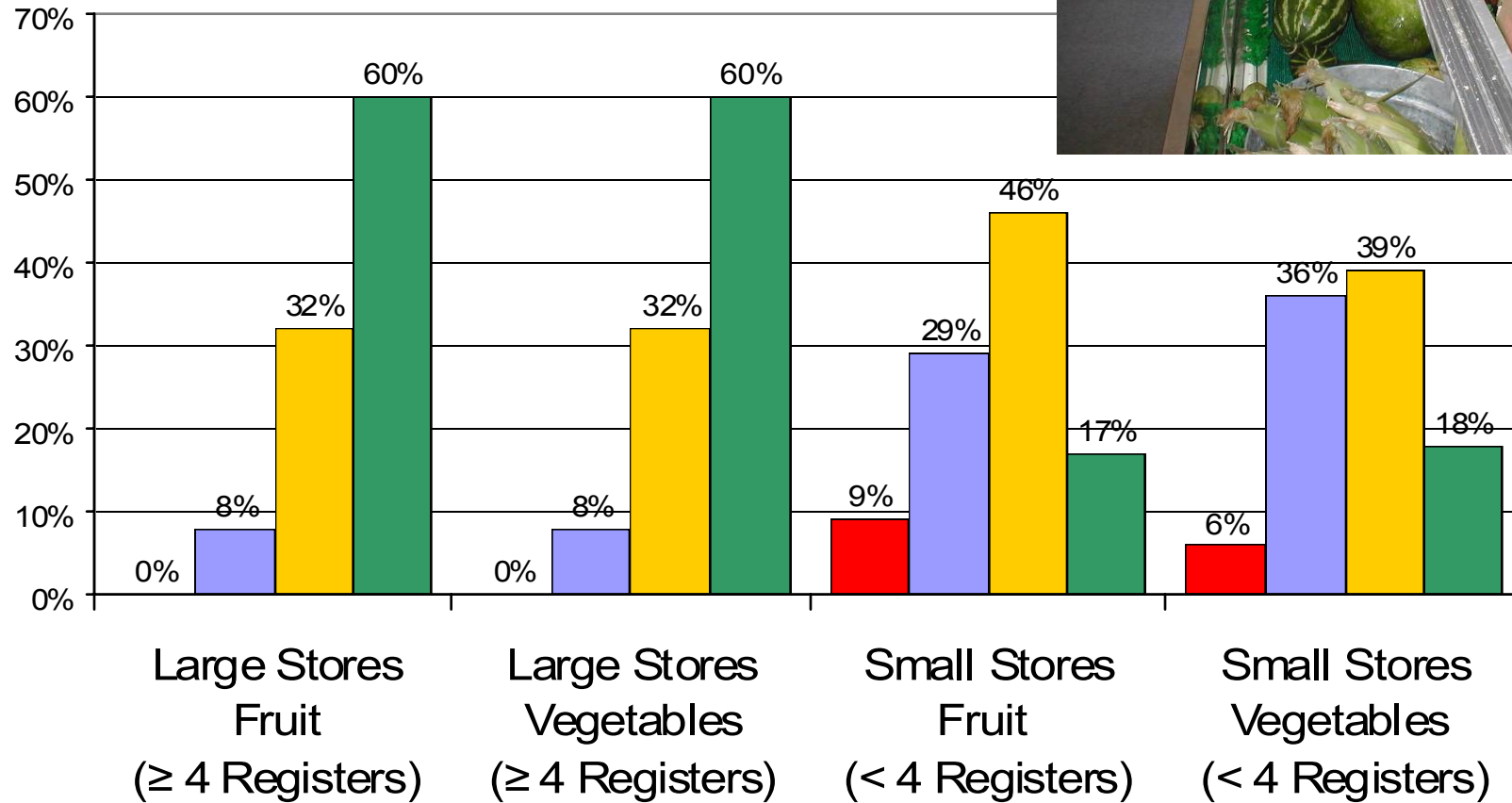
- ❑ Chose 3-7 low-income neighborhoods
- ❑ Each neighborhood 1-5 census tracts
- ❑ >50% of population in census tract at or below 185% Federal Poverty Level (FPL)
- ❑ Other selection factors
  - ❑ Established partnerships
  - ❑ Race/Ethnic make-up
  - ❑ Rural and Urban (for some sites)
  - ❑ Obesity rates (used by one site)



# CX<sup>3</sup>: F/V Availability by Store Size



# CX<sup>3</sup>: F/V Quality by Store Size



- All or most poor quality
- Mixed quality; more poor than good
- Mixed quality; more good than poor
- All or most of good quality

# CX<sup>3</sup>: Unhealthy Marketing at Checkout



Large Stores: n = 27

Small Stores: n = 134



Range: 20% in Santa Clara Co. neighborhood; over 80% in W. Oakland

Only 24%  
of large stores ( $\geq 4$  registers)  
have health promotions  
around fruit and vegetable displays





Ads on  
roof/walls...

77% of  
fast food  
chains (n=44)

54% of  
other fast  
food outlets  
(n = 41)

# *CX*<sup>3</sup>: Localized Data Methods

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- Each health department receives local data analyzed into neighborhood profile (2007)
  - Added features: new WIC package; nutrition information in FF restaurants
- Use of scoring system
  - Store scores (Up to 100 pts for each store)
  - Fast Food Outlet Scores (Up to 50 pts for each outlet)
  - Quality standards created
- Locals can use visual (maps and photos) and numeric representation of neighborhood conditions



# CX<sup>3</sup> Action Guidance:



- ❑ Intervention guidance relevant to funding stream
- ❑ Community empowerment and priority setting process outlined and encouraged
  - All data variables– local policy implications!
    - ❑ From land use to signage ordinances to menu labeling
- ❑ Consultation from Public Health Law and Policy at Public Health Institute
- ❑ Consultation from communications firm to assist with media and data sharing for local community action

# CX<sup>3</sup> Action Guidance:

- Public Health Law & Policy provides technical assistance for empowering communities/consumers
  - Education and/or Voluntary Action
  - Policy
    - Land use (general plan, zoning, design guidelines)
    - Economic development
  - Enforcement of existing policy
  - Targeting designated redevelopment zones



# *CX*<sup>3</sup> Action is growing: Examples

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- Kern (Delano)
  - City task force developed, using data; link consumers with information on alternative food sources (food stands)
- W. Oakland
  - Youth developed clean up campaign via park to get access to local store
- Santa Clara
  - Neighborhood group (Promotoras) prioritized need for farmers' market, activating
- Berkeley
  - Retail program with local merchant



# For more information:

**Alyssa Ghirardelli, MPH, RD**

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**Research Associate, California  
Department of Public Health, Cancer  
Prevention and Nutrition Section**

**[alyssa.ghirardelli@cdph.ca.gov](mailto:alyssa.ghirardelli@cdph.ca.gov)  
916-449-5342**

