



**Economic &
Planning Systems**

*Real Estate Economics
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REGULATORY FEE ASSESSMENTS: NUTRITION-RELATED MUNICIPAL SERVICES

NEXUS STUDY

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INTRODUCTION

This report provides the results of a nexus study conducted to support the levying of a regulatory fee by local government agencies on the sale of sweetened beverages¹ and restaurant-prepared food to combat the emerging obesity epidemic. The funds could be used on any number of locally administered programs related to obesity prevention. The report is divided into four chapters:

I. Sweetened Beverages and Restaurant Foods Contribute to the Obesity Epidemic

This chapter provides scientific data about how sweetened beverages and restaurant-prepared foods contribute to the obesity epidemic.

II. Local Government Can Levy Fees to Combat Obesity

A regulatory fee is like a business license fee that may be imposed on a business that has caused or can be anticipated to cause a particular type of harm. Such fees are a relatively common way for city, county, and state governments to raise revenue to cover the costs of specific regulatory programs. This chapter provides an overview of the legal basis for implementing a fee and distinguishes fees from general taxes.

III. Model Fee-Based Programs

This chapter provides short descriptions of four obesity-related programs and implementation resources as examples of programs that local governments could implement to address obesity.

IV. Calculating a Regulatory Fee

This chapter presents a model spreadsheet calculation of a regulatory fee for a hypothetical mid-sized city. The purpose of this calculation is to demonstrate how a given funding requirement can be rationally allocated to businesses that contribute to obesity.

The nexus study concludes that local governments likely have broad authority to levy fees on businesses that sell sweetened beverages or restaurant-prepared foods and that the fees can be used for municipal programs to address obesity.

¹ The term *sweetened beverages* is used to describe those beverages to which sugar is added, such as regular (non-diet) soft drinks, fruit drinks, fruitades, and sports drinks. The term does not include fruit juices, which contain only water and fruit juice and no added sugar.

I. SWEETENED BEVERAGES AND RESTAURANT FOODS CONTRIBUTE TO THE OBESITY EPIDEMIC

PROBLEM STATEMENT

Preventing obesity by improving access to healthy food and opportunities for physical activity is an emerging national priority in the United States. According to the Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, an estimated 61% of U.S. adults aged 20 years and older, and 13% of children and adolescents, are classified as overweight or obese.² The National Institutes of Health indicates that obesity has risen to epidemic levels. It leads to devastating and costly health problems, reduces life expectancy, and is associated with stigma and discrimination. Obesity is a strong risk factor for certain cancers and is associated with depression and other medical conditions.³

The prevention of obesity and related health impacts is most urgently needed in low-income communities of color that have higher rates of morbidity and mortality associated with obesity, and fewer resources to combat the conditions leading to poor health.^{4 5} For example, recipients of the federal Food Stamp Program (FSP) have a statistically significant greater likelihood when compared with either income-eligible nonparticipants or higher-income nonparticipants of suffering from high blood pressure, coronary heart disease, diabetes, emphysema, and congestive heart failure.⁶ Obesity is 50% more prevalent among women of lower socioeconomic status (SES) than among women of higher SES.⁷ The California Department of Health Services indicates that more than one-third of children surveyed in the California Children's Healthy Eating and Exercise Practices Survey were overweight or at risk of being overweight, and

² U.S. Department of Health and Human Services, "The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity," 2001, p. XIII.

³ National Institutes of Health Obesity Research Task Force, "Strategic Plan for NIH Obesity Research," 2004.

⁴ Block, J.P., et al., "Fast Food, Race/Ethnicity, and Income: A Geographic Analysis," *American Journal of Preventive Medicine*, vol. 27, pp. 211-217, 2004.

⁵ Yancy, A.K., et al., "Population-based Interventions Engaging Communities of Color in Healthy Eating and Active Living: A Review," *Preventing Chronic Disease: Public Health Research, Practice, and Policy*, vol. 1, no. 1, Jan 2004. See www.cdc.gov/pcd/issues/2004/jan/03_0012.htm.

⁶ Fox, M.K., et al., "Nutrition and Health Characteristics of Low-Income Populations: Volume I, Food Stamp Program Participants and Nonparticipants," United States Department of Agriculture, Economic Research Service, 2004. See www.ers.usda.gov/publications/efan04014-1.

⁷ Morrill, A.C., "The Obesity Epidemic in the United States," *Journal of Public Health Policy*, vol. 25, no. 3/4, p. 10, 2004.

African-American, Latino, and Asian children were more likely than white children to be obese.⁸

Multiple factors have been associated with the recent obesity epidemic,⁹ but the marked increase in the prevalence of obesity appears to be largely attributable to environmental conditions that implicitly discourage physical activity while explicitly encouraging the consumption of greater quantities of energy-dense, low-nutrient foods.¹⁰ Two leading risk factors include:

- **Lack of Access to Healthy Foods:** California Food Policy Advocates documents the lack of access to healthy foods as a major contributing factor to obesity in California. “While poverty is the main cause of malnutrition in California, lack of access to nutritious, affordable food is also a critical element. The flight of supermarkets to the suburbs, inadequate public transportation, and a paucity of healthy foods at corner stores are all factors that contribute to lack of healthy food access in low-income neighborhoods.”¹¹
- **Lack of Access to Physical Activity:** The link between obesity and the lack of opportunities for physical activity is addressed in a recent report by the Institute of Medicine, *Preventing Childhood Obesity: Health in the Balance* (2005).¹² The report calls for the following improvements to municipalities in order to adequately address the obesity epidemic:

Local governments, private developers, and community groups should expand opportunities for physical activity, including recreational facilities, parks, playgrounds, sidewalks, bike paths, routes for walking or bicycling to school, and safe streets and neighborhoods, especially for populations at high risk of childhood obesity.¹³

The corollary to the lack of access to healthy foods is the all-too-easy access to *unhealthy* foods, which studies have shown can also lead to a decrease in physical activity.¹⁴

⁸ California Department of Health Services, “A Special Report on Policy Implications from the 1999 California Children’s Healthy Eating and Exercise Practices Survey,” 2002. See www.dhs.ca.gov/ps/cdic/cpns/research/images/final%20policy%20report%20PDF%20-%207%2025%2002.pdf.

⁹ For a more complete discussion of the factors contributing to obesity, see www.cdc.gov/nccdphp/dnpa/obesity/contributing_factors.htm.

¹⁰ Hayne, C.L., “Regulating Environments to Reduce Obesity,” *Journal of Public Health Policy*, vol. 25, no. 3/4, p. 48, 2004.

¹¹ Bolen E. and Hecht, K., “Neighborhood Groceries: New Access to Healthy Food in Low-Income Communities,” *California Food Policy Advocates*, 2003. See www.cfpa.net/Grocery.pdf.

¹² Institute of Medicine, *Preventing Childhood Obesity: Health in the Balance* (National Academies Press, 2005).

¹³ *Ibid*, p. 257.

¹⁴ French, S., Harnack, L., and Jeffery, R.W., “Fast-Food Restaurant Use Among Women in the Pound of Prevention Study: Dietary, Behavioral, and Demographic Correlates,” *International Journal of Obesity*, vol. 24, pp. 1353-59, 2000. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the*

While this problem is true in *all* communities regardless of income, it especially affects low-income communities, which have the fewest opportunities available in their neighborhoods to choose healthy foods. Research has implicated environmental influences such as the number and proximity of fast-food restaurants as a primary contributor to the obesity epidemic.¹⁵

A recent evidence-based review of the literature prepared by the Center for Weight and Health of the University of California at Berkeley identified at least two types or sources of food for which the evidence suggested a causal link to obesity in children or adults: sweetened beverages and restaurant-prepared foods.¹⁶

1. **Sweetened Beverages:** Sweetened beverages,¹⁷ which are widely consumed and have little nutritional value, are more popular today than ever before.¹⁸ On a per capita basis during 1994–96, Americans two years and older consumed 16% of their total energy intake from added sweeteners, by far the largest source of which was from sweetened beverages.¹⁹ Studies indicate that the consumption of sweetened beverages contributes to energy intake and is a likely contributing factor to the recent rise in adiposity (obesity) in the United States.^{20, 21} While

Development of Obesity. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

¹⁵ Block, J.P., et al., "Fast Food, Race/Ethnicity, and Income: A Geographic Analysis," *American Journal of Preventive Medicine*, vol. 27, pp. 211-217 (2004).

¹⁶ Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity.* University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>

¹⁷ The term *sweetened beverages* is used to describe those beverages to which sugar is added, such as regular (non-diet) soft drinks, fruit drinks, fruitades, and sports drinks. The term does not include fruit juices, which contain only water and fruit juice and no added sugar.

¹⁸ Jacobson, M.F., "Liquid Candy: How Soft Drinks Are Harming Americans' Health," Center for Science and the Public Interest, undated. See www.cspinet.org/sodapop/liquid_candy.htm; Borrud, L., Enns, C.W., and Mickle, S., "What We Eat in America: USDA Surveys Food Consumption Changes," *Food Review*, vol. 19, pp. 14-20, 1996; Gorrion, S., Putnam, J., and Bente, L., "Milk and Milk Products: Their Importance in the American Diet," *Food Review*, pp. 29-37, May-August 1998; Morton, J.F. and Guthrie, J.F., "Changes in Children's Total Fat Intakes and Their Food Group Sources of Fat, 1989–91 versus 1994–95: Implications for Diet Quality," *Family Economics and Nutrition Review*, vol.11, pp. 44-57, 1998; Cavadini, C., Siega-Riz, A.M., and Popkin, B.M., "U.S. Adolescent Food Intake Trends from 1965 to 1996," *Western Journal of Medicine*, vol. 173, pp. 378-83, 2000.

¹⁹ Guthrie, J.F., and Morton, J.F., "Food Source of Added Sweeteners in the Diets of Americans," *Journal of the American Dietetic Association*, vol. 100, pp. 43-48, 51, 2000; Krebs-Smith, S.M., "Choose Beverages and Foods to Moderate Your Intake of Sugars: Measurement Requires Quantification," *Journal of Nutrition*, vol. 131 (suppl), pp. 527S-35S, 2001. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity.* University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁰ Ludwig, D.S., Peterson, K.E., and Gortmaker, S.L., "Relation between consumption of sugar-sweetened drinks and childhood obesity," *Lancet*, vol. 357, pp. 505-08, 2001; Troiano, R.P., Briefel, R.R., Carroll, M.D., and Bialostosky, K., "Energy and Fat Intakes of Children and Adolescents in the United States: Data from the National Health and Nutrition Examination Surveys," *American Journal of Clinical Nutrition*, vol. 72 (suppl), pp. 1343S-53S, 2000; Public Health Institute, "A Special Report on Policy Implications from the 1999 California Children's Healthy Eating and Exercise Practices Survey (CalCHEEPS)," May 2004.

interventions to reduce sweetened beverage consumption are scant, the results of a recent one-year education program designed for school children in the U.K. are encouraging: overweight was significantly reduced as a result of decreased intake of soda.²²

The potential reasons for the weight gain associated with sweetened beverage consumption are varied, but the scientific literature points to the following biological and social mechanisms:

- Liquid sugar or energy consumed as liquid may be less well regulated than energy consumed in solid forms.²³ Approximately 64% of the calories from an energy challenge (i.e., an additional source of food energy) provided as a solid are offset by subsequent decreases in energy intake, while only 9% of the calories from liquid challenges are compensated for by subsequent decreases in energy intake.²⁴ Energy consumed as a food is more likely to translate to a proportional decreased appetite than energy consumed as a liquid. Essentially, given the same caloric intake, one will feel “full” sooner with a food than with a beverage.
- Beverages, because they typically are quickly consumed and absorbed by the gastrointestinal tract, may not stimulate satiety signals to the same extent as solids.²⁵

<http://csmf.ucop.edu/cpehp/downloads/calcheeps.pdf>. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

²¹ Wirfalt, A.K.E. and Jeffery, R.W., “Using Cluster Analysis to Examine Dietary Patterns: Nutrient Intakes, Gender, and Weight Status Differ Across Food Pattern Clusters,” *Journal of the American Dietetic Association*, vol. 97, pp. 272-79, 1997; Millen, B.E., Quatromoni, P.A., Copenhafer, D.L., Demissie, S., O’Horo, C.E., and D’Agostino, R.B., “Validation of a Dietary Pattern Approach for Evaluating Nutritional Risk: The Framingham Nutrition Studies,” *Journal of the American Dietetic Association*, vol. 101, pp. 187-94, 2001; Sichieri R., “Dietary Patterns and Their Associations with Obesity in the Brazilian City of Rio de Janeiro,” *Obesity Research*, vol. 10, pp. 42-48, 2002. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

²² James, J., Thomas, P., Cavan, D., and Kerr, D., “Preventing Childhood Obesity by Reducing Consumption of Carbonated Drinks: Cluster Randomised Controlled Trial,” *British Medical Journal*, vol. 328, pp. 1237-38, May 2004.

²³ Mattes, R.D., “Dietary Compensation by Humans for Supplemental Energy Provided as Ethanol or Carbohydrate in Fluids,” *Physiology & Behavior*, vol. 59, pp. 179-87, 1996. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁴ Mattes, R.D., “Dietary Compensation by Humans for Supplemental Energy Provided as Ethanol or Carbohydrate in Fluids,” *Physiology & Behavior*, vol. 59, pp. 179-87, 1996. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁵ Teff, K., “Cephalic Phase Insulin Release in Humans: Mechanism and Function,” In: Fernstrom, J.D., and Miller, G.D., eds. *Appetite and body weight regulation: Sugar, fat, and macronutrient substitutes* (1994, CFC

- Thirst and hunger mechanisms may not be fully integrated, particularly if beverages are calorically rich. Therefore humans may not compensate for the consumption of energy-dense beverages.²⁶
- Although the food pyramid classifies sweetened beverages as “desserts” or “extras,” consumers may not be treating them as special additions to daily food consumption.²⁷
- There is evidence that increased consumption of fructose, when compared with other carbohydrates, may result in reduced fat breakdown and increased fat synthesis.²⁸ Sweetened beverages account for about half of the daily intake of added fructose among adolescents.²⁹

2. **Restaurant-Prepared Foods:** There is a clear trend in the United States toward preparing and consuming more food away from home.³⁰ Between the 1970s and 1990s, the energy consumed from fast food by adults increased more than threefold, from approximately 60 kcal/day to over 200 kcal/day.³¹ During this same time period, the amount of their food dollar that households spent on foods

Press, Inc.). See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁶ Tournier, A. and Louis-Sylvestre, J., “Effect of the Physical State of a Food on Subsequent Intake in Human Subjects,” *Appetite*, vol. 16, pp. 17-24, 1991. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁷ O’Dea, J.A., “Children and Adolescents Identify Food Concerns, Forbidden Foods, and Food-Related Beliefs.” *Journal of the American Dietetic Association*, vol. 99, pp. 970-973, August 1999. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁸ Tittelbach, T.J., Mattes, R.D., and Gretebeck, R.J., “Post-exercise Substrate Utilization After a High Glucose vs. High Fructose Meal During Negative Energy Balance in the Obese,” *Obesity Research*, vol. 8, pp. 496-505, 2000; Van Gaal, L., Mertens, I., Vansant, G., and De Leeuw, I., “Carbohydrate-Induced Thermogenesis in Obese Women: Effect of Insulin and Catecholamines,” *Journal of Endocrinological Investigation*, vol. 22, pp. 109-114, 1999. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

²⁹ Park, Y.K. and Yetley, E.A., “Intakes and Food Sources of Fructose in the United States,” *American Journal of Clinical Nutrition*, vol. 58 (suppl), pp. 737S-47S, 1993. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁰ Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³¹ Cutler, D.M., Glaeser, E.L., and Shapiro, M.A., “Why Have Americans Become More Obese?” National Bureau of Economic Research, Working Paper Series, Working Paper 9446, Jan. 2003. See www.nber.org/papers/w9446. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

eaten away from home nearly doubled, the percentage of meals and snacks eaten away from home increased from 16% to 27%,³² and the percentage of total calories consumed as food prepared away from home increased from 18% to 32%.³³ Also during this period, the number of per capita fast-food restaurants doubled, and the number of full-service restaurants increased by 35%.³⁴

People who eat more food prepared away from home, particularly from fast-food restaurants, tend to have higher rates of obesity.³⁵ ³⁶ Primary reasons for the increased rates are that:

- The nutritional quality of food eaten away from home is generally poorer, higher in fat, and lower in fiber than meals eaten at home.³⁷
- High-fat, low-fiber diets have been implicated in obesity due to increased energy density, which leads to overconsumption.³⁸

³² Center for Science in the Public Interest, "Anyone's Guess: The Need for Nutrition Labeling at Fast-Food and Other Chain Restaurants," 2003. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³³ Center for Science in the Public Interest, "Anyone's Guess: The Need for Nutrition Labeling at Fast-Food and Other Chain Restaurants," 2003. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁴ Chou, S-Y., Grossman, M., and Saffer, H., "An Economic Analysis of Adult Obesity: Results from the Behavioral Risk Factor Surveillance System," National Bureau of Economic Research, Working Paper No. w9247, October 2002. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁵ Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁶ Block, J.P., et al., "Fast Food, Race/Ethnicity, and Income: A Geographic Analysis," *American Journal of Preventive Medicine*, vol. 27, pp. 211-217, 2004. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁷ McCrory, M.A., Fuss, P.J., Hays, N.P., Vinken, A.G., Greenberg, A.S., and Roberts, S.B., "Overeating in America: Association Between Restaurant Food Consumption and Body Fatness in Healthy Adult Men and Women Ages 19 to 80," *Obesity Research*, vol. 7, pp. 564-71, 1999; Zoumas-Morse, Rock, C.L., Sobo, E.J., and Neuhaus, M.L., "Children's Patterns of Macronutrient Intake and Associations with Restaurant and Home Eating," *Journal of the American Dietetic Association*, vol. 101, pp. 923-25, 2001; Dausch, J.G., Story, M., Dresser, C., Gilbert, G.G., Portnoy, B., and Kahle, L.L., "Correlates of High-Fat/Low-Nutrient-Dense Snack Consumption Among Adolescents: Results from Two National Health Surveys," *American Journal of Health Promotion*, vol. 10, pp. 85-88, 1995; Paeratakul, S., Ferdinand, D.P., Champagne, C.M., Ryan, D.H., and Bray, G.A., "Fast-Food Consumption Among U.S. Adults and Children: Dietary and Nutrient Intake Profile," *Journal of the American Dietetic Association*, vol. 103, pp. 1332-38, 2003; Bowman, S.A., Gortmaker, S.L., Ebbeling, C.B., Pereira, M.A., and Ludwig, D.S., "Effects of Fast-Food Consumption on Energy Intake and Diet Quality Among Children in a National Household Survey," *Pediatrics*, vol. 113, pp. 112-18, 2004. See Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley. <http://nature.berkeley.edu/cwh/activities/position.shtml>.

- Increased fast-food intake is associated with decreased physical activity.³⁹
- Consumers are encouraged to purchase “value meals” with larger portion sizes and additional calories, which commonly exceed standard serving sizes and increase the amount consumed.⁴⁰

CONCLUSION

The obesity epidemic is an issue confronting every municipality. Studies show that sweetened beverages and restaurant-prepared foods contribute to the problem due to a variety of nutritional problems associated with these food products.

³⁸ Bray, G.A. and Popkin, B.M., “Dietary Fat intake Does Affect Obesity!” *American Journal of Clinical Nutrition*, vol. 68, pp. 1157-73, 1998. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

³⁹ French, S.A., Harnack, L., and Jeffery, R.W., “Fast-Food Restaurant Use Among Women in the Pound of Prevention Study: Dietary, Behavioral, and Demographic Correlates,” *International Journal of Obesity*, vol. 24, pp. 1353-59, 2000. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

⁴⁰ Center for Science in the Public Interest, “Anyone’s Guess: The Need for Nutrition Labeling at Fast-Food and Other Chain Restaurants,” 2003. See www.cspinet.org/restaurantreport.pdf; Diliberti, N., Bordi, P.L., Conklin, M.T., Roe, L.S., and Rolls, B.J., “Increased Portion Size Leads to Increased Energy Intake in a Restaurant Meal,” *Obesity Research*, vol. 12, pp. 562-68, 2004. Center for Weight and Health (CWH) 2005. *Dietary Influences and Critical Periods in the Development of Obesity*. University of California: Berkeley.
<http://nature.berkeley.edu/cwh/activities/position.shtml>.

II. LOCAL GOVERNMENT CAN LEVY FEES TO COMBAT OBESITY

THE ROLE OF LOCAL GOVERNMENT

At first glance, municipalities may not see their role in obesity prevention or ensuring healthy eating by their residents; that role traditionally belongs to a local city or county health department or an overweight individual's personal physician. But municipalities have *unique and powerful contributions* to make toward obesity prevention in low-income communities.

State and local leaders are charged with providing for the general health and welfare of their citizens. Decisions are made daily at every level of government that impact opportunities for physical activity. Government leaders have the unique ability to convene key decision makers, enable information flow and collaboration, promote important community issues, and support effective programming to increase active living opportunities.⁴¹ Municipalities oversee both the economic expansion within a geographic area and the development or redevelopment of the municipal infrastructure in these neighborhoods. Therefore, they are ideally positioned to take action to improve community health and well-being.

REGULATORY FEES

The primary focus of this report is to provide the basic justification for municipalities levying regulatory fees to support obesity-related activities at the local level. A regulatory fee is like a business license fee that may be imposed on a business that has caused or can be anticipated to cause a particular type of harm. Such fees are a relatively common way for city, county, and state governments to raise revenue to cover the costs of specific regulatory programs. For example, cities and counties have imposed regulatory fees on:

- **Liquor stores** to prevent public nuisances and criminal activity associated with alcohol sales
- **Advertising signs and billboards** to protect community aesthetics, and to ensure safety and adequacy of signs and billboards
- **Rental housing** to fund rent control administration
- **Solid waste** to reduce refuse and to fund recycling programs

⁴¹ Active Living Leadership. See www.activelivingleadership.org.

The legal basis for local regulatory fees is derived from the “police power” set forth in the California constitution, which authorizes cities and counties to make and enforce within their limits all local, police, sanitary, and other ordinances and regulations not in conflict with state law. The police power is broadly defined to encompass regulations designed to promote the public health, safety, and general welfare.

The regulatory fee program that is perhaps most analogous to the one proposed in this study is the statewide fee imposed on distributors of gasoline and paint to fund the California Childhood Lead Poisoning Prevention Program. This program works to ameliorate the health problems associated with children’s exposure to lead that come from the *historic* use of lead in paints and gasoline. The regulatory fee is imposed on the distributors of these products even though lead was phased out of the products more than a decade ago; the fees pay for the mitigation of current problems associated with past emissions. As the California Supreme Court reasoned, “[T]he police power is broad enough to include mandatory remedial measures to mitigate the *past, present, or future* adverse impact of the fee payer’s operations.”⁴² The Supreme Court has also repeatedly affirmed that the local police power is, within the municipal sphere, as broad as that of the State Legislature.⁴³

DISTINGUISHING REGULATORY FEES FROM TAXES

On the surface, regulatory fees are similar to taxes in that they collect revenue for government operations. Under California law, however, regulatory fees are distinguishable from taxes in several critical ways. First, unlike general taxes, fees may not be used for the general revenue of a governmental entity. Instead, fees must be earmarked for programs specifically aimed to remediate identifiable problems caused by a business operation, and they may not be used for any purposes unrelated to the problem the fee is intended to mitigate. Second, the collected fees must be “reasonably commensurate” with the cost of operating the program designed to mitigate the problem being addressed.⁴⁴ In other words, the fees can cover all, but not more than, the programmatic and administrative costs associated with solving the specific problem. Third, the fees must be apportioned “so that charges allocated to a payor bear a fair or reasonable relationship to the payors’ burdens or benefits from the regulatory activity.”⁴⁵

In sum, a regulatory fee is generally allowable—and is not considered a tax—so long as:

- the fee collected is for a valid regulatory purpose under the general police power of the municipality or the State;

⁴² *Sinclair Paint v. State Board of Equalization*, 15 Cal. 4th 866 (1997) (emphasis in the original).

⁴³ *Associated Home Builders Inc. v. City of Walnut Creek*, 4 Cal.3d 633 (1971)

⁴⁴ *Mills v. County of Trinity*, 108 Cal.App.3d 656, 663 (1980).

⁴⁵ *San Diego Gas & Electric Co. v. San Diego County Air Pollution Control Dist.*, 203 Cal.App.3d 1132, 1146 (1988).

- the amount collected does not exceed (bears a “reasonable relationship to”) the cost of mitigating the identified harm (i.e., the fee is not levied for unrelated revenue purposes); and
- the business paying the fee pays roughly its fair share of the cost of mitigating the harm (note that a precise apportionment or cost-fee relationship is not required).

A final distinguishing characteristic between fees and taxes is that a fee ordinance can be enacted by a simple majority of a legislative body (i.e., city council, board of supervisors, state legislature), whereas many taxes require a two-thirds vote of the legislative body or voters. Therefore, although fees are limited in how they can be used, they are sometimes easier to pass than taxes, as fewer votes are needed for approval.

The paper proposes a regulatory fee on businesses that are shown in the scientific literature to contribute to the obesity epidemic: namely, restaurants and sellers of sweetened beverages. It posits that there is sufficiently strong science on the link between obesity and these types or sources of food, and therefore a rational basis for imposing a regulatory fee on businesses selling these products to fund obesity prevention activities at the municipal level.

CONCLUSION

Municipalities can make unique contributions to addressing and preventing obesity. Regulatory fees are available to raise revenue for local programs so long as there is a connection between the obesity problem and the municipal services for which the revenues are used.

III. MODEL FEE-BASED PROGRAMS

This section presents four model programs that engage existing municipal services to improve the health of low-income residents through obesity prevention activities. The model programs address recommendations from the U.S. Surgeon General to ensure that healthier food choices are promoted in communities, and that community facilities be made available and accessible for physical activity opportunities.⁴⁶

Each of the model programs especially target high-risk low-income communities; two programs target access to healthy foods, and two target improvements to physical activity opportunities.

- Providing farmers' markets in low-income communities
- Providing financial incentives and technical assistance services for neighborhood food retailers to improve the types of food made available
- Improving sidewalks and traffic calming strategies to allow for pedestrian walkways and bike paths
- Enhancing the usability and safety of public park and recreation facilities

The programs described are meant only as examples of what can be done at a municipal level; they are provided to spur creative thinking and action. In each program description, suggestions are made for which city or county departments could play a vital role in the success of the program. Resources are also provided for more information, and technical and financial assistance. Localities differ, and the model programs described below may not be the best fit in all cases; also, other priorities related to community health may predominate. So long as a proposed program can establish a clear and demonstrable link to mediating the problems associated with obesity, it arguably can be funded through a regulatory fee on sweetened beverages and restaurants as described above.

PROVIDING FARMERS' MARKETS IN LOW-INCOME NEIGHBORHOODS

According to the U.S. Department of Agriculture (USDA), direct marketing of farm products through farmers' markets continues to be an important outlet for fresh agricultural products. Farmers' markets continue to rise in popularity, mostly due to growing consumer interest in obtaining fresh products directly from the farm. The

⁴⁶ United States Department of Health and Human Services, "Overweight and Obesity: A Vision for the Future," 2005. See www.surgeongeneral.gov/topics/obesity/calltoaction/fact_vision.htm.

number of farmers' markets in the United States has grown dramatically, increasing 111% from 1994 to 2004. According to the 2004 National Farmers' Market Directory, there are more than 3,700 farmers markets operating in the United States.⁴⁷

Farmers' markets are particularly important in low-income communities that have no supermarkets and may rely on neighborhood corner liquor stores as a primary food vendor. In fact, farmers' markets provide a source of fresh fruits and vegetables for nearly three million low-income mothers, children, and senior citizens throughout the country, and are often the only source of healthy foods in many communities.⁴⁸

A farmers' market was recently introduced in the low-income, predominantly African-American community of West Oakland, California. Initiated via a grant from the USDA and the West Oakland Food Project, the weekly market links African-American farmers from California's Central Valley with urban communities that have little access to fresh fruits and vegetables. Besides providing organic foods to a community that would otherwise be classified as a "food desert," the West Oakland Food Project organizers have several other goals. They seek to work with the more than 35 liquor and convenience stores in the neighborhood to provide healthier food options on a regular basis, train local residents on how to build a community food cooperative so local funds can stay in the community, and improve residents' understanding of how food can be prepared and eaten so that healthier choices are made.⁴⁹

CITY OR COUNTY DEPARTMENTS WITH A POTENTIAL ROLE

- Community Services – working with neighborhood associations or nonprofit agencies to sponsor a weekly market day
- Planning and Community Development – developing financing and providing zoning and/or permits for the market
- Public Works – street closures, event setup and cleanup
- Public Safety – site safety and community relations
- Health Services Departments – while part of county government, health departments serve all cities within the county jurisdiction (exceptions are the cities of Berkeley, Long Beach and Pasadena, which have their own health departments)

⁴⁷ Agricultural Marketing Service at the United States Department of Agriculture, "Farmers' Market Facts," undated. See www.ams.usda.gov/farmersmarkets/facts.htm.

⁴⁸ Ibid.

⁴⁹ National Public Radio, "Program Brings Farmers' Markets to Low-Income Communities," Feb. 2005. See www.npr.org/templates/story/story.php?storyId=4473387.

RESOURCES TO ASSIST COMMUNITIES DEVELOP FARMERS' MARKETS

- **U.S. Department of Agriculture:** Agricultural Marketing Services' Marketing Services Branch (MSB) conducts research on emerging trends in farmers' market operations and practices, and prepares research reports, reference material, and fact sheets for distribution to farm vendors, farm market managers, and other interested members of the general public. Additionally, MSB staff analyze the feasibility of planned renovation or construction of projects at several types of food market facilities, including farmers' markets. They also develop conceptual designs of facilities, estimating costs and assessing expected levels of market patronage. Such research is typically carried out on a collaborative basis with the State government, local government, or nonprofit agency closely associated with the market being studied. For more information, see www.ams.usda.gov/farmersmarkets or call the Farmers' Market Hotline at (800) 384-8704.
- **California Department of Health Services Cancer Prevention & Nutrition Services:** Each of the 11 regional lead agencies coordinates a community coalition composed of representatives from schools, community youth organizations, farmers' markets, supermarkets, food services/restaurants, mass media, and other organizations concerned with the health of their community's children. For more information, see www.dhs.ca.gov/ps/cdic/CPNS.
- **California Federation of Certified Farmers' Markets:** This membership organization of individuals, agencies, and associations holding a valid California Certified Farmers' Market Certificate provides information on statewide vendors and government players, and hosts a directory of associations and organizations that help development of local markets. For more information, see www.cafarmersmarkets.com.
- **Urban Village:** The nonprofit Urban Village Farmers' Market Association was created to provide the best possible opportunity for farmers, food vendors, and community members to preserve, enhance, and enjoy regional fresh quality foods. The Urban Village Farmers' Markets have been instrumental in many cities' successful efforts to revitalize economically and socially depressed downtown areas. For more information, see www.urbanvillageonline.com or call (510) 745-7100.

FINANCIAL INCENTIVES AND TECHNICAL ASSISTANCE SERVICES FOR NEIGHBORHOOD FOOD RETAILERS TO IMPROVE FOOD SELECTIONS

California Food Policy Advocates (CFPA) concludes that residents of many low-income communities lack access to supermarkets within a reasonable walking distance, which limits their ability to purchase nutritious, affordable foods, especially fresh fruits and

vegetables.⁵⁰ The lack of accessible healthy foods results in “food deserts”: areas where supermarkets with healthy and affordable food are several miles away. A University of Connecticut study showed that low-income communities are 30% less likely than higher-income neighborhoods to have a supermarket. Other studies have shown that when a grocery store is present, low-income African-Americans increase fruit and vegetable consumption so as to meet dietary guidelines;⁵¹ with each additional grocery store, adherence to the guidelines is 32% more likely.⁵² Additionally, the lack of markets has a negative ripple effect throughout a neighborhood’s economy; it results in lower sales and property taxes, increased blight, lower revenues and profits for existing retailers, and fewer real estate possibilities for developers.⁵³

The proposed strategy is to combat the “food desert” phenomenon by providing market-based incentives to enhance the quality of foods sold at existing corner stores and independent grocers serving ethnic markets in low-income neighborhoods. Initial studies have shown that technical assistance, streamlined zoning and licensing arrangements, and offers of financial incentives such as grants, loans, and tax benefits successfully enhance healthy food choices in neighborhoods that traditionally have access only to fast food, packaged foods, and liquor.⁵⁴

City or County Departments with a Potential Role

- Community Services – outreach to neighborhood associations and nonprofits to identify needs, assets, and expectations
- Planning and Community Development – facilitate permitting and zoning processes
- Community and Economic Development – business financing and tax incentives
- Small Business Development – consultation and technical services
- Health Services Departments – while part of county government, health departments serve all cities within the county jurisdiction (exceptions are the cities of Berkeley, Long Beach, and Pasadena, which have their own health departments)

Resources for Communities on Business Incentives

- **U.S. Department of Commerce:** Comprehensive Economic Development Strategy (CEDS) programs provide grants to enhance economic development

⁵⁰ Bolen, E. and Hecht, K., “Neighborhood Groceries: New Access to Healthy Food in Low-Income Communities,” California Food Policy Advocates, January 2003. See www.cfpa.net/Grocery.PDF.

⁵¹ Morland, K., et al, “The Contextual Effect of the Local Food Environment on Residents’ Diets: The Atherosclerosis Risk in Communities Study,” *American Journal of Public Health*, vol. 92, no. 11, p. 176, 2002.

⁵² Ibid.

⁵³ Bolen, E. and Hecht, K., “Neighborhood Groceries: New Access to Healthy Food in Low-Income Communities,” California Food Policy Advocates, January 2003. See www.cfpa.net/Grocery.PDF.

⁵⁴ Ibid.

planning capability, support the formulation of development policies, and assist in building local institutional capacity. See www.eda.gov.

- **U.S. Small Business Administration (SBA) Certified Development Companies:**
The CDC/504 loan program is a long-term financing tool for economic development within a community. The 504 Program provides growing businesses with long-term, fixed-rate financing for major fixed assets, such as land and buildings. A Certified Development Company is a nonprofit corporation set up to contribute to the economic development of its community. CDCs work with the SBA and private-sector lenders to provide financing to small businesses. There are about 270 CDCs nationwide, each of which covers a specific geographic area. For more information and other sources of funding, visit www.sba.gov/financing/sbaloan/cdc504.html.
- **The Center for Food and Justice (CFJ)** is a division of the Urban & Environmental Policy Institute (UEPI) at Occidental College. With its vision of a sustainable and socially just food system, CFJ engages in collaborative action strategies, community capacity building, and research and education. For more information, see <http://departments.oxy.edu/uepi/cfj> or call (323) 341-5099.
- **California Community Economic Development Association (CCEDA):**
CCEDA's membership is composed of organizations actively engaged in revitalizing California's neighborhoods, including local governments and resident-driven community development corporations, community action agencies, and faith-based institutions. CCEDA provides its members with a clearinghouse for information and action that advance the field and elevate the discussion through training and continuing education, technical assistance, advocacy and public policy. For more information, visit www.cceda.com.
- **Local Initiatives Support Corporation (LISC)** provides grants, loans, and equity investments to community development corporations (CDCs) for neighborhood redevelopment. When LISC begins a new program, National LISC matches locally raised funds and gives that much more to the community for renovation. The CDC then designates the funds to a variety of projects that will best suit the neighborhood, and the renovation begins. For more information, visit
LISC Los Angeles: www.lisc.org/los_angeles/index.shtml;
LISC San Diego: www.lisc.org/san_diego/;
LISC San Francisco/Bay Area: www.bayarealisc.org/.
- **The Center for Civic Partnerships** provides intensive technical assistance and consultation services (including one-on-one consultation, site visits, and group facilitation) to more than 100 cities and communities, both within and outside of California. Those communities include rural, suburban, and urban areas, and are ethnically and economically diverse. The Center provides a variety of services to help groups develop, implement, and sustain community improvements. For more information, visit www.civicpartnerships.org.

- **The National Community Capital Association** is a network of more than 160 private-sector community development financial institutions (CDFIs) that provides financing, training, consulting, and advocacy for CDFIs. Active in all 50 states, the National Community Capital network invests in small businesses, quality affordable housing, and vital community services that benefit economically disadvantaged people and communities. National Community Capital is committed to leading the community development finance system to scale through capital formation, policy, and capacity development. For more information, visit www.communitycapital.org.
- **The USDA Community Food Projects (CFP) Competitive Grants Program** provides the major funding source for community-based food and agriculture projects nationwide. Approximately \$4.6 million in funds were granted in 2004, and a similar amount will likely be available in 2005. The application is available at http://www.csrees.usda.gov/funding/rfas/04_community_foods.html, and tips for applicants are available at <http://www.foodsecurity.org/funding.html>.

IMPROVING SIDEWALKS AND TRAFFIC CALMING STRATEGIES TO ALLOW FOR PEDESTRIAN WALKWAYS AND BIKE PATHS

The lack of physical activity is a main contributing factor to obesity. Not only does physical activity prevent obesity, but it also reduces the risk of developing or dying from some of the leading causes of illness in the United States.⁵⁵ Regular physical activity reduces the risks associated with colon cancer, heart disease, diabetes, high blood pressure, depression, and anxiety; it also helps build healthy bones, muscles, and joints; and maintains independence in older adults.⁵⁶

Creating safer places to walk and bicycle could have a profound impact on health in the United States. Furthermore, the CDC estimates that if all physically inactive Americans became active, we would save \$77 billion in annual medical costs.

Americans increasingly desire more walking, biking, and open spaces.⁵⁷ In response, general plans, zoning ordinances, and local permit processes are beginning to reflect an acknowledgment of the importance of promoting physical activity in community design.

⁵⁵ U.S. Department of Health and Human Services, "The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity," Rockville, MD.: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001.

⁵⁶ U.S. Department of Health and Human Services, "Physical Activity and Health: A Report of the Surgeon General," Rockville, MD.: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 1996.

⁵⁷ Beldon, Russonello, and Stewart, "2004 American Community Survey: National Survey on Communities" (conducted for Smart Growth America and the National Association of Realtors), 2004. See www.smartgrowthamerica.com/NAR-SGAsurvey.pdf.

For example, the City of Oakland has developed a Pedestrian Master Plan envisioning a city that encourages and rewards the choice to walk.⁵⁸

A recent survey fielded by the International City and County Management Association and the National Association of Counties found that local elected and appointed leaders across the country are committed to enhancing opportunities for active living in communities. Local officials identified remarkably similar challenges and needs in enabling healthy, livable places.⁵⁹

Active Living Leadership, a relatively new initiative by the Robert Wood Johnson Foundation, promotes the following strategies to enhance physical activity in local communities. (For links to examples of ways for nearly all the following strategies to support recreation facilities, parks, and trails, see www.activelivingleadership.org/strategy6.htm.)

- Develop a bikeway master plan to identify ways to expand trails and connections.
- Create corridors of open space that can be used as recreational greenways. Tactics include land acquisition, easements, and partnerships with conservation groups.
- Build trails through neighborhoods to connect homes with schools so children can ride bikes or walk to school without having to cross major roadways.
- Construct new facilities along trails or public transit routes to make them more accessible.
- Ensure that all community members have access to walking trails, community centers, and fitness centers.
- Maintain and create new neighborhood parks and pocket parks so that all residents have a park within 1 mile of their home.
- Encourage and support physical activity programs for senior citizens and youth.
- Support walking and hiking clubs.
- Promote special events that support active living.

City or County Departments with a Potential Role

- Community Services – outreach to neighborhood associations and nonprofits to identify needs, assets, and expectations
- Planning and Community Development – facilitate permitting and zoning processes

⁵⁸ The City of Oakland, “Pedestrian Master Plan” (part of the Land Use and Transportation Element of the City of Oakland’s General Plan), 2002. See www.oaklandnet.com/government/Pedestrian/Intro_Ch%201.pdf.

⁵⁹ Active Living Leadership. See www.activelivingleadership.org.

- Health Services Departments – while part of county government, health departments serve all cities within the county jurisdiction (exceptions are the cities of Berkeley, Long Beach, and Pasadena, which have their own health departments)

Resources for Pedestrian Walkways and Bike Paths

- **Centers for Disease Control and Prevention:** *Promoting Physical Activity: A Guide for Community Action* shows how to facilitate behavior change from both an individual and a community perspective. Using a social marketing and behavioral science approach to intervention planning, the text provides a step-by-step guide to address a target population's understanding and skills, social networks, physical environments, and policies that most influence positive outcomes. For more information, see www.cdc.gov/nccdphp/dnpa/pahand.htm.
- **Smart Growth America** is a coalition of nearly 100 advocacy organizations that have a stake in how metropolitan expansion affects our environment, quality of life, and economic sustainability. Coalition partners include national, state, and local groups working on behalf of the environment, historic preservation, social equity, land conservation, neighborhood redevelopment, farmland protection, labor, and town planning. For more information, see www.smartgrowthamerica.org.
- **The Surface Transportation Policy Project** is a diverse, nationwide coalition working to ensure safer communities and smarter transportation choices that enhance the economy, improve public health, promote social equity, and protect the environment. For more information, see www.transact.org.
- **The American Planning Association (APA)** is a nonprofit public interest and research organization committed to urban, suburban, regional, and rural planning. APA and its professional institute, the American Institute of Certified Planners, advance the art and science of planning to meet the needs of people and society. A recent publication, *Mean Streets 2004*, is available at www.planning.org/features/2004/meanstreets.htm.
- **California Department of Health Services – Epidemiology and Prevention for Injury Control (EPIC) Branch:** The EPIC Branch is the focal point for the Department of Health Services' (DHS) injury prevention efforts, both epidemiological investigations and implementation of prevention programs to reduce intentional and unintentional injuries. See www.dhs.ca.gov/ps/cdic/epic.
- **Active Living Leadership** is a national initiative supported by the Robert Wood Johnson Foundation, developed to support government leaders as they create and promote policies, programs, and places that enable active living to improve community health, well-being, and vitality. See www.activelivingleadership.org/strategy6.htm.

- **Healthy Transportation Network** partners have conducted and analyzed formative research with local elected officials statewide. They are focusing project efforts on communities that are: (1) revising a general plan, specific area plan, or master pedestrian or bicycling plan; (2) redeveloping a downtown or neighborhood; (3) planning a new development that significantly impacts the community; (4) developing a major transit project; (5) improving local street, sidewalk, and trail standards or guidelines; or (6) developing new funding streams for walking and bicycling. For more information, see www.healthytransportation.net.
- **Rails-to-Trails Conservancy (RTC)** promotes a nationwide network of trails from former rail lines and connecting corridors to create healthy places for healthy people. See www.railtrails.org.
- **Pedestrian and Bicycle Information Center** provides a checklist to measure the walkability of your community. See www.walkinginfo.org/pdf/walkingchecklist.pdf.

ENHANCING THE USABILITY AND SAFETY OF PUBLIC PARK AND RECREATION FACILITIES

According to the National Recreation and Park Association, four out of five Americans use their local parks or recreation system,⁶⁰ and low-income communities are more dependent on public parks for physical activity than are high-income urban dwellers or suburban and rural residents.⁶¹ No longer seen as simply grass and trees, parks provide a multitude of benefits to their users and often include recreational facilities with extensive programming. Parks provide formal and informal gathering places for building community, help to positively influence property values, and give city dwellers a place to connect to the natural world.⁶² Good park and recreation facilities don't just happen—they need support from neighborhoods, cities, states, and the federal government. They require professional care and financial support to keep them clean, safe, and suitable for communities.

Where parks already exist, their maintenance is critical. A well-maintained park or open space sends a message that someone cares about it, which in turn helps create a perception of safety. The greater the perception of safety, the more likely the park will be used. In addition, maintenance programs that include user participation help establish a sense of community ownership and promote stewardship of the space.

⁶⁰ National Recreation and Park Association, "Programs and Partnerships," undated. See www.nrpa.org/content/default.aspx?documentId=28

⁶¹Boyle, Maria, MS, RD, and Samuels & Associates, "Environmental Barriers and Solutions to Gaining Access to the Essentials of Nutritional Health in Low-Income Communities," November 2004 (available upon request).

⁶² City Parks Forum, www.planning.org/cpf.

Concern that parks can be settings for crime and illegal activity inhibits some community leaders from proposing new parks or supporting existing ones. However, when properly planned, parks and greenways adjacent to residential areas may help to shield against crime.⁶³

Recreation programs are also important to engaging people of all ages and interests in a community. Some recreation programs have begun to address more targeted groups, such as the elderly and youth at risk.⁶⁴ Recreation programs provide opportunities for all ages to positively socialize with peers, relieve stress, and achieve greater physical activity.

City or County Departments with a Potential Role

- Park and Recreation Departments – planning, maintaining and staffing municipal parks and recreation programs
- Community Services – engaging neighborhood associations to develop ideas and suggestions about improving local parks and recreational facilities
- Public Works – providing maintenance on existing parks
- Public Safety – site safety and community relations
- Public Relations – community outreach and publicity for park/recreational events

Resources for Public Park and Recreation Facilities

National Recreation and Park Association has advocated the importance of thriving local park systems, the opportunity for all Americans to lead healthy, active lifestyles, and the preservation of great community places. See www.nrpa.org.

- **California Integrated Waste Management Board (CIWMB)** is conducting a grants program to help local agencies upgrade their playgrounds. Potential applicants should fax their name and address to the Board at (916) 255-3871 to be added to the playground grants mailing list. For more information, the Board also has a grants hotline: call (916) 255-2577 or visit www.ciwmb.ca.gov/Playgrounds.

⁶³ University of Illinois at Urbana-Champaign: "How Cities Use Parks to Create Safer Neighborhoods," Human-Environment Research Laboratory, 2003. See www.planning.org/cpf/pdf/createsaferneighborhoods.pdf.

⁶⁴ Julie, K.S., Sprouse, M.S., Wolf Klitzing, Sandra, Ph.D., and Mary Parr, ed., "Research Update: January 2005," *P&R Magazine*, January 2005. See www.nrpa.org/content/default.aspx?documentId=1823; RAND California, "California Policy Bulletins," vol. 2, issue 17, Sept. 1999. See <http://ca.rand.org/statebulls/bulletins/xstatebull217.html>.

- **California State Parks, Office of Grants and Local Services** publicizes public and private grants for local parks and recreational programs. Visit www.parks.ca.gov/default.asp?page_id=1008 or call (916) 653-7423 for recent updates.
- **American Planning Association, City Parks Forum:** The City Parks Forum creates opportunities for mayors to address park issues in ways that improve the quality of life and prosperity of city residents and businesses. For more information, visit www.planning.org/cpf.
- **The Center for Physical Activity** works through strategic alliances with physical activity experts, local health departments, community-based organizations, and like-minded public- and private-sector partners. The Center's work to establish community-based physical activity programs for older adults serves as a model across the nation and has received state, national and international honors. For more information, see www.caphysicalactivity.com.

CONCLUSION

The four programs highlighted in this chapter are only examples of what municipalities can do to address obesity. Cities and counties can strengthen their existing infrastructures or develop new programs to address the obesity problem in a manner they determine best meets the needs of their community.

IV. CALCULATING A REGULATORY FEE

This chapter presents a model spreadsheet calculation of a regulatory fee for a hypothetical mid-sized city with a population of approximately 100,000 and the number of food retailers typically supported by such a population. The purpose of this calculation is to demonstrate how a given funding requirement can be rationally allocated to businesses that contribute to the public health problem of obesity.

In creating this model, various assumptions regarding fee levels and allocation were made; these assumptions can be reassessed based upon specific local conditions and policy concerns. The model shows the relationship between a fee levy and the revenue potential of such a fee. Individual cities or counties considering such a fee will need to fit the model to the particular circumstances in their city/county and make other adjustments consistent with their overall policy objectives.

The regulatory fee is based upon the logic that certain classes of businesses, including restaurants and food retailers (the term used for vendors of sweetened beverages, including sodas, sports drinks, and juices with added sugars), sell products that cause obesity as discussed in Chapter 1. The regulatory fee, in a manner similar to business license fees typically charged by cities/counties, would fund specific programs and activities in the city/county designed to combat obesity. Chapter 3 provides several examples of programs related to access to healthy foods and physical activity opportunities in low-income communities that a city/county could implement with collected fees.

For purposes of this model city, \$622,800 in annual fee revenue would be available to fund an obesity mitigation program.

FEE ON RESTAURANTS

Table 1 summarizes the overall allocation of a model city's obesity program revenue collected from all restaurants in the city. Economic & Planning Systems, Inc. (EPS) allocated the fee charged based on restaurant size. Four categories of restaurants were created:

1. Small Restaurants: Restaurants grossing \$999,999 or less in sales
2. Medium Restaurants: Restaurants grossing \$1 million to \$1.9 million in sales
3. Large Restaurants: Restaurants grossing \$2 million to \$2.9 million in sales
4. Extra Large Restaurants: Restaurants grossing over \$3 million in sales

EPS then created four corresponding fee levels to be charged to the restaurants within each category. Each jurisdiction will be able to decide on an appropriate fee level for its jurisdiction; the fees used herein are for illustrative purposes only. EPS has proposed charging a fee of \$550, \$2,000, \$4,000, and \$8,000 respectively to small, medium, large,

Table 1
Overall Allocation of Obesity Program Costs for Restaurants in Example City
Obesity Regulatory Fee Study, EPS #14124

Item	Number of Restaurants	Fee Amount	Total Fee Collected	Average Fee as Percent of Gross Receipts
Fee Charged to Small Restaurants Grossing \$999,999 or Less in Sales	16	\$550	\$8,800	0.10%
Fee Charged to Medium Restaurants Grossing \$1 Million to \$1.9 Million in Sales	12	\$2,000	\$24,000	0.12%
Fee Charged to Large Restaurants Grossing \$2 Million to \$2.9 Million in Sales	5	\$4,000	\$20,000	0.15%
Fee Charged to Extra Large Restaurants Grossing Over \$3 Million in Sales	9	\$8,000	\$72,000	0.17%
Total Fee Collected from Restaurants for Example City	42		\$124,800	

Source: Economic & Planning Systems, Inc.

and extra large restaurants. **Tables 2** through **5** illustrate how the fee program would work for restaurants. For modeling purposes, EPS listed fictitious restaurants and their gross receipts for each fee category. The fee for all three categories of restaurants ranges from 0.10% to 0.17% of gross receipts.

The total fee collected from restaurants for this model city is \$124,800. Obviously, the total fee collected will vary greatly depending on a number of variables, including the number of restaurants in the city/county and in each fee category, the gross receipts of each restaurant, and the fee chosen by the city.

FEE ON FOOD RETAILERS

A similar process was performed for food retailers in the model city. *Food retailers* is the term used to describe the vendors, excluding restaurants, that sell sweetened beverages. **Table 6** summarizes the overall allocation of a model city's obesity program revenue collected from all food retailers in the city. EPS allocated the fee charged based on the store type and size. Four main store types are assumed, based on "Overview: Soft Drinks in the United States," a Euromonitor March 2004 study. **Table 7** shows the breakdown of the retail categories outlined in the Euromonitor report into four categories of food retailers: supermarkets, convenience stores, vending machines, and other retail channels. This allocation shows that supermarkets/hypermarkets sell 60% of the nation's soft drinks, and vending machine operators sell the lowest percent (approximately 8%). Due to the disparity between big box retailers' and drugstores' gross sales, EPS removed drugstores from the Other Retail Channels category and renamed it Big Box Retailers, and expanded the Supermarkets category to Supermarkets and Drugstores.

Using the food retailer categories presented in the Euromonitor report as a guide, seven categories of food retailers were created, including subcategories for supermarkets and drugstores, based on gross sales. They are as follows:

- 1) Supermarkets and Drugstores
 - a. Small Supermarkets and Drugstores: Supermarkets and drug stores grossing \$999,999 or less
 - b. Medium Supermarkets and Drugstores: Supermarkets and drug stores grossing \$1 million to \$4.9 million
 - c. Large Supermarkets and Drugstores: Supermarkets and Drug Stores grossing \$5 million to \$9.9 million
 - d. Extra Large Supermarkets and Drugstores: Supermarkets and Drug Stores grossing \$10 million and above
- 2) Convenience Stores
- 3) Vending Machines
- 4) Big Box Retailers (includes warehouse clubs and mass merchandisers)

Table 2
Regulatory Fee Allocation for Small Restaurants
Obesity Regulatory Fee Study, EPS #14124

Restaurant Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Restaurant A	\$975,000	\$550	0.06%
Restaurant B	\$900,000	\$550	0.06%
Restaurant C	\$850,000	\$550	0.06%
Restaurant D	\$800,000	\$550	0.07%
Restaurant E	\$750,000	\$550	0.07%
Restaurant F	\$650,000	\$550	0.08%
Restaurant G	\$600,000	\$550	0.09%
Restaurant H	\$550,000	\$550	0.10%
Restaurant I	\$500,000	\$550	0.11%
Restaurant J	\$475,000	\$550	0.12%
Restaurant K	\$425,000	\$550	0.13%
Restaurant L	\$400,000	\$550	0.14%
Restaurant M	\$325,000	\$550	0.17%
Restaurant N	\$275,000	\$550	0.20%
Restaurant O	\$225,000	\$550	0.24%
Restaurant P	\$200,000	\$550	0.28%
TOTAL	\$8,900,000	\$8,800	0.10%

Source: Economic & Planning Systems, Inc.

Table 3
Regulatory Fee Allocation for Medium Restaurants
Obesity Regulatory Fee Study, EPS #14124

Restaurant Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Restaurant U	\$1,975,000	\$2,000	0.10%
Restaurant V	\$1,900,000	\$2,000	0.11%
Restaurant W	\$1,800,000	\$2,000	0.11%
Restaurant X	\$1,750,000	\$2,000	0.11%
Restaurant Y	\$1,700,000	\$2,000	0.12%
Restaurant Z	\$1,650,000	\$2,000	0.12%
Restaurant AA	\$1,600,000	\$2,000	0.13%
Restaurant BB	\$1,575,000	\$2,000	0.13%
Restaurant CC	\$1,550,000	\$2,000	0.13%
Restaurant DD	\$1,500,000	\$2,000	0.13%
Restaurant EE	\$1,250,000	\$2,000	0.16%
Restaurant FF	\$1,000,000	\$2,000	0.20%
TOTAL	\$19,250,000	\$24,000	0.12%

Source: Economic & Planning Systems, Inc.

Table 4
Regulatory Fee Allocation for Large Restaurants
Obesity Regulatory Fee Study, EPS #14124

Restaurant Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Restaurant PP	\$2,975,000	\$4,000	0.13%
Restaurant Q	\$2,900,000	\$4,000	0.14%
Restaurant R	\$2,750,000	\$4,000	0.15%
Restaurant S	\$2,500,000	\$4,000	0.16%
Restaurant T	\$2,000,000	\$4,000	0.20%
TOTAL	\$13,125,000	\$20,000	0.15%

Source: Economic & Planning Systems, Inc.

Table 5
Regulatory Fee Allocation for Extra Large Restaurants
Obesity Regulatory Fee Study, EPS #14124

Restaurant Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Restaurant GG	\$6,500,000	\$8,000	0.12%
Restaurant HH	\$6,000,000	\$8,000	0.13%
Restaurant II	\$5,250,000	\$8,000	0.15%
Restaurant JJ	\$5,000,000	\$8,000	0.16%
Restaurant KK	\$4,500,000	\$8,000	0.18%
Restaurant LL	\$4,250,000	\$8,000	0.19%
Restaurant MM	\$4,000,000	\$8,000	0.20%
Restaurant NN	\$3,750,000	\$8,000	0.21%
Restaurant OO	\$3,500,000	\$8,000	0.23%
TOTAL	\$42,750,000	\$72,000	0.17%

Source: Economic & Planning Systems, Inc.

Table 6
Overall Allocation of Obesity Program Costs for Food Retailers in Example City
Obesity Regulatory Fee Study, EPS #14124

Item	Number of Stores	Fee Amount	Total Fee Collected	Average Fee as Percent of Gross Receipts
Fee Charged to Small Supermarkets and Drugstores Grossing \$999,999 or Less	2	\$2,500	\$5,000	0.27%
Fee Charged to Medium Supermarkets and Drugstores Grossing \$1 Million to \$4.9 Million	4	\$7,500	\$30,000	0.28%
Fee Charged to Large Supermarkets and Drugstores Grossing \$5 Million to \$9.9 Million	4	\$15,000	\$60,000	0.21%
Fee Charged to Extra Large Supermarkets and Drugstores Grossing \$10 Million and Above	3	\$25,000	\$75,000	0.23%
Fee Charged to Convenience Stores	8	\$2,500	\$20,000	0.18%
Fee Charged to Vending Machines	8	\$1,000	\$8,000	0.10%
Fee Charged to Big Box Retailers	4	\$75,000	\$300,000	0.21%
Total Fee Collected from Food Retailers	33		\$498,000	

Source: Economic & Planning Systems, Inc.

Table 7
U.S. "Sugar Water" Sales by Type of Retailer
Obesity Regulatory Fee Study, EPS #14124

	Percent of Total Soft Drink Sales by Retailer Type (2)	Gross U.S. Soft Drink Sales	"Sugar Water" as Percent of Total U.S. Soft Drink Sales (3)	Net Sales of U.S. Food Retailer "Sugar Water"	Total U.S. Food Sales by Retail Category	Percent of Retailer Food Sales Attributable to "Sugar Water"
Total Soft Drink Sales		\$73,612,200,000				
Total Food Retailer Sales (1)		\$56,092,496,400				
Food Retailers						
Supermarkets/hypermarkets	60.2%	\$33,767,682,833	77.1%	\$26,034,883,464	\$450,000,000,000	5.8%
Convenience Stores (4)	15.5%	\$8,694,336,942	77.1%	\$6,703,333,782	\$112,700,000,000	5.9%
Vending Machines	7.6%	\$4,263,029,726	77.1%	\$3,286,795,919	\$22,600,000,000	14.5%
Other Retail Channels (5)	16.7%	\$9,367,446,899	77.1%	\$7,222,301,559	\$29,500,000,000	24.5%
TOTAL	100.0%	\$56,092,496,400	77.1%	\$43,247,314,724	\$614,800,000,000	7.0%

(1) Excludes sales of soft drinks in restaurants.

(2) Percentage data only available for carbonates, and is assumed to apply for other sugar water drinks such as iced tea and fruit punch.

(3) Percentage reflects exclusion of diet drinks, water, all-natural juice, and milk products.

(4) Includes service stations.

(5) Includes warehouse clubs, drugstores, and mass merchandisers such as Wal-Mart and Target.

Sources: Euromonitor, March 2004, "Overview- Soft Drinks in the United States"; Food Marketing Institute, 2004; Euromonitor, July 2003, "Vending in United States"; EPS.

EPS then created seven corresponding fee levels to be charged to all food retailers within each category. However, as with restaurants, each jurisdiction will be able to decide on an appropriate fee level for its jurisdiction. EPS has proposed charging a fee of \$2,500, \$7,500, \$15,000, and \$25,000 respectively to small, medium, large, and extra large supermarkets and drugstores. EPS has also proposed charging a fee of \$2,500 to convenience stores, \$1,000 to vending machine operators, and \$75,000 to big box retailers.

Tables 8 through 14 illustrate how the fee program would work for food retailers. For modeling purposes, EPS listed fictitious food retailers and their gross receipts for each fee category. The total fee collected for each food retailer is calculated the same way it is for restaurants, by multiplying each food retailer's gross receipts by the annual fee charged to the food retailer's fee category. The fee as a percent of gross receipts ranges from an average of 0.28 for medium supermarkets and drugstores, to 0.10 for vending machine operators. The fee for each class of food retailer is not proportional to its sales, as this would constitute a tax. However, the range in the fee's percentage of retailer's gross receipts is based on soft drink industry research presented in **Table 7**.

Tables 8 through 14 illustrate how EPS used the percent of total sweetened beverage sales by retailer type as a framework for setting the regulatory fee for food retailers. In accordance with their large share of total soft drink sales, supermarkets and drugstores bear the biggest burden of the fee. Convenience stores and big box retailers bear roughly the same burden of the fee (approximately 0.20%), as they both compose approximately 16% of total soft drink sales. Vending machine operators bear the smallest burden of the fee, as they have the smallest share of total soft drink sales.

The total fee collected from food retailers for this model city is \$498,000. As with the fee imposed on restaurants, the total fee collected will vary greatly depending on a number of variables, including the number of food retailers in the city/county and in each fee category, the gross receipts of each food retailer, and the fee chosen by the city/county.

IMPLEMENTATION CONSIDERATIONS

The numbers used in this study are purely hypothetical and used for illustrative purposes only. The number of restaurants and food retailers in this study reflects a jurisdiction of roughly 100,000 people with fee revenue per capita of \$6.23.

Moving forward, individual jurisdictions can design their obesity mitigation programs however they see fit; for example, they may choose to have 100% of fee revenue used to fund an existing low-income obesity prevention program, or the city may use the funds to hire staff and create a new program. Furthermore, jurisdictions may choose to allocate a greater percentage of total fee revenue collected from restaurants instead of food retailers, or vice versa; or they may choose to further specify the percentage of the total fee for which categories of food retailers and restaurants are responsible.

These allocation decisions may be based on the percent of total soft drink sales of U.S. retailers and restaurants, or on scientific evidence of restaurants' and the contribution of sweetened beverages to obesity, or it may simply be a policy decision. Due to the variability in fee revenue from year to year, no matter how the fee allocation is configured, it is recommended that jurisdictions allocate additional resources, such as grant revenue, to fund an obesity prevention program for low-income communities.

CONCLUSION

This chapter shows how regulatory fees can be used to require businesses that are shown to result in negative community impacts to pay their fair share of the costs associated with mitigating the adverse health impacts of unhealthy foods. The fee allocation model detailed in this chapter can assist jurisdictions in imposing a regulatory fee on businesses whose products contribute to obesity in order to fund a program to mitigate the adverse health effects of such foods.

Table 8
Regulatory Fee Allocation for Small Supermarkets and Drugstores
Obesity Regulatory Fee Study, EPS #14124

Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Supermarket A	\$975,000	\$2,500	0.26%
Supermarket B	\$900,000	\$2,500	0.28%
TOTAL	\$1,875,000	\$5,000	0.27%

Source: *Economic & Planning Systems, Inc.*

Table 9
Regulatory Fee Allocation for Medium Supermarkets and Drugstores
Obesity Regulatory Fee Study, EPS #14124

Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Supermarket C	\$1,000,000	\$7,500	0.75%
Supermarket D	\$2,500,000	\$7,500	0.30%
Drug Store A	\$3,500,000	\$7,500	0.21%
Supermarket E	\$3,750,000	\$7,500	0.20%
TOTAL	\$10,750,000	\$30,000	0.28%

Source: *Economic & Planning Systems, Inc.*

Table 10
Regulatory Fee Allocation for Large Supermarkets and Drugstores
Obesity Regulatory Fee Study, EPS #14124

Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Supermarket F	\$5,000,000	\$15,000	0.30%
Supermarket G	\$6,000,000	\$15,000	0.25%
Drug Store B	\$8,000,000	\$15,000	0.17%
Drug Store C	\$9,000,000	\$15,000	0.19%
TOTAL	\$28,000,000	\$60,000	0.21%

Source: Economic & Planning Systems, Inc.

Table 11
Regulatory Fee Allocation for Extra Large Supermarkets and Drug
Obesity Regulatory Fee Study, EPS #14124

Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Supermarket H	\$10,000,000	\$25,000	0.25%
Supermarket I	\$12,000,000	\$25,000	0.21%
Drug Store D	\$10,000,000	\$25,000	0.25%
TOTAL	\$32,000,000	\$75,000	0.23%

Source: Economic & Planning Systems, Inc.

Table 12
Regulatory Fee Allocation for Convenience Stores
Obesity Regulatory Fee Study, EPS #14124

Convenience Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Convenience Store A	\$1,000,000.00	\$2,500	0.25%
Convenience Store B	\$1,200,000.00	\$2,500	0.21%
Convenience Store C	\$1,300,000.00	\$2,500	0.19%
Convenience Store D	\$1,350,000.00	\$2,500	0.19%
Convenience Store E	\$1,400,000.00	\$2,500	0.18%
Convenience Store F	\$1,500,000.00	\$2,500	0.17%
Convenience Store G	\$1,600,000.00	\$2,500	0.16%
Convenience Store H	\$1,700,000.00	\$2,500	0.15%
TOTAL	\$11,050,000	\$20,000	0.18%

Source: Economic & Planning Systems, Inc.

Table 13
Regulatory Fee Allocation for Vending Machine Operators
Obesity Regulatory Fee Study, EPS #14124

Vending Machine Operator Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Vending Machine Operator A	\$900,000	\$1,000	0.11%
Vending Machine Operator B	\$950,000	\$1,000	0.11%
Vending Machine Operator C	\$975,000	\$1,000	0.10%
Vending Machine Operator D	\$1,000,000	\$1,000	0.10%
Vending Machine Operator E	\$1,050,000	\$1,000	0.10%
Vending Machine Operator F	\$1,100,000	\$1,000	0.09%
Vending Machine Operator G	\$1,200,000	\$1,000	0.08%
Vending Machine Operator H	\$1,225,000	\$1,000	0.08%
TOTAL	\$8,400,000	\$8,000	0.10%

Source: Economic & Planning Systems, Inc.

Table 14
Regulatory Fee Allocation for Big Box Retailers
Obesity Regulatory Fee Study, EPS #14124

Store Name	Gross Receipts	Annual Fee	Fee as Percent of Gross Receipts
<i>Source Formula</i>	<i>EPS Estimate (a)</i>	<i>EPS Estimate (b)</i>	<i>(c = b / a)</i>
Mass Merchandiser A	\$50,000,000.00	\$75,000	0.15%
Warehouse Club Store A	\$41,000,000.00	\$75,000	0.18%
Mass Merchandiser B	\$30,000,000.00	\$75,000	0.25%
Discount Department Store A	\$20,000,000.00	\$75,000	0.38%
TOTAL	\$141,000,000	\$300,000	0.21%

Source: Economic & Planning Systems, Inc.