



Richmond General Plan Update

Issues & Opportunities Paper #8:
Community Health and Wellness

DRAFT

Prepared In July 2007 by

Moore Iacofano Goltsman, Inc.

CONTENTS

8.1	Overview	3
8.2	Existing Conditions	7
8.3	Key Planning Issues/Consideration/Opportunities	34
8.4	Technical Appendix	38

8 COMMUNITY HEALTH AND WELLNESS

8.1 OVERVIEW

8.1.1 Project Background

The City of Richmond is among many communities in the Bay Area and the nation that are struggling to address critical issues related to public health including, air pollution, water and soil contamination, pedestrian and bicyclist injuries, chronic diseases, and crime and violence. Many of these issues are directly related to the design of the built environment and have historic roots. The industrial past of the city is both a source of pride as well as a significant challenge that affects the health and well being of its current residents, especially vulnerable population groups such as children, elderly, people of color and low-income households.

Already, Richmond residents are at a higher risk than residents in the rest of the county on many health indicators including, the highest proportion of deaths from diabetes, a much higher than average rate of children requiring hospitalization due to asthma, and the second highest number of hospitalizations for mental health disorders and substance abuse.

Richmond residents are also disproportionately affected by heart disease, cancer, and stroke (Contra Costa County Hospital Council Report, Community Health Indicators for Selected Cities and Places in Contra Costa County, March 3, 2005).

In addition, 36.3% of Richmond's 99,216 residents live in poverty. Richmond also has a large non-white population with 35.6% African American and 26.5% Latino residents. In comparison, the county's population is 9% African American and 18% Latino. Recent studies have shown that despite steady improvements in the overall health in United States, racial and ethnic minorities experience a lower quality of health services, are less likely to receive routine medical procedures, and have higher rates of morbidity and mortality than non-minorities. Disparities in health care exist even when controlling for gender, condition, age and socio-economic status (American Medical Association).

Recognizing that there are critical health risks in the community, the City of Richmond is developing a comprehensive Community Health and Wellness Element for its General Plan. A general plan primarily addresses concerns that relate to the built environment, but because the City of Richmond is defining public health broadly, the Community Health and Wellness Element will also address socio-economic conditions that largely explain health disparities among low-income and minority communities.

California state law requires each jurisdiction in the state to develop a general plan that contains seven elements including, circulation, conservation, housing, land use, noise, open-space, and safety. Optional elements often adopted include economic development, infrastructure, public services and facilities, and recreation. For the most part, public health considerations are not addressed in a city's General Plan.

Richmond is one of the first cities in the country to develop a comprehensive general plan element that addresses the link between public health and the built environment. This effort was funded by The California Endowment (TCE) with a \$255,000 grant for an 18-month planning process to coincide with the overall general plan update process.

8.1.2 Health and the Built Environment: A Historical Perspective

The field of urban planning grew out of concerns for public health and welfare in the fast-growing industrial cities in the early 20th Century. These concerns were related to polluting and unsanitary conditions in the cities where tanneries and slaughter houses abutted homes and schools, and tall skyscrapers blocked light and air from streets. Poor living conditions for city residents often resulted in infectious disease outbreaks and public health emergencies.

To address the growing health concerns, local governments instituted restrictions on the type of uses that could locate close to residential areas. These restrictions went far beyond the 19th Century Common Law Theory of Nuisance that addressed public health and safety by prohibiting 'unreasonable' uses of land to prevent similar outbreaks of infectious diseases.

By 1926, the US Supreme Court's decision on *Village of Euclid vs. Ambler Realty Co.* established the right of local governments to control land use through zoning laws and introduced the concept of 'Euclidean' Zoning that segregated land uses to minimize conflicts. Improvements in the transportation system, including the construction of freeways, further weakened the connection between work, home, retail and other daily services, isolating them from one another and making them accessible only by car.

While these laws and trends prevented factories from locating close to neighborhoods, and offered a means to escape from the polluted city center, they also provided local governments the power to exclude and segregate communities, and supported the growth of suburbs. People were protected from infectious diseases such as tuberculosis and cholera, but they now faced new epidemics such as obesity, asthma, heart disease and diabetes, all related to the design of the built environment.

The environmental movement in the 1970s gave rise to the environmental review process that was meant to protect it. Other urban planning concepts such as New Urbanism and Smart Growth are attempting to reverse the impacts of urban development policies of the previous decades. All these efforts attempted to return to the traditional neighborhoods and urban form that valued a mix of uses, pedestrian and transit amenities and compact development.

While the focus was on the design of the built environment, the underlying theme was the health of a community, defined in terms of the environment, economy and equity. As the City of Richmond addresses public health in the general plan update, it will take recent efforts one step further by strongly linking city policies on the design of the built environment with benefits and impacts on public health and wellbeing.

The general plan will address factors that influence mental and physical health including, physical activity, nutrition, bicycle and pedestrian safety, hazardous materials and contamination, air and water quality, housing quality, preventive medical care, homelessness, and violent crime, among others. The general plan element will also be sensitive to the historic impacts on low income communities due to pollution and segregation, recognizing that many low-income households in the city share a disproportionately higher burden of impacts.

8.1.3 Planning Process

The process for developing the Health Element is similar to the other elements, and is fully integrated into the overall general plan development process. The General Plan Advisory Committee (GPAC), appointed by the City Council, will develop recommendations for the general plan elements with input from the community-at-large for review and adoption by the City Council.

A Technical Advisory Committee (TAC), composed of all city department heads, provided extensive staff level input. A comprehensive community outreach and involvement program was implemented to ensure engagement and participation from community organizations, stakeholders, other jurisdictions and agencies, and the community-at-large.

A Project Team was formed to lead the development of the Health Element. This group included city staff, MIG staff and key public health consultants, including representatives from the Contra Costa Health Services Department (CCHS), the Environmental Health Investigation Branch (EHIB) of the California Department of Health Services, Department of Public Health City and County of San Francisco, and the Sequoia Foundation. The Project Team collaborated to develop the approach, methodology and key products for review and discussion by a Technical Advisory Group (TAG).

The TAG was formed to provide technical input for developing the Health Element. TAG members included a wide range of academic, community and public agency representatives and stakeholders who are working at the local, state and national level in the area of health and the built environment (see Appendix 8.4.4 for more detail on the TAG). The TAG met regularly throughout the planning process to review and provide input on the existing conditions analysis. The TAG will also be involved in developing goals, policies and implementing actions for the Health Element.

The Health Element will address health disparities and promote healthy living, and use the General Plan as a vehicle for promoting sound public health and land use policy. The Element will outline a framework and methodology for evaluating and understanding existing community health and wellness conditions, develop goals, policies and implementing actions to address key community issues and opportunities, and create a tool for tracking progress over time. The Element will involve key stakeholders and the Richmond community in the process, and focus on key community needs and opportunities.

8.1.4 Report Organization

Section 8.2 documents the results of the existing conditions analysis that was conducted between December 2006 and June 2007. The TAG provided extensive input in developing the Policy Framework as well as developing the methodology.

Section 8.3 describes the key planning issues, consideration and opportunities that will form the basis for developing goals, policies and implementing actions for the Health Element.

Section 8.4 is the Technical Appendix that provides background information on the existing conditions report. This includes methodology and assumptions, data sources, bibliography, and a community profile.

8.2 EXISTING CONDITIONS

8.2.1 Policy Framework

The City of Richmond General Plan Community Health and Wellness Element (Health Element) will address the link between public health and the built environment. The Policy Framework (Framework) developed by the TAG guided the existing conditions analysis and will form the basis for developing goals, policies, and implementation actions for the Health Element. The Framework includes the following sections:

A. Community Planning Objectives

A community's overall health depends on multiple factors, including the environment they live in. A healthier living environment reduces health risks and promotes better lifestyle choices. Determinants of a healthy living environment are described as Community Planning Objectives, listed below.

1. Access to recreation and open space
2. Access to healthy foods
3. Access to medical services
4. Access to public transit and safe active transportation
5. Access to quality affordable housing
6. Access to economic opportunities
7. Completeness of neighborhoods
8. Safe neighborhoods and public spaces
9. Environmental quality
10. Green and sustainable development and practices

B. Community Health Impacts

Health impacts describe the link between determinants of a healthy living environment and specific health conditions. The research and analysis that establishes these links is cited in the technical appendix of the existing conditions report.

C. Community Conditions Indicators

For each planning objective, there are multiple indicators that describe existing community conditions in Richmond. These indicators are based on a preliminary assessment of community issues and opportunities.

1. Access to recreation and open space

A healthy community promotes physical activity, social cohesion and contact with natural areas through the design of its built environment.

Community Health Impacts

Access to a park predicts the use of parks for recreation and physical activity. Quality recreational facilities and programs can also increase physical activity.

Health benefits of physical activity include a reduced risk of premature mortality and reduced risks of coronary heart disease, hypertension, stroke, some cancers, and diabetes mellitus. Regular participation in physical activity can also reduce depression and anxiety, improve mood, and enhance ability to perform daily tasks throughout the life span.

School grounds that are available after school and on weekends for community gathering, recreation and fitness promote physical activity, social cohesion, and neighborhood safety. Contact and exposure to natural areas can reduce stress, improve mental health, and facilitate recovery from illness.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 1.A. Proportion of population within ¼ mile of neighborhood or regional park, open space or publicly accessible shoreline, by neighborhood
- 1.B. Acres per capita of neighborhood and community parks, by sub-regions
- 1.C. Proportion of population within ¼ mile of community recreational facility, by neighborhood
- 1.D. Proportion of shoreline and creeks with public access
- 1.E. Proportion of schools that meet state standards for adequate play areas
- 1.F. Quality of parks (safe, clean and green)

Key Findings

Most residents live close to parks and open space [SEE MAP 1.A.]

78.6% of Richmond's population lives within ¼ mile of a neighborhood or regional park, open space or publicly accessible shoreline. In 24 (69%) of Richmond's 35 neighborhoods, more than 80% of the residents live in close physical proximity to a park or open space.

Some neighborhoods in central Richmond have poor physical proximity to parks. These include: Belding Woods (8,307 residents in 2000) and Cortez/Stege (3,310 residents in 2000). Neighborhoods in the El Sobrante Valley that have poor physical proximity to parks and recreation include May Valley (4,213 residents in 2000), Carriage Hill South (607 residents in 2000) and Greenridge Heights (6 residents in 2000).

The Central City area needs additional recreational opportunities

There are approximately 12,630 acres of parks and open space in the City of Richmond. The 1994 Richmond General Plan required 3 acres per (1,000) capita for neighborhood and community parks in the city (does not include regional parks and open space). In terms of neighborhood and community parks, there are 2.1 acres of neighborhood and community parks per 1,000 capita in the City of Richmond.

Strategies to increase access include transportation improvements, more efficient use of existing facilities, joint use with the school district and the East Bay Regional Park District.

Richmond Subregions	Population (2000 Census)	Number of Facilities	Acres of Parks and Open Space	Acres per (1,000) Population
Central City	69,581	34	110	1.6
South Shoreline	6,249	10	687	110.0
El Sobrante Valley	9,832	5	2,448	249.0
North City	13,490	7	2,383	177.0

70% of Richmond’s residents live in the Central City subregion, which has 109.8 acres (40%) of Richmond’s 271.7 acres of parks. The per (1,000) capita park acreage in the Central City is 1.6 acres. There is good distribution of parks in the Central City; however the parks are not large enough to meet current or future demand.

Few residents live close to recreation facilities [SEE MAP 1.C.]

23% of Richmond’s population lives within ¼ mile of a community recreation facility (e.g. YMCA, Boys and Girls Club, Community Center, etc.). 58% of the population lives within ½ mile. Areas of the city that have poor physical proximity to recreational facilities include Marina Bay, Hilltop Mall area, and East Richmond.

The Iron Triangle area, Belding Woods and the North and East neighborhoods have some physical proximity to recreational facilities but also have higher densities and larger concentration of low-income populations that may not be currently served.

Many creeks and parts of the shoreline are without public access [SEE MAP 1.D.]

11.2 miles (27.8%) of Richmond’s 40.3 miles of shoreline is accessible to the public. Almost half of this is in the Point Pinole Regional Shoreline Park (operated by the East Bay Regional Park District). 4.6 miles (30%) of Richmond’s 15.4 miles of creeks are accessible to the public. Almost all these miles are along Wildcat Creek in the Wildcat Canyon Regional Park (operated by the East Bay Regional Park District).

City of Richmond General Plan Update

Elementary schools need more space for play area [SEE MAP 1.E.]

3 (20%) of Richmond's 15 elementary schools surveyed meet adequate play area acreage standards. 6 (50%) of the 12 elementary schools that do not meet state standards for adequate play area are within 500 feet of a city park, providing an opportunity for joint use. There is no data available for Cezar Chavez Elementary School, Sheldon Elementary School, Lovonya DeJean Middle School and the four high schools on adequate play areas.

Parks and playgrounds need more maintenance and repair

Most parks, playgrounds and community facilities in the city need more maintenance and repair to make them clean, green and safe for community use.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Transportation
- Housing
- Education
- Conservation, Natural Resources and Open Space
- Parks and Recreation
- Community Facilities and Infrastructure

2. Access to healthy foods

A healthy community promotes health food options, including fresh produce stores and farmers markets, through the design of its built environment.

Community Health Impacts

The presence of a supermarket in a neighborhood predicts higher fruit and vegetable consumption; reducing the prevalence of overweight and obesity, and reducing the incidence of hunger.

Farmers' markets provide another source of fresh, locally produced fruits, vegetables and other food products. This in turn may support recommended daily consumption of fruits and vegetables. Markets may be particularly important in areas poorly served by full service supermarkets.

Community gardens can provide a source of fresh fruits and vegetables for users, increase physical activity, and provide opportunities for social interaction and cohesion. Locally produced food reduces long-distance shipping that reduces vehicle emissions, associated with chronic diseases and global warming, and helps sustain the local economy.

Where there are high numbers of fast-food restaurants compared to grocery stores, there are also higher rates of diabetes, cardiovascular disease and cancer.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 2.A. Proportion of population within ½ mile of a full-service grocery store or fresh produce market, by neighborhood
- 2.B. Food balance score (ratio of distance to full-service grocery stores to fast food restaurants - food desert methodology)
- 2.C. Food quality score (ratio of the number of fast food restaurants and convenient stores to supermarkets and farmers markets -retail food environment index)
- 2.D. Proportion of residents eligible for but not enrolled in federal food assistance programs

Key Findings

Few residents live in close proximity to a grocery store [SEE MAP 2.A.]

27% of Richmond's population lives within ½ mile of a grocery store or fresh produce market. In 20 (57%) of Richmond's 35 neighborhoods, there is no grocery store or fresh produce market within a ½ mile of residents. In another 9 neighborhoods (26%), less than a third of the population lives within ½ mile of healthy food options.

Residents have better access to fast food than grocery stores [SEE MAP 2.B. and 2.C.]

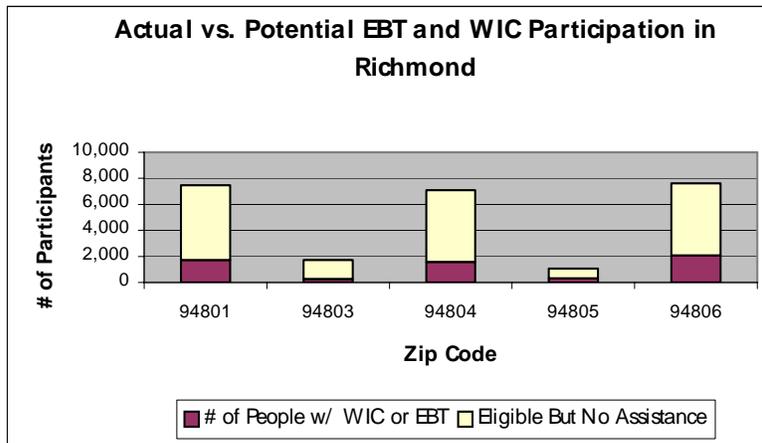
72.3% of Richmond’s population lives in a ‘food desert’. These are areas that have poor access to healthy foods, as defined by a low food balance score. 26.9% of Richmond’s population has average access to healthy food and 0.9% has good access to healthy foods.

Note: food balance score is the ratio between the distance to the nearest fast food restaurant and the distance to the nearest grocery store. A score of 1.0 means that the area is equal-distant from the nearest grocery store and fast food restaurant. A score of less than 1.0 means that the grocery store is closer than a fast food restaurant. For this analysis, a food balance score of 0-0.75 is defined as good access, 0.76 to 1.5 is defined as average and 1.51 and up is defined as poor access to healthy food.

There are more than 6 times as many fast-food restaurants and convenience stores in the city as supermarkets and produce vendors, for a retail food environment index (RFEI) of 6.3. In comparison, the county RFEI is 4.7 and the state RFEI is 4.2. (California Center for Public Health Advocacy, January 2007)

Most eligible residents are not enrolled in federal food assistance programs [SEE MAP 2.D.]

31.3% of Richmond residents who are eligible for federal food assistance (5,949 in total) are enrolled in EBT and/or WIC programs.



Source: US Census 2000, Food Stamp Participants 2006, Contra Costa County Employment and Human Services Department

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Housing
- Economic Development

3. Access to medical services

A healthy community promotes preventive care through the design of its built environment.

Community Health Impacts

The availability of primary care has a role in preserving good health and preventing morbidity and hospitalizations from chronic and communicable diseases, including asthma and diabetes. The availability of public transportation to community health facilities affects access to quality, affordable, reliable health care. Locating health facilities near transit can reduce vehicle trips and driving with benefits to air quality, community noise, and injuries.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 3.A. Proportion of medical facilities directly served by and within 1/4 mile of public transit
- 3.B. Proportion of low income households within 1/2 hour commute by public transit to a public primary care facility

Key Findings

Most medical facilities in the city are served by public transit [SEE MAP 3.A.]

32 (94.1%) of Richmond's 34 medical facilities are within 1/4 mile of a local transit stop and 8 (23.5%) are within 1/2 mile of a regional transit stop. 22 (65%) are directly served by transit.

Low income households can access a public primary care facility by transit

According to AC Transit's bus schedules, it takes approximately 30 minutes to go across the city, on any route. 96% of Richmond's population lives within 1/4 mile of local public transit stop. 12.9% of Richmond households have no car access compared to 6.5% in the County (US Census 2000).

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Transportation
- Community Facilities and Infrastructure

4. Access to public transit and safe active transportation

A healthy community promotes walking, biking and public transit through the design of its built environment.

Community Health Impacts

Streets that are designed for multiple users including, pedestrians of all ages, bicyclists, people with disabilities and cars, reduce risk of pedestrian and bicycle injuries. Walking or biking to school, work, daily errands and recreation increases physical activity.

Health benefits of physical activity include reduced illness and death from heart disease, stroke, some cancers, and diabetes. Regular participation in physical activity can reduce depression and anxiety, improve mood, and enhance ability to perform daily tasks throughout the life span.

Using public transit and active transportation options such as walking and biking reduces vehicle miles traveled, vehicle emissions, respiratory disease, hypertension from noise, exposure to environmental contamination due to fuel and oil spills, etc. Proximity to transit is associated with reduced vehicle trips and improved access to social, medical, employment and recreational activities. Using public transit helps people meet minimum requirements for physical activity.

Pedestrian trips do not contribute to noise or air pollution emissions. Vehicle miles traveled are directly proportional to air pollution and greenhouse gas emissions. Air pollutants, including ozone and particulate matter are risk factors for cardiovascular mortality and respiratory disease and illness.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 4.A. Proportion of population within ½ mile of a regional transit stop and ¼ mile of a local public transit stop, by neighborhood
- 4.B. Proportion of jobs within ½ mile of a regional transit stop and ¼ mile of local transit stop
- 4.C. Proportion of streets that promote walking
- 4.D. Proportion of street miles with bike paths and dedicated lanes, by class
- 4.E. Number of collisions involving pedestrians and bicycles
- 4.F. Proportion of residential units within ¼ mile of public elementary or middle school
- 4.G. Proportion of schools with direct service and within ¼ mile of public transit or bicycle lane

Key Findings

Richmond is well served by local and regional public transit [SEE MAP 4.A. and 4.B.]

96% of Richmond's population lives within ¼ mile of local public transit stop, which connects to the regional transit stops. 14% of Richmond's population lives within ½ mile of a regional transit stop. There are 2 regional transit stops within the City of Richmond and two more in close proximity.

5 (14%) of Richmond's 35 neighborhoods are less than adequately served by local public transit. These neighborhoods include: Greenridge Heights, May Valley, El Sobrante Hills, Carriage Hills South, and Point Richmond. 63.9% of Richmond's population lives within ¼ miles of local public transit stop with late evening and weekend service. 11 (31%) of Richmond's 35 neighborhoods have no public transit service with ¼ mile on weekends and late in the evening.

City of Richmond's Paratransit Program provides low-cost transportation services to elderly persons and persons with disabilities. It serves the residents of Richmond, North Richmond, Kensington and El Sobrante. The van program is available from 7:30am to 5:00pm, Monday to Thursday. The taxi program is available 24 hours a day, 7 days a week.

AC Transit and BART provide transit service to persons with disabilities or with disabling health conditions through the East Bay Paratransit Program. The program provides sedans or vans with wheelchair lifts. The service is only available near operating bus and train lines; within ¾ mile of an AC Transit bus route or ¾ mile of a BART station; during the same hours that buses and trains are running on those routes.

87% of approximately 25,000 jobs in Richmond are within ¼ mile of a local or regional transit stop. 24.3% of the jobs are within ½ mile of a regional transit stop. 14.48% of Richmond residents used public transit to get to work compared to 8.97% in the County and 18.6% in Berkeley. (US Census 2000)

Many streets in Richmond can be improved to promote safe walking or biking [SEE MAP 4.E.i and E.ii]

Many streets in the city need improvements such as pedestrian-scale lighting, better sidewalks, bike paths, and other amenities such as street trees, benches, and bus shelters.

Most of the pedestrian and bicycle collisions in the city are concentrated along major arterials, including San Pablo Ave., Macdonald Ave., Cutting Blvd., 13th St., Harbor Way and 23rd St. Collisions are also clustered around key intersection, including San Pablo and Central Ave., San Pablo Ave. from Cutting Blvd. to Potrero Ave., Harbor Way from 13th St. to Macdonald Ave. and Cutting Blvd. at Carlson Ave.

1.85% of Richmond residents walked to work compared to 1.5% in the County. Also, 0.57% of Richmond residents biked to work compared to 0.47% in the County. (US Census 2000)

Pedestrian and Bicycle Collisions				
Year	Bicycle Collisions		Pedestrian Collisions	
	Number	% Change	Number	% Change
2002	66		23	
2003	46	-30.3%	29	26.1%
2004	39	-15.2%	20	-31.0%
07-2005	19		10	

Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

Richmond has few bike paths

Bike paths are 3.3% (12.3 miles) of total road miles in Richmond. Of the total miles of bike paths, 6.1 miles are Class I (49.6%), 2.1 miles are Class II (17%) and 4.1 miles are Class III (33.3%) bike paths.

Note: Class I Bike Path is intended for the exclusive use of bicycles. While it may parallel a roadway, it is physically separated by distance or a vertical barrier. Class II Bike Lane shares the right-of-way with a roadway or walkway. It is indicated by a bikeway pictograph on the pavement and a continuous stripe on the pavement or separated by a continuous or intermittent curb or other low barrier. Class III Bike Route also shares the right-of-way with a roadway or walkway. It is not indicated by a continuous stripe on the pavement or separated by any type of barrier, but it is identified as a bikeway with signs.

Many residents live in close proximity to an elementary school [SEE MAP 4.F.]

9,007 (26%) of Richmond’s 34,625 residential units are within ¼ mile of a public elementary or middle school. 24,990 (72%) of the residential units are within ½ mile of a public elementary or middle school. Yet, residents in 19 (55.9%) of Richmond’s 34 residential neighborhoods have no physical proximity to a public elementary or middle school.

Richmond schools are not well served by public transit and bike paths [SEE MAP 4.G.i and G.ii]

1 (25%) of Richmond’s 4 middle and high schools are directly served by AC Transit. 3 (75%) of the schools are within ¼ mile of an AC Transit bus stop. All schools are within ½ mile of a bus stop. 6 (27%) of Richmond’s 22 schools are directly served by a designated bikeway. 14 (63.6%) schools are within ¼ mile of a designated bikeway. 19 (86%) are within ½ mile of a bikeway.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Transportation
- Housing
- Community Facilities and Infrastructure
- Parks and Recreation
- Public Safety and Noise

5. Access to quality affordable housing

A healthy community promotes integrated, affordable housing choices through the design of its built environment.

Community Health Impacts

Lack of adequate affordable housing may force families to seek any form of shelter, compromising their health and well-being. This can result in overcrowding, overpayment, substandard housing, infestation, mold, longer work commutes and other deficiencies. Excessive rent or housing cost burdens contribute to hunger, mental stress, harsh parenting and overcrowding. Lower housing costs result in more disposable income for essential non-housing needs.

A wider range of housing sizes (number of bedrooms) that are affordable could alleviate overcrowding and lessen related negative health impacts. Residents of substandard housing are at increased risk for fire, electrical injuries, lead poisoning, falls, rat bites, childhood asthma, and other illnesses and injuries. Overcrowded housing conditions contribute to higher mortality rates, infectious disease risk, childhood development and stress. Integrating rental, subsidized and market-rate housing can break down the social conditions that contribute to isolation, crime and violence.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 5.A. Proportion of affordable housing units, by neighborhood
- 5.B. Proportion of housing units that lack complete plumbing and kitchen facilities
- 5.C. Proportion of housing units that are overcrowded (more than 1 occupant per room)

Key Findings

Richmond met its fair share of regional housing needs

Shortfalls in the regional housing supply in the Bay Area, compared to the overall demand, have created high need for quality affordable housing in every community. The City of Richmond has met and exceeded its fair share of affordable housing demand, as determined by the Association of Bay Area Government (ABAG), for the last five years.

Between 2000 and 2005, about 3,700 residential units were constructed or were under construction in Richmond. Of these, 538 (14.5%) were for very low income households, 421 (11.5%) for low income households and 301 (8%) for moderate income households. The regional housing share for Richmond in this time frame was 2,603 units.

In 2005, 1,928 housing units in Richmond receive some form of assistance (Low Income Housing Tax Credit Program (LIHTC), Mortgage Revenue Bonds (MRB), Public Housing Authority (PHA), Section 202 or Section 8).

While 790 rental units were classified as ‘at-risk’ of losing affordability restrictions in 2005, their funding was renewed in 2006.

Many residents in Richmond are unable to pay for quality housing

In 2005, residents in 35% of Richmond’s housing units were overpaying for their shelter compared with 33.4% in Contra Costa County. The higher percentage of Richmond residents who overpay for their housing is explained, in part, by high housing costs throughout the Bay Area, including Richmond, and low earning power of Richmond residents. A household that pays more than 30% of the household income on housing costs is considered to be overpaying for their shelter. (Census2000)

Richmond Affordable Housing Projects			
Project	Location	# of Units	Assistance Type
Heritage Park	3811 Lakeside Dr.	192	Low Income Housing Tax Credit (LIHTC) Program
Deliverance Temple I	4312 Potrero Ave.	82	
City Center		64	
Liberty Village	298 W. Chanslor Ave.	40	
The Carquinez Senior Apts	400 Harbor Way	36	
Deliverance Temple II	4610 Potrero Ave.	32	
The Summit at Hilltop	3600 Sierra Ridge	144	Mortgage Revenue Bonds (MRB)
Hacienda Senior	1300 Roosevelt Ave.	150	Public Housing Authority (PHA)
Nevin Plaza	2400 Nevin Ave.	142	
Nystrom Village	222 Marina Way S.	100	
Triangle Court	960 Triangle Court	98	
Friendship Manor	564 Stege Ave.	58	
Community Heritage Senior Apts	1555 3 rd St.	51	Section 202-811
Rubicon Homes	978 13 th St.	10	Section 8, 236
Barrett Terrace	700 Barrette Ave.	114	
Barrett Plaza Town	700 Barrette Ave.	58	
Richmond Twonhomes	2989 Pullman Ave.	192	
Crescent Park	5000 Hartnett Ave.	186	Section 8, 221d3
St. John’s	77 W MacDonald Ave.	156	
Arbors	5311 Creely Ave.	23	
Easter Hill/Richmond Village	700 S. 26 th St.	237	Hope VI

Source: Richmond 2001-2006 Housing Element

Some residential units in the city need to be upgraded

In 2000, 254 (1.5%) of Richmond's occupied housing units lacked complete plumbing facilities and 161 (1%) housing units lacked complete kitchen facilities. (Census 2000)

Some residential units in the city are overcrowded

In 2005, 15% of Richmond's occupied housing units were overcrowded, compared with 3% in Contra Costa County (2005 American Community Survey). Overcrowding is defined as more than 1 occupant per room.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Housing
- Economic Development

6. Access to economic opportunity

A healthy community promotes adequate jobs that pay living wages and opportunities for building equity through the design of its built environment.

Community Health Impacts

Unemployment and lack of income is a strong determinant of all health outcomes. Individuals in households making less than a living wage live fewer years. Children of families making less than a living wage are less likely to graduate from high school.

Attainment of self-sufficiency income predicts better health, improved nutrition, and lower mortality, and indirect health benefits such as reduced communicable diseases and reduced community violence.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 6.A. Proportion of jobs in the City that provide self-sufficiency income
- 6.B. Homeownership rates, by neighborhood
- 6.C. Proportion of population within ½ mile of banking services, by neighborhood

Key Findings

Few industry sectors in the city provide living wage jobs

In 2002, 4 of Richmond's 12 industry sectors, with 46% of employees, provided self-sufficiency income (average payroll) (2002 Economic Census). These sectors include Manufacturing (21% of employees), Wholesale Trade (9% of employees), Information Technology (7% of employees) and Professional/Scientific/Technical/Services (9% of employees).

From 2001 to 2004, 3 of these 4 sectors lost jobs in Richmond. Manufacturing had a 24% decrease in the number of employees, Information Technology had a 48% decrease, and Professional/Scientific/Technical Services had a 10% decrease. Wholesale Trade had a 10% increase in number of employees in this time period (CA Employment Development Department, 2006, BAE, 2006)

In the same time period, the two sectors that had the highest increase in the number of employees also had the lowest average payroll. Accommodation and Food Services (average payroll of \$12,145.13) had a 50% increase in number of employees and Education Services (average payroll of \$16,985.37) had a 12% increase.

The self-sufficiency wage for a family of four in Contra Costa County was \$46,484 in 2003, as defined by United Way Bay Area. This is an 11.8% increase from \$41,568 in 2000.

City of Richmond General Plan Update

Lack of self-sufficiency wages affects the ability of Richmond residents to access essential services such as health care, nutritious food and quality housing.

Homeownership rates in the city vary by neighborhood [SEE MAP 6.B.]

In 2000, 46.7% of Richmond's housing units were renter occupied. In 2005, this number decreased to 39.2%. The national average was 33.8% in 2000 and 33.1% in 2005. In 19 (54.3%) of Richmond's 35 neighborhoods, homeownership rates are less than 50%. In 8 (22.9%) neighborhoods, all in the El Sobrante Valley, homeownership rates are above 75%. There are 8 neighborhoods in the Valley.

Many residents live near a bank [SEE MAP 6.C.]

51% of Richmond residents are within ½ mile of a bank. In 15 (43%) of Richmond's 35 neighborhoods, no one lives within ½ mile of a bank. A more detailed analysis is needed to determine whether residents in Richmond have equitable access to capital.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Economic Development
- Education

7. Completeness of neighborhoods

A healthy community promotes neighborhoods with daily goods and services within walking distance through the design of its built environment.

Community Health Impacts

Walking access to neighborhood goods and services promotes physical activity, reduces vehicle trips and miles traveled, and increases neighborhood cohesion and safety.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

7.A. Proportion of residents with more than 50% of the key public and retail services within ¼ mile

Public services include: post office, public school, community park or playground, community garden, library, recreation center, civic spaces, medical facilities, and transit stops

Retail services include: bank, produce market, convenience store, full-service grocery store, hardware store, cleaner, restaurant, farmer's market, and private childcare

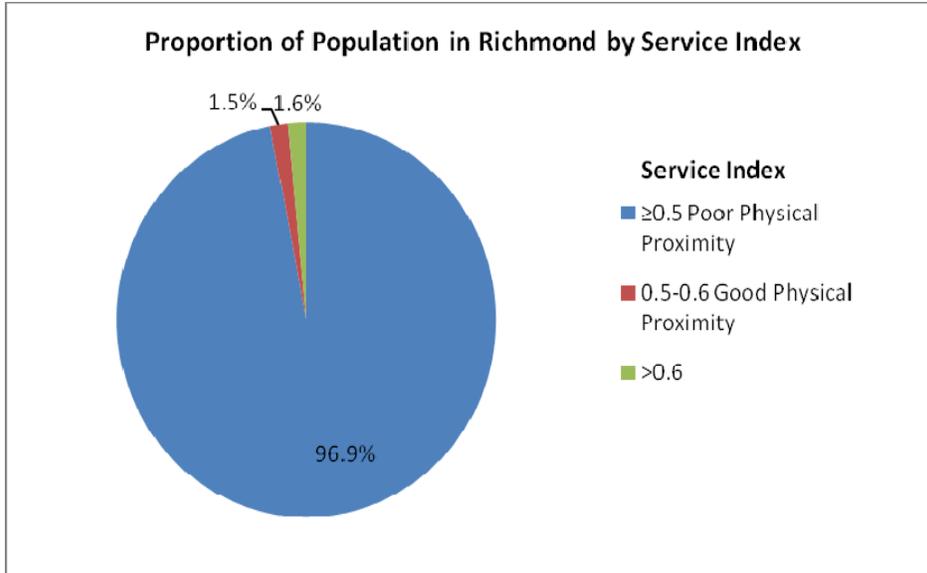
Key Findings

Many neighborhoods can be developed as complete neighborhoods [SEE MAP 7.A.]

More than 70% of Richmond residents live in the Central City subarea which is laid out on a grid pattern that provides high connectivity. This provides an immense opportunity to link neighborhoods to daily goods and services, which are currently lacking in the city.

3.1% of Richmond residents have good physical proximity to daily goods and services (service index of 0.5 or higher). 96.9% of Richmond residents have poor physical proximity to daily goods and services. 2 of Richmond's 15 major intersections provide good physical proximity to daily goods and services. These intersections are Macdonald Ave. at 23rd Street (with 1,839 residents within a ¼ mile) and Cutting Boulevard at Garrard Street (with 1,760 residents within a ¼ mile).

Note: The analysis uses 9 public and retail services each. If a given parcel in the city is within ¼ mile of at least 9 of the 18 services listed above, that parcel is considered to have good physical proximity to daily goods and services (service index of 0.5). A service index of 0.5 or higher relates to completeness of neighborhoods.



Service Index for Key Intersections

Key Intersection	Service Index	Population within ¼ mile
Macdonald Ave. and 37 th Street	0.38	2,070
Macdonald Ave. and 23 rd Street	0.67	1,839
Macdonald Ave. and Marina Way	0.50	2,648
Macdonald Ave. and Harbour Way	0.56	1,960
Macdonald Ave. and Garrard St.	0.22	959
Macdonald Ave. and San Pablo Ave.	0.22	744
San Pablo Ave. Gateway	0.22	1,503
San Pablo Ave. and Barrett Ave.	0.28	1,717
Cutting Blvd. and Carlson Blvd.	0.22	1,918
Cutting Blvd. and 23 rd St.	0.33	2,848
Cutting Blvd. and Marina Way	0.33	1,269
Cutting Blvd. and Harbour Way	0.33	736
Cutting Blvd. and Garrard St.	0.67	1,760
Potential Ferry Terminal	0.17	663
Hilltop Mall	0.44	667

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Transportation
- Housing
- Community Facilities and Infrastructure
- Economic Development
- Education
- Parks and Recreation

8. Safe neighborhoods and public spaces

A healthy community promotes safety, social interaction, cohesion and sense of place through the design of its built environment.

Community Health Impacts

Environmental design affects social interactions which affects violence. The resulting neighborhood social cohesion is positively associated with lower crime and better health outcomes. Violence in turn impacts the physical and mental health of victims and their families, friends, and neighbors, as well as the social and economic well-being of the neighborhood, influencing business investment, job and housing security, educational attainment, and community integration.

Levels of neighborhood crime and safety are determined by factors including resident participation in community development, sidewalk cleanliness and width, street design for pedestrian safety and speed control, poor street lighting, abundance of liquor stores, community isolation, and lack of services and housing for low-income persons, as well as other factors including presence of drugs or gangs, lack of police presence, gun availability, under- and un-employment, and lack of community activities for families and youth.

The density of alcohol outlets correlates with density of physical assaults and is closely related to crime and violence. Alcohol slows reaction time and its use by pedestrians and drivers contributes to traffic injuries.

The perceived safety of a neighborhood, often as important as the actual safety, impacts the health/well-being of children and adults by affecting engagement in physical and social activities, which subsequently impacts levels of isolation, obesity, diabetes, and high blood pressure. Better-lit areas decrease the likelihood of violence and increase the feeling of safety and security.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 8.A. Relative concentration of stand-alone liquor outlets, per capita, by neighborhood
- 8.B. Number of violent assaults, by neighborhood
- 8.C. Proportion of streets, parks and public places with lighting
- 8.D. Proportion of commercial corridors and civic spaces active and safe after dark

Key Findings

Liquor stores are concentrated in low-income neighborhoods [SEE MAP 8.A.]

There are 0.65 liquor stores per 1,000 capita in Richmond compared to 0.49 in the County. 6 (17%) of Richmond's 35 neighborhoods, which together account for 41% of Richmond's population, have 62% (39) of the 63 liquor stores in the city. These neighborhoods have high poverty rates and include Shields Reid, May Valley, Belding Woods, Santa Fe, Iron Triangle and North & East neighborhoods.

Neighborhoods with the highest per 1,000 capita concentration of liquor stores include Shields Reid (3.91), Santa Fe (2.5), May Valley (1.9), Point Richmond (1.6), Panhandle Annex (1.4) and Hilltop Green (1.4). Most liquor stores are concentrated along 23rd Street (between Brookside Dr. and Barrett Ave.), 13th Street (between Brookside Dr. and Carlson Ave.), and Barrett Ave. (between Harbor Way and 23rd St.).

Richmond has a high number of violent assaults [SEE MAP 8.B.]

In 2006, there were a total of 319 violent assaults in Richmond. Two-third of these assaults occurred in 6 neighborhoods. These neighborhoods include Iron Triangle (66 violent assaults), Cortez/Stege (38), Coronado (33), North and East (27), Santa Fe (22) and Belding Woods (21).

In 2006, 6 (14.3%) of Richmond's 42 homicides and 21 (7.6%) of Richmond's 277 assaults occurred within a 100 feet of a park. No homicides or assaults occurred within 100 feet of a school. In 2005, there were 11.4 violent assaults per 1,000 capita in Richmond, including 40 homicides. In the same period, there were 5.6 violent assaults per 1,000 capita in Berkeley, including 3 homicides. (FBI Crime Statistics, 2005)

Many public spaces in the city are not safe

Almost all city streets and public parks have some lighting. More detailed analysis is needed to determine areas that need pedestrian scale lighting, regular maintenance and/or additional lighting.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Housing
- Community Facilities and Infrastructure
- Economic Development
- Education
- Parks and Recreation
- Public Safety and Noise

9. Environmental quality

A healthy community promotes environmental protection and conservation through the design of its built environment.

Community Health Impacts

Epidemiologic studies have found consistent associations between living in proximity to a busy roadway and respiratory disease symptoms, including asthma, and lung function measures. Diesel particulate matter has acute short-term impacts and a disproportionate effect on the elderly, children, people with illnesses, or others who are sensitive to air pollutants. Second hand smoking is a toxic air contaminant that may cause or contribute to an increase in deaths or serious illness or pose a hazard to human health, especially children.

Chronic noise exposure can result in sleep disturbance, cognitive impairment in children and adults, adult hypertension, stress hormone activation. Living in greener environments is associated with reduced self-reported health symptoms, better self-rated health, and higher scores on general health questionnaires.

Pervious surfaces allow natural ground absorption of rainfall, replenishing groundwater tables and reducing the amount of storm-water runoff to the Bay. In turn, contaminant runoff to the Bay is reduced and residents swimming or fishing in the Bay have reduced exposure to oils, lead, and other toxins. Contaminated sites inherently pose health hazards.

Trees provide natural cooling through shading thereby reducing exposure to UV radiation and the risk of skin cancer, as well as energy demand and consumption. Presence of trees slows down traffic, reducing risk for pedestrian and bike injuries. Trees capture air pollution, reduce carbon dioxide, increase oxygen, and help capture storm-water runoff; reducing the amount of mercury, oil, and lead that flows into the Bay.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 9.A. Proportion of land with tree canopy, by sub-regions
- 9.B. Creeks, watersheds and shoreline restored and/or cleaned
- 9.C. Proportion of population and schools within 500 feet of roadways with 100,000 average daily vehicles
- 9.D. Proportion of population and schools within an impact area of a polluting industry
- 9.E. Proportion of population by neighborhood living with outdoor noise level of more than 55 decibels
- 9.F. Location of contaminated sites
- 9.G. Per capita number of violations of water quality, air quality, toxic release standards.

Key Findings

Most urban areas in Richmond have low tree coverage [SEE MAP 9.A.]

9.14% of the urban areas in Richmond have good tree canopy coverage. In comparison, San Francisco has 12% tree coverage, which includes natural and urban areas. Tree canopy coverage in the sub areas is 9% in the North Area, 10% in the El Sobrante Area, 7% in the South Shoreline Area and 9% in the Central City Area.

Many creeks and shoreline areas have been restored and/or cleaned

Sections of creek corridors that have been restored and/or cleaned include: Cerrito Creek between Peirce Street and the El Cerrito Border (Pacific East Mall), Baxter Creek at Booker T. Anderson Park, Mira Vista Park (small section of Creek, mostly El Cerrito), Wildcat Creek at Alvarado Park, an approximately 200-foot section of a drainage arm of Wilkie Creek in El Sobrante (restored from culverts about 20 years ago), and portions of San Pablo and Wildcat Creek flood plain restored by the County Flood Control and Water Conservation District about 10 years ago. Some portions of the shoreline that have been restored and/or cleaned.

Busy roadways through the city affect some residents

5% of Richmond residents live within 500 feet of busy roadways (100,000 average daily vehicles and more). I-80 freeway is the only roadway segment that carries that level of traffic. 22.5% of the population and 3 schools are within 500 feet of a freeway or truck route. These schools include Lovonya Dejean Middle School, Washington Elementary School and Lincoln Elementary School.

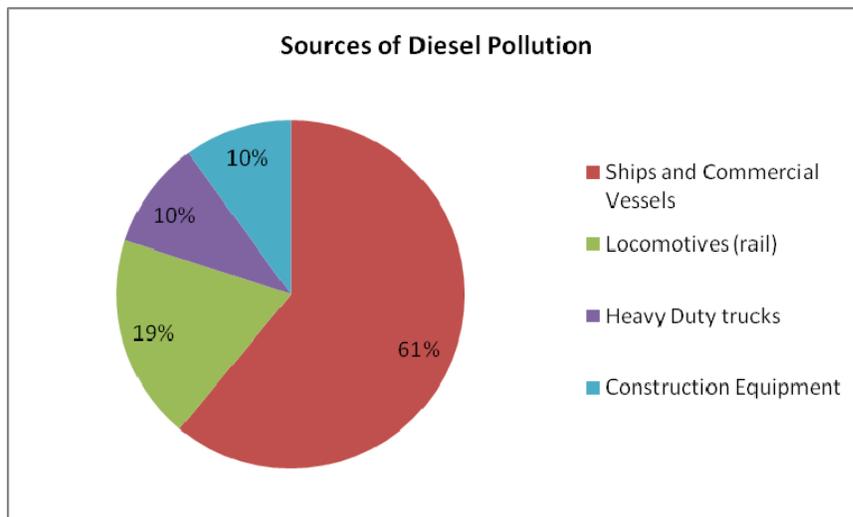
Polluting industries and businesses affect many neighborhoods and residents [SEE MAP 9.D]

18% of Richmond residents live within the impact area of a polluting business or industry. In 4 (11.4%) of Richmond's 35 neighborhoods more than 40% of the residents live within the impact area of a polluting business or industry. All residents in the Santa Fe neighborhood live within this impact area. 16.5% of the population and 3 schools are within 500 feet of industrial zoned land. These schools include Washington Elementary School, Lincoln Elementary School and Peres Elementary School.

The impact area of an industrial site is defined as 'low' or 'high' by the CA Air Resources Board (CARB) in the Air Quality and Land Use Handbook (2005). Low-impact industries include automotive repair, communications, dry cleaners, funeral service and crematories, furniture stores, gasoline service stations, and wholesale traders. These industries are designated a 300-foot impact area by CARB.

High-impact industries include construction, electric, gas and sanitary services, manufacturing, medical services, mining, pipelines and transportation. These industries are designated a 1,000-foot impact area by CARB.

The inner West Contra Costa County receives 5 tons or diesel particulate matter (DPM) per square mile per year, which is 40 times more than in California as a whole and 6 times more than in the County. 70% of all airborne cancer risks come from breathing diesel exhaust. 61% of the diesel pollution comes from ships and commercial vessels, 19% from locomotives (rail) and 10% each from heavy duty trucks and construction equipment. (Deluged by Diesel: Healthy Solutions for West County, July 2005)



Source: *Deluged by Diesel: Healthy Solutions to West County, July 2005*

Busy roadways, railroads and industry are major noise polluters

In 2006, major sources of noise pollution in Richmond included motor vehicles, railroads and industrial areas. Noise levels from motor vehicles are high along major arterials, freeways and along truck routes. Noise from railroads is generated by passenger and freight train traffic on Union Pacific and Amtrack lines, Burlington Northern Santa Fe Railway lines, Richmond Pacific Railroad lines, and BART surface lines. Noise from stationary sources is generated by industrial uses such as metal scrapping and recycling, shipping, and loading.

7 of the 10 locations studied in Richmond had noise levels higher than what is allowed by the City of Richmond Municipal Code, 2006. All 7 of these locations are adjacent to residential neighborhoods. The primary source of noise pollution in these locations is motor vehicle traffic on arterials or freeways.

Richmond has many highly contaminated sites [SEE MAP 9.F.]

There are 1,050 acres of contaminated sites (41 sites total) recognized by the California Department of Toxic Substances Control (DTSC) in Richmond. There are 11 point locations of hazardous materials, recognized by the City of Richmond.

Most of the contaminated and hazardous material sites are located in the industrial zone south of I-580 and west of the Richmond Parkway. As the city explores the potential for developing industrial land into other uses and providing public access to the shoreline, environmental remediation and toxic cleanup will become a major issue on these sites.

Noise Monitoring Data at Representative Locations

Location	Major Sources of Noise	Std. ² (db)	Daily Avg. ¹ (dB)	Daily Min. ¹ (dB)	Daily Max. ¹ (dB)
1. Marina Bay Parkway between Meeker Avenue and Regatta Boulevard (Start time: 3:50 p.m.)	<ul style="list-style-type: none"> • Marina Bay Parkway • Train horn • Passing train 	65	67.3	45.5	90.3
2. Carlson Boulevard and 45th Street (Start time: 4:25 p.m.)	<ul style="list-style-type: none"> • I-580 • Carlson Blvd. • Passing freight train 	65	70.4	59.0	93.1
3. Canal Boulevard and W. Cutting Boulevard (Start time: 5:00 p.m.)	<ul style="list-style-type: none"> • Canal Blvd. (truck from port and industries) • I-580 	75	62.9	55.3	72.0
4. Richmond Parkway between Hilltop Drive and Atlas Road (Start time: 5:50 p.m.)	<ul style="list-style-type: none"> • Richmond Parkway 	65	69.4	49.8	87.2
5. 23rd Street and Bush Avenue (Start time: 6:30 p.m.)	<ul style="list-style-type: none"> • 23rd Street 	65	70.3	54.4	84.8
6. 23rd Street and Virginia Avenue (Start time: 10:30 a.m.)	<ul style="list-style-type: none"> • 23rd Street 	65	67.2	49.9	84.5
7. Cutting Boulevard and 17th Street (Start time: 10:55 a.m.)	<ul style="list-style-type: none"> • Cutting Blvd. 	65	64.8	43.0	80.8
8. Harbour Way South and Maine Avenue (Start time: 11:25 a.m.)	<ul style="list-style-type: none"> • Harbor Way S. 	65	68.5	45.8	86.0
9. Barrett Avenue and 21st Street (Start time: 12:00 p.m.)	<ul style="list-style-type: none"> • Barrette Ave. 	65	68.5	47.1	83.7
10. MacDonald Avenue and 29th Street (Start time: 12:45 p.m.)	<ul style="list-style-type: none"> • MacDonald Ave. 	65	64.5	45.1	86.5

Source: EIP Associates, a division of PBS&J, 2006

1 Measurements were made on September 19 and 20, 2006.

2 Maximum noise levels allowed; not to be exceeded more than 30 minutes in any hour (City of Richmond Municipal Code, 2006).

Per-capita air quality violations in the city are higher than the region

From 1997 to 2007, the Bay Area Air Quality Management District (BAAQMD) reported a total of 65 air quality incidents in the Bay Area, of which 13 (20%) were reported in Richmond. In terms of per 100,000 capita, there were 13.1 air quality incidents in Richmond compared with 0.96 for the entire Bay Area.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Housing
- Transportation
- Economic Development
- Public Safety and Noise

10. Green and sustainable development and practices

A healthy community promotes sustainability and environmental stewardship through the design of its built environment.

Community Health Impacts

Reducing electricity and natural gas usage results in reduction in climate change and air pollution emissions and reduction in the hazards and use of environmental resources necessary to produce and transport energy. This subsequently results in improved air quality and lower rates of respiratory illness. Green businesses reduce occupational and environmental exposures to toxic chemicals. Recycling and composting helps improve air, land, and water quality, as well as reduce energy demands associated with air pollution and green house gas emissions.

See Appendix 8.4.3 for further readings.

Community Conditions Indicators

The indicators listed below were analyzed for determining existing conditions in the city. These indicators were based on input from the community from the first phase of General Plan community outreach in 2006.

- 10.A. Proportion of water recycled or conserved
- 10.B. Proportion of waste diverted from landfill to recycling, reuse or composting
- 10.C. Proportion of energy generated from renewable sources
- 10.D. Proportion of facilities that meet green building standards (public and private)
- 10.E. Proportion of businesses that meet or exceed the County's green business standards

Key Findings

Richmond contributes to water recycling and conservation

East Bay Municipal Utility District (EBMUD) is the water service provider in Richmond. EBMUD partners with the West County Wastewater District (WCWD) and Stege Sanitation District to provide wastewater service in the city. From 1970 to 2005, the daily water usage in EBMUD's service area dropped 24.8% from 210 to 158 gallons per capita per day, mostly due to efficiency gains, conservation and recycling.

EBMUD's Water Supply Management Program, established in 1993, set a water recycling goal of 14 million gallons per day (MGD) by 2020. In 2006, EBMUD saved 1.5 MGD, or 0.7% of the 212 MGD consumed by all EBMUD's 380,000 customers. In 2006, EBMUD distributed nearly \$1 million to customers to retrofit plumbing fixtures, appliances, process equipment, and irrigation systems with water-efficient models.

City of Richmond General Plan Update

2 of EBMUD's 7 wastewater recycling facilities are located in Richmond. Together they account for 4.18 MGD (70.1%) of the all recycled water use in EBMUD's service area. Richmond Country Club used 0.18 MGD and Chevron Refinery used 4.0 MGD of recycled water.

In 2006, EBMUD produced 5.9 MGD of recycled water, or 2.8% of the 212 MGD consumed by all EBMUD's 380,000 customers. EBMUD's Water Conservation Master Plan (WCMP) was established in 1994 to develop programs to meet a 35 MGD goal for water savings by 2020. The programs include water-saving device distribution, financial incentives, and targeted education and outreach.

Richmond residents help divert waste from landfills through recycling and composting

The West Contra Costa County Integrated Waste Management Authority (WCCIWMA) provides recycling service in the City of Richmond. 90-95% of Richmond's residents participate in the recycling program. Green waste is collected bi-weekly. To include food scraps in the collection, WCCIWMA would have to increase service to weekly green waste collection.

The WCCIWMA is working with Richmond Sanitary Services on a construction and debris ordinance that would require construction projects to divert at least 50% of materials away from the landfill. Piedmont's Construction and Debris Ordinance is a good model.

In 2006, Richmond residents and businesses recycled and composted green waste at a rate of 22.3%. This is almost 9% lower than the diversion rate for the rest of the WCCIWMA service area, which was 31%. Since 2001, the rest of the service area has increased their diversion rate by 5% while Richmond has only increased theirs by 1.7%.

Richmond uses some renewable energy

12 to 14 % of energy produced by PG&E is derived from renewable sources. Specific data for cities is currently not available. PG& E provides all the energy for the City of Richmond.

Richmond promotes green buildings

The renovated City Hall will be the first LEED certified green building in Richmond.

Note: The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings.

Few businesses in the city are certified green businesses

13 (1%) of Richmond's 1,298 businesses are recognized as green businesses by Contra Costa County's Green Business Program. These businesses are meeting or exceeding the County's Green business standards.

Related General Plan Elements

Goals, policies and implementing actions in this section will be consistent with the following General Plan Elements:

- Land Use and Urban Design
- Transportation
- Housing
- Economic Development
- Education
- Community Facilities and Infrastructure
- Conservation, Natural Resources and Open Space
- Parks and Recreation

8.3 KEY PLANNING ISSUES/CONSIDERATION/OPPORTUNITIES

In developing goals, policies and implementing actions for the General Plan, the city must address the following key issues and opportunities in the Community Health and Wellness Element. The key issues and opportunities are organized by the ten Community Planning Objectives.

Access to recreation and open space

1. **The City must increase access to recreation opportunities, especially in the urban core**
About 25% of Richmond residents have poor physical proximity to parks and open space. About 50% of Richmond residents have poor physical proximity to recreation facilities. Less than 1/3 of the shoreline and creeks in Richmond have direct public access. Most schools in Richmond do not meet state standards for adequate play areas.
2. **The City must address the maintenance of parks, playgrounds and open space**
Many parks in Richmond do not meet the standards for being safe, clean and green. A detailed assessment is needed to identify improvements.

Access to healthy foods

3. **The City must promote an increase in the number of healthy food options for residents, especially in low income neighborhoods**
About 75% of Richmond residents have poor access to a fresh produce market or full-service grocery store. About 75% of Richmond residents have better access to a fast food restaurant than a fresh produce market or full-service grocery store. There are more than 6 times as many fast food restaurants and convenience stores in Richmond than supermarkets and farmer's markets.
4. **The City can address low enrollment in food assistance programs**
About 70% of Richmond residents who are eligible for federal food assistance are not enrolled in these programs. This represents a loss of nutrition for eligible residents and a loss of revenue for local food stores.

Access to medical services

5. **The City should continue to improve transportation linkages to medical facilities, especially from low income neighborhoods**
About 2/3 of Richmond's 34 medical facilities are directly served by public transit. About 95% are within a 1/4 mile of a local public transit stop. Most Richmond residents can reach a primary care facility with a half hour commute by public transit.

6. **The City must address the lack of medical care during an emergency or natural disaster**

With the potential closure of the Doctor's Hospital, the only other emergency medical facility located within the city is the Kaiser Hospital in downtown Richmond. Along with Richmond, many other neighboring cities are also affected by the closure of the Doctor's Hospital and may need to collaborate with the County to find solutions.

Access to public transit and safe active transportation

7. **The City must continue to enhance, improve and expand access to public transit, especially for low-income households, youth, persons with disabilities and seniors**

About 13% of Richmond households do not have access to a car and are entirely dependent on public transit for medical and other needs. Richmond is well served by local and regional transit including, Bay Area Rapid Transit (BART), Amtrak, Alameda County Transit (AC Transit) and Contra Costa Transit Authority.

While more than 95% of Richmond residents live within ¼ mile of a local public transit stop, the El Sobrante Valley is not adequately served. Richmond has an extensive paratransit system. Service is provided by AC Transit, BART and the City of Richmond. More than 85% of jobs in Richmond are within ¼ mile of a local public transit stop. About 15% of residents used transit to get to work. Night and weekend bus service may not adequately serve the needs of residents, especially low income households.

8. **The City must address safety and connectivity for active modes of transportation such as walking and biking**

Only 25% of Richmond's 22 schools are directly served by a designated bike path. Only 1 of Richmond's 4 middle and high schools are directly served by public transit. About 25% of residential units in Richmond are within ¼ mile of an elementary or middle school, allowing kids to walk to school.

Access to quality affordable housing

9. **The City should continue to support programs that meet affordable housing needs in the community**

Shortfalls in the regional housing supply in the Bay Area, compared to the overall demand, have created high need for quality affordable housing in every community. The City of Richmond has met and exceeded its fair share of affordable housing demand, as determined by ABAG, for the last five years.

In 2005, residents in 35% of Richmond's housing units were overpaying for their shelter compared with 33.4% in Contra Costa County. The higher percentage of Richmond residents who overpay for their housing is explained, in part, by high housing costs throughout the Bay Area, including Richmond, and low earning power of Richmond residents. A household that pays more than 30% of the household income on housing costs is considered to be overpaying for their shelter. (Census2000)

Access to economic opportunities

10. The City must attract and retain quality jobs that pay living wages

Only 45% of jobs in Richmond provide self-sufficiency income for a family of four (2002). Industry sectors that provided living-wage jobs declined in the region as well as Richmond between 2001 and 2004. Industry sectors that provided the lowest average payroll (below the living-wages) grew the most in the same time period.

11. The City can support policies and programs that improve access to capital and equity, especially for low-income households.

About 60% of housing units in Richmond are owner-occupied. The national average is about 67%. Homeownership rate in 19 of Richmond's 35 neighborhoods is lower than 50%.

Completeness of neighborhoods

12. The City can encourage mix of uses in neighborhoods and along corridors and key intersections to increase access to daily goods and services for residents

More than 95% of residents in Richmond have poor physical proximity to daily goods and services. Two intersections in the city that provide good physical proximity to daily goods and services include Macdonald Ave. at 23rd St. and Cutting Blvd. at Garrard St.

Safe neighborhoods and public spaces

13. The City can restrict the concentration of liquor stores in low-income areas

6 of Richmond's 35 neighborhoods have more than 60% of the liquor stores. Most liquor stores are concentrated along segments of 23rd St., 13th St. and Barrett Ave.

14. The City must protect its residents and businesses from crime and violence

The per capita number of violent assaults in Richmond is more than twice the number in Berkeley. More than 2/3 of these assaults occurred in 6 neighborhoods. There were 40 homicides in Richmond in 2005. About 15% of the homicides and about 10% of the violent assaults occurred within a 100 feet of a park.

Most of the city does not have pedestrian scale lighting in streets, parks and public places. Pedestrian-scale lighting made a significant contribution towards improved safety in the nearby Filbert St./3rd St. area of North Richmond.

Environmental quality

15. The City must protect, conserve and enhance its natural resources

Only about 10% of Richmond has tree canopy (more than 25% tree coverage), compared to 42% in Portland and 21% in the nation. While some sections of creeks and shoreline areas in Richmond are restored, being restored, or plan to be restored, there are many other sections that still need improvements.

16. The City must address pollution and toxic contamination, especially in its urban core and along the shoreline

About 25% of Richmond residents live within the impact area of a polluting business or industry or within 500 feet of busy roadways (100,000 average daily vehicles and more). 22.5% of the population and 3 schools are within 500 feet of a freeway or truck route.

Diesel particulate matter (DPM) per square mile per year released in Richmond is 6 times higher than the county average and 40 times higher than the state average. 70% of all airborne cancer risks come from breathing diesel exhaust. More than 60% of the diesel pollution in Richmond comes from ships and commercial vessels, and about 20% comes from rail.

The per capita number of air quality incidents in Richmond was 14 times higher than the Bay Area average. There were 13 such incidents in Richmond between 1997 and 2007. Major sources of noise pollution in Richmond include motor vehicle traffic on arterials or freeways. Other sources of noise pollution include railroads and industrial areas.

About 1,050 acres of land in 41 parcels are recognized by the California Department of Toxic Substances (DTSC) in Richmond as contaminated sites. 11 point locations of hazardous materials are recognized by the City of Richmond. Most of the contaminated and hazardous sites are located in the industrial zone south of I-580 freeway and west of Richmond Parkway.

Green and sustainable development and practices

17. The City can reduce its energy footprint

Currently, about 3.5% of the water consumed by Richmond residents is conserved (0.7%) or recycled (2.8%). Currently, about 12% of the energy consumed in Richmond is produced from renewable sources. Less than 25% of the waste in Richmond was recycled or composted, compared to more than 30% in the county.

18. The City can encourage 'green' facilities and businesses

The renovated City Hall will be the first and only LEED certified building in Richmond. Only about 1% of the businesses in Richmond are recognized by the county Green Business Program.

8.4 TECHNICAL APPENDIX

The technical appendix includes the following four sections:

- Methodology and Assumptions
- Data and Information Sources
- Bibliography
- Community Profile for the City of Richmond
- Technical Advisory Group Roles and Responsibilities

8.4.1 Methodology and Assumptions

The existing conditions analysis defined the baseline conditions in the city with regards to public health that can be improved through the general plan. The analysis focused on the spatial distribution of amenities as well as disparities and disproportionate impacts. The scope of work did not include primary research and data collection and was therefore limited to existing data and information (see section 8.4.2 for details). Spatial modeling was conducted by MIG, Inc., using ArcGIS mapping and modeling software.

Due to the unique boundary conditions and distinct character of its neighborhoods, the results were presented city-wide and by sub-region or neighborhood. This allows for accurate comparison among distinct geographic areas of the city and evaluation of disproportional impacts. The existing conditions analysis is based on two primary approaches, described below.

Service Area Analysis

For community amenities such as parks, grocery stores, etc., or nuisances such as polluting uses, contaminated sites, etc., the analysis defines a service area that it would serve or impact. For the baseline analysis, the service area for a community amenity is defined as $\frac{1}{4}$ mile to $\frac{1}{2}$ mile distance from the amenity. For example, people living within a $\frac{1}{4}$ to $\frac{1}{2}$ mile of a neighborhood park were assumed to be served by parks.

A $\frac{1}{4}$ to $\frac{1}{2}$ mile service area was assumed because people of all ages and abilities can reasonably be expected to walk this distance to access community amenities. A more detailed analysis may consider the actual route or streets to determine the distances, but since most of the city is on a grid, a simplified method was used.

Similarly, impact areas of varying radii were drawn around community nuisances based on scientific data available. For example, a busy roadway was assumed to impact residential units and school up to 500 feet and a dry cleaner up to 200 feet of the actual facility. When available, these findings were compared with data from other jurisdictions for benchmarking.

Equitable Distribution Analysis

This approach was used to determine the number of key amenities or nuisances within a geographic area such as a sub-area or neighborhood. This approach allowed for comparisons between different sub-areas and neighborhoods in the city.

8.4.2 Data and Information Sources

Data and information for the existing conditions analysis was drawn from the following sources:

City of Richmond

City of Richmond Planning Department – city parks, regional parks and open space, creeks, water bodies, bicycle network, community recreation facilities, full-service grocery stores, produce markets, community gardens, and farmers markets, libraries, post offices, street lighting, truck routes, industrial zoned land, streets, freeways, hazardous material sites, parcels, and neighborhood boundaries.

City of Richmond 2001-2006 Housing Element – affordable housing units, units with complete plumbing, and units with overcrowding.

City of Richmond General Plan, August 1994 – city park standard.

City of Richmond Police Department – assaults with a deadly weapons and homicides.

US Census

US Census 2000 – census tracts, blocks and block groups, population, people in poverty, households, transportation mode to work, homeownership and rental rates.

North American Industry Classification System (NAICS) – private recreation facilities, fast food restaurants, medical facilities, businesses, employees at each business, banks, convenience stores, hardware stores, cleaners, restaurants, and private child care centers.

American Community Survey (2005) – population and households.

US Economic Census (2002) – jobs by industry.

Federal Agencies

Federal Bureau of Investigation (FBI) – violent assaults and homicides.

US Environmental Protection Agency (EPA), Toxic Release Inventory (TRI) (2005) – air emissions.

Center for Urban Forest Research, UC Davis and US Forest Service (USFS) – tree canopy coverage.

State Agencies

California Department of Alcoholic Beverage Control – liquor stores.

California Department of Toxic Substances Control (DTSC) – federal superfund sites, state response to contamination sites, and voluntary cleanup of contamination sites.

California Employment Development Department (EDD) – jobs by industry.

California Highway Patrol (CHP), Statewide Integrated Traffic Records System (SWTTRS) – pedestrian and bicycle collisions.

California Air Resources Board (CARB) – impact areas for roadways and hazardous industries.

City of Richmond General Plan Update

Regional Agencies

Bay Area Air Quality Management District (BAAQMD) – air quality incidents.

East Bay Municipal Utility District (EBMUD), Water Supply Management Program and Water Conservation Master Plan (1994) – waste water.

Pacific Gas & Electric (PG&E) – energy.

AC Transit – bus routes, stops and schedules.

Bay Area Rapid Transit District (BART) – BART routes and stops.

Contra Costa County

Contra Costa Health Services – health risks and liquor store locations.

Contra Costa County Employment and Human Services Department – EBT and WIC recipients.

West Contra Costa County, Measure “M” Facilities Evaluation Report, January 2002 – school playground evaluations.

West Contra Costa Unified School District – public schools.

Deluged by Diesel: Healthy Solutions to West County (July 2005) – asthma rates and air emissions.

Contra Costa County Integrated Waste Management Authority (WCCIWMA) – waste management.

West County Wastewater District (WCWD) – waste management.

Contra Costa County’s Green Business Program – green businesses.

Non-Profit Organizations

National Recreation and Park Association (<http://www.nrpa.org/>) – national park acreage standard.

United Way of the Bay Area – living wages for Contra Costa County.

California Center for Public Health Advocacy (<http://publichealthadvocacy.org/>) – Retail Food Environmental Index (RFEI).

California Nutrition Network – EBT and WIC vendors and fast food restaurants.

Food Bank of Contra Costa and Solano County - charitable food sites.

General Plan Consultants and Research Firms

Bay Area Economics (BAE) – jobs in the city.

EIP Associates, a division of PBS&J (2006) – noise pollution.

Mari Gallagher Research and Consulting Group (www.marigallagher.com) – Food Desert Methodology for the City of Chicago.

8.4.3 Bibliography

Parks and Natural Areas

Cohen DA, Ashwood JS, Scott MM, Overton A, Evenson KR, Staten LK, Porter D, McKenzie TL, Catellier D. Public parks and physical activity among adolescent girls, 2006.

Kahn EB. The effectiveness of interventions to increase physical activity. *American Journal of Preventative Medicine*, 2002.

Kuo FE, Sullivan WC. Environment and crime in the inner city: does vegetation reduce crime? *Environment and Behavior*, 2001.

Parks for People: Why America Needs more City Parks and Open Space. San Francisco: The Trust for Public Land, 2003.

Taylor AF, Kuo FE, Sullivan WC. Coping With ADD: The Surprising Connection to Green Play Settings. *Environment and Behavior*, 2001.

Vries S, de Verheij RA, Groenewegen PP, Spreeuwenberg P. Natural environments - healthy environments? An exploratory analysis of the relationship between green space and health. *Environment and Planning A*, 2003.

Healthy Food

Inagami S, Cohen DA, Finch BK, Asch SM. You are where you shop: grocery store locations, weight, and neighborhoods. *Am J Prev Med*, 2006.

Morland K, Diez Roux AV, Wing S. Supermarkets, other food stores, and obesity: the atherosclerosis risk in communities study. *Am J Prev Med*, 2006.

Urban Agriculture

La Trobe, H. Farmers' markets: consuming local rural produce. *International Journal of Consumer Studies*, 2001.

SF Food Systems. 2005 SF Collaborative Food System Assessment. Available at: <http://www.sffoodsystems.org/index.html>

Medical Facilities

Epstein AJ. The role of public clinics in preventable hospitalizations among vulnerable populations. *Health Serv Res*, 2001.

Public Transit, Walking and Biking

Besser LM, Dannenberg AL. Walking to public transit: steps to help meet physical activity recommendations, 2005.

Dellinger A, Staybtib C. Barriers to Children Walking and Bicycling to School. *Morbidity and Mortality Weekly Report*, 2002.

City of Richmond General Plan Update

Ewing R, Forinash CV, Schroeer W. Neighborhood Schools and Sidewalk Connections. What are the impacts on travel mode choice and vehicle emissions. Transportation Research News, March-April 2005 pp 4-10.

Ewing R, Schieber RA, Zegeer CV. Urban sprawl as a risk factor in motor vehicle occupant and pedestrian fatalities, 2003.

Hadayeghi A, Shalaby AS, Persaud BN. Macrolevel accident prediction models for evaluating safety of urban transportation systems. Transportation Research Record, 2003.

Lascaia EA, Gerber D, Gruenewald PJ. Demographic and environmental correlates of pedestrian injury collisions: a spatial analysis, 2000.

Lovegrove GR, Sayed T. Macrolevel collision prediction models for evaluating neighborhood traffic safety. Canadian Journal of Civil Engineering, 2006.

Morrison DS, Petticrew M, Thomson H. What are the most effective ways of improving population health through transport interventions? Evidence from systematic reviews. Journal of Epidemiology and Community Health, 2003.

Task Force on Community Preventive Services. Increasing Physical Activity: A Report on Recommendations of the Task Force on Community Preventive Services. Morbidity and Mortality Weekly Report. October 26, 2001.

World Health Organization (WHO), Edited by Margie Penden, Richard Scurfield, David Sleet, et al. World Report on road traffic injury prevention, 2004. Accessed at: http://www.who.int/world-health-day/2004/infomaterials/world_report/en/

Affordable Housing

Acevedo-Garcia D, Lochner KA, Osypuk TL, Subramanian SV. Future Directions in Residential Segregation and Health Research: A Multilevel Approach. Am J of Pub Health, 2003.

Fang J, Madhavan S, Bosworth W, Alderman MH. Residential segregation and mortality in New York City. Soc Sci Med, 1998.

Gee GC, Payne-Sturges DC. Environmental health disparities: a framework integrating psychosocial and environmental concepts. Environmental Health Perspectives, 2004.

Guzman C, Bhatia R, Durazo C. Anticipated Effects of Residential Displacement on Health: Results from Qualitative Research. San Francisco Department of Public Health, 2005. Available at: http://www.sfdph.org/phes/publications/PHEs_publications.htm

LaVeist TA. Segregation, poverty, and empowerment: health consequences for African Americans. Milbank Q, 1993.

Maantay J. Zoning, equity, and public health. Am J of Pub Health, 2001.

San Francisco Department of Public Health, Program on Health, Equity, and Sustainability. The Case for Housing Impacts Assessment: The human health and social impacts of inadequate housing and their consideration in CEQA policy and practice. May, 2004. Available at: http://www.sfdph.org/phes/publications/PHEs_publications.htm

Shihadeh ES, Flynn N. Segregation and crime: the effect of black isolation on the rates of black urban violence. Soc Forces, 1996.

Economic Opportunities

Bhatia R, Katz M. Estimation of the health benefits from a living wage ordinance. *Am J Public Health*, 2001.

Cervero R, Duncan M. Which reduces vehicle travel more: jobs-housing balance or retail-housingmixing? *Journal of the American Planning Association*, 2006.

Institute of Medicine, 2004. Project on the Consequences of Uninsurance: An Overview. <http://www.iom.edu/Object.File/Master/17/736/Fact%20sheet%20overview.pdf>

Jin RL, Shah CP, Svoboda TJ. The impact of unemployment on health: a review of the evidence. *The Journal of the Canadian Medical Association*, 1995.

Lovell V. No Time to be Sick: Why Everyone Suffers When Workers Don't have Paid Sick Leave. Washington DC: Institute for Women's Policy Research, 2004.

Lynch JW, Kaplan GA, Pamuk ER, Cohen RD, Heck KE, Balfour JL, Yen IH. Income inequality and mortality in metropolitan areas of the United States. *Am J Public Health*, 1998.

Yen I, and Bhatia R. How Increasing the Minimum Wage Might Affect the Health Status of San Francisco Residents: A Discussion of the Links Between Income and Health, Working Paper, February 27, 2002.

Complete Neighborhoods

Ewing R, Frank L, Kreutzer R. Understanding the Relationship between Public Health and the Built Environment: A Report to the LEED-ND Core Committee, 2006.

Frank LD, Schmid TL, Sallis JF, Chapman J, Saelens BE. Linking objectively measured physical activity with objectively measured urban form: findings from SMARTAQ, 2005.

Kawachi I, Berkman LF. *Neighborhoods and Health*. New York: Oxford University Press, 2003.

Saelens BE, Sallis JF, Black JB, Chen D. Neighborhood-based differences in physical activity: an environment scale evaluation, 2003.

Neighborhood Safety

Lipton R, Gruenewald P. The spatial dynamics of violence and alcohol outlets. *Journal of Studies on Alcohol*, 2002.

Ozer EJ, McDonald KL. Exposure to violence and mental health among Chinese American urban adolescents, 2006.

Perez-Smith AM, Albus KE, Weist MD. Exposure to violence and neighborhood affiliation among inner-city youth, 2001.

San Francisco Safety Network. Community Survey on Public Safety . April 2006. Analysis provided by the National Council on Crime and Delinquency. Accessed on July 5, 2006 at: <http://www.safetynetwork.org/article.php?id=60>

Tree Canopy

Grant R, Heisler G, Gao W. Estimation of Pedestrian Level UV exposure under trees. Photochemistry and Photobiology, 2002.

Pacific Southwest Research Station Center for Urban Forest Research: Accessed at: <http://www.fs.fed.us/psw/programs/cufr/research/benefit.shtml>; SF Urban Forest Council 2005 Annual Report. Accessed at: www.sfenvironment.com/aboutus/openspaces/urbanforest/ufc2005_annual_report.doc

SF Urban Forest Council 2005 Annual Report. Accessed at: http://www.sfenvironment.com/aboutus/openspaces/urbanforest/ufc2005_annual_report.doc

Air Quality

B, Janssen NA, de Hartog J, Harssema H, Knappe M, van Vliet P. Air pollution from truck traffic and lung function in children living near motorways. Epidemiology, 1997.

Brauer M, Hoek G, Van Vliet P, et al. Air pollution from traffic and the development of respiratory infections and asthmatic and allergic symptoms in children. American Journal of Respiratory and Critical Care Medicine, 2002.

California Air Resources Board. Air Quality and Land Use Handbook: A Community Health Perspective. 2005. Accessed at: <http://www.arb.ca.gov/ch/handbook.pdf>

English P, Neutra R, Scalf R, Sullivan M, Waller L, Zhu L. Examining Associations Between Childhood Asthma and Traffic Flow Using a Geographic Information System. Environmental Health Perspectives, 1999.

Kim JJ, Smorodinsky S, Lipsett M, Singer BC, Hodgson AT, Ostro B. Traffic-related air pollution and respiratory health: East Bay Children's Respiratory Health Study. American Journal of Respiratory and Critical Care Medicine, 2004.

Lin S, Munsie JP, Hwang SA, Fitzgerald E, Cayo MR. Childhood asthma hospitalization and residential exposure to state route traffic. Environ Res., 2002.

Venn A, Lewis SA, Cooper M, Hubbard R, Britton J. Living near a main road and the risk of wheezing illness in children. American Journal of Respiratory and Critical Care Medicine, 2001.

Brownfields

US Occupational Safety and Health Administration. Brownfields Health and Safety. Accessed at: http://www.osha.gov/SLTC/brownfields/brnfld_qna.html#QUESTION4

Noise

Stansfeld SA, Berglund, B, Clark C, Lopez-Barrio I, Fischer P, O'hrstroïm E, Haines MM, Head J, Hygge S, Kamp I, Berry BF, and RANCH study team. Aircraft and road traffic noise and children's cognition and health: a cross-national study. The Lancet, June 4-10, 2005.

Stansfeld S, Haines M, Brown B. Noise and health in the urban environment. Rev Environmental Health, 2000.

Green and Sustainable

Bay Area Green Business program. <http://www.greenbiz.abag.ca.gov/>

DeNardo J, Jarrett AR, Manbeck HB, Beattie DJ, Berghage RD. Green roof mitigation of stormwater and energy usage. Paper number: 032305, 2003 ASAE Annual Meeting.

Environmental Protection Agency. Climate Change and Public Health. United States Office of Policy, Environmental Protection Planning and Evaluation Agency (2171) EPA 236-F-97-005, October 1997.

RE Hester and RM Harrison, eds. Environmental and Health Impact of Solid Waste Management Activities. Royal Society of Chemistry, 1st Edition, 2003.

Union of Concerned Scientists. The Hidden Cost of Fossil Fuels. Accessed: http://www.ucsusa.org/clean_energy/fossil_fuels/the-hidden-cost-of-fossil-fuels.html

8.4.4 Community Profile for the City of Richmond

The following data and information provides a profile of community health conditions in the City of Richmond.

Age Adjusted Asthma Hospitalization Rates

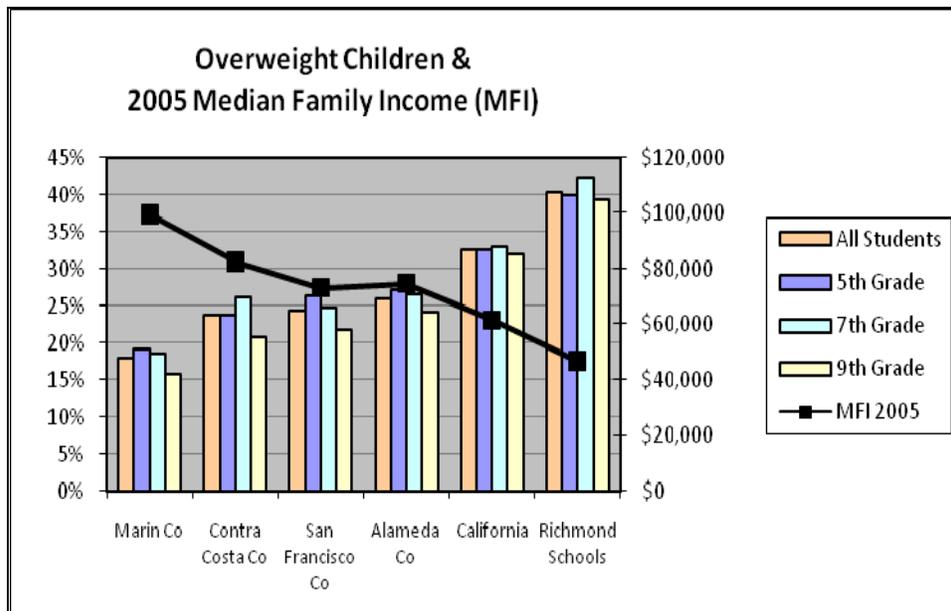
The age-adjusted asthma hospitalization rate in Contra Costa County is 21.1 per 10,000 children ages 0-14. Hospitalization rates in Richmond are far higher in all zip codes, compared to County-wide rates. African American children are hospitalized at an even higher rate, at 62.7 per 10,000 children ages 0-14.

Age-Adjusted Asthma Hospitalization Rates (1998-2000), Children Ages 0-14, Contra Costa County

Zip Code	Hospitalizations (1998-2000)	Age-Adjusted Rate per 10,000
94801	101.3	39.7
94803	47.4	31.4
94804	117.4	41.8
94805	19.5	23.2
94806	162.1	39.6
Contra Costa County		21.1

Source: Contra Costa County Health Services Department

Overweight Children and Median Family Incomes



Source: American Community Survey US Census 2005, California Physical Fitness Test 2006-07

Medically Underserved Area

The federal government recognizes the entire City of Richmond as a Medically Underserved Area (MUA).

Note: Factors that affect MUA status include: ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over.

Toxic Air Releases

In 2005, zip codes 94801 and 94804 registered 348,479.9 and 88,880.3 pounds of toxic air releases from TRI permitted facilities, together almost a 100 times higher than on-site air discharge in Berkeley’s industrial zip code 94710. Zip code 94801 also experiences higher on-site surface water discharge.

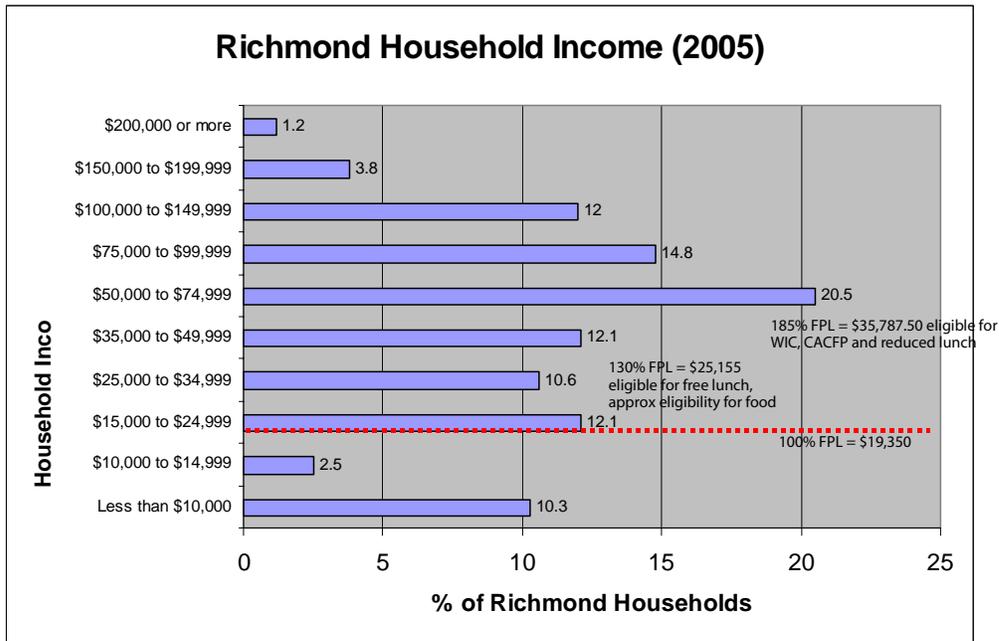
Toxic Releases					
Zip Codes	On-Site Air Discharge (Lbs.)	On-Site Surface Water Discharges (Lbs.)	Total On-Site Disposal (Lbs.)	Total Off-Site Disposal (Lbs.)	TOTAL On-and Off-Site Disposal (Lbs.)
94801	348,479.9	430,777.5	779,257.4	202,562.4	981,819.8
94804	88,880.3	0.1	88,880.4	2,665.1	91,545.5
94806	138.7	0.0	138.7	451.4	590.1
Richmond Zip Codes	438,533.3	430,777.6	869,310.9	205,951.9	1,075,262.8
West Berkeley 94710	4,437.0	0.0	4,437.0	47,456.0	51,893.0

Source: Toxic Release Inventory (TRI), CA 2005

Jobs-Housing Balance

In 2000, the ratio of the number of Richmond residents who worked in the city to the number of housing units was 0.25:1 (jobs-housing balance). In 2000, 21% of Richmond residents worked in Richmond. (Census 2000)

Household Income and Poverty



Source: US Census, American Community Survey, 2005, Richmond Income Distribution Compared to Assistance Programs (assumes a family of four)

In 2005, 15.6% of individuals and 15.2% of families in Richmond were in poverty as defined by the Federal Poverty Level (American Community Survey, 2005). In the same time period, 13.3% of individuals and 10.2% of families in the country were in poverty. In 14 (40%) of Richmond’s 35 neighborhoods, the proportion of households in poverty is higher than the city average. In 5 (14.3%) of the neighborhoods, the proportion of households in poverty is more than 30%. These neighborhoods include Park View, Panhandle Annex, Cortez/Stege, Metro Richmore Village and Coronado.

Homelessness

About 1,549 individuals in Richmond experienced homelessness each year, of which 735 were children, compared with 14,757 individuals in Contra Costa County who experienced homelessness each year, of which 7,000 were children. (2001-2006 Contra Costa County Homeless Continuum of Care Plan) Approximately 170 individuals and 95 families, including 179 children, may be homeless in Richmond on any given night.

8.4.5 Technical Advisory Group (TAG) Roles and Responsibilities

The Technical Advisory Group (TAG) will support the City of Richmond and the General Plan Advisory Committee (GPAC) to develop the Community Health and Wellness Element for the General Plan Update. Below is a description of the charge, membership, roles and responsibilities for the TAG.

TAG Roles:

- Ensure technical soundness of research and assessment methodology.
- Ensure quality work products.

TAG Membership:

The TAG members were selected by the project team to represent diverse interests in the areas of planning, health and the community. The TAG included the following representatives:

- Richard Jackson, MD, MPH, Adjunct Professor, School of Public Health, UC Berkeley
- Richard Kreutzer, MD, Branch Chief, Environmental Health Investigations Branch, California Department of Health Services
- Wendel Brunner, MD, Public Health Director, Contra Costa Public Health
- Poki Stewart Namkung, MD, MPH, Public Health Officer, Santa Cruz County Health Services Agency; and President of the National Association of County and City Health Officials (NACCHO)
- Dennis M. Barry, Director, Contra Costa County Community Development
- Richard Mitchell, Planning Director, City of Richmond
- Victor Rubin, PolicyLink
- Sharon Fuller, Ma'at Academy
- Sheryl Lane, Urban Habitat
- Barbara Becnel, North Richmond Neighborhood House
- Delphine Smith, Communities for a Better Environment

TAG Responsibilities:

- Review meeting materials and participate in discussions.
- Attend up to five (5) TAG meetings.