

**CITY OF OAKLAND**  
**AGENDA REPORT**

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2003 SEP 18 PM 1:51

TO: Office of the City Manager  
ATTN: Deborah Edgerly  
FROM: Community and Economic Development Agency  
DATE: September 30, 2003

RE: **SUPPLEMENTAL REPORT ON THE ENVIRONMENTAL HAZARDS  
ELEMENT (ALSO KNOWN AS THE SAFETY ELEMENT) OF THE  
OAKLAND GENERAL PLAN**

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**SUMMARY**

On May 27, 2003, staff from the Community and Economic Development Agency (CEDA), Planning and Zoning Division, presented an informational report to the Public Safety Committee regarding the update to the environmental hazards element (also known as the safety element) of the Oakland General Plan. Before receiving the report and forwarding it to the City Council, the Committee requested that staff consider broadening the scope of the document to cover the issues of concentration of poverty and rising crime rates in the event that those issues are not already included in other elements of the City's General Plan or in other City plans. Committee members also requested that staff provide information regarding crime prevention in the general plan of the City of Long Beach. This report responds to those two requests by the Committee.

**BACKGROUND**

California state law requires that all cities and counties prepare a general plan to guide their physical growth and development. By law, general plans must consider the risks and hazards to a community from fires, flooding and all known seismic and geologic conditions, and propose measures to mitigate the impacts of those hazards. To conform with that requirement, the City adopted an "Environmental Hazards" element in September 1974 as part of the City's General Plan. That document has never been updated until now.

The purpose of the environmental hazards element is to minimize the loss of life, injuries and property damage. Given the element's purpose, the Public Safety Committee believes that the element should also include crime-related issues (specifically, the concentration of poverty and rising crime rates) provided that those issues are not already covered in other elements of the City's General Plan or in other City plans.

**STAFF RESPONSE**

To respond to the Committee's direction, CEDA Planning and Zoning staff have queried City agencies to determine the extent to which other plans or other General Plan elements consider

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the issues of concentration of poverty and rising crime rates. Staff have identified two City documents that address those issues extensively:

- I. To deal with rising crime rates, the Department of Human Services recently completed a Violence Prevention Plan (VPP) to address the root causes of violence in the community. The plan, prepared in collaboration with the Oakland Police Department, contains six policy areas: (1) prevention and positive alternatives for youth; (2) breaking the cycle of family violence and sexual assault; (3) adult and young offenders initiatives; (4) reducing access to illegal weapons; (5) reducing the negative impact of alcohol and drug abuse; and (6) community-building and problem-solving strategies. For each policy area, the plan identifies several implementation strategies; and each strategy establishes objectives, activities or next steps, partners or participants, and target dates for implementation. The VPP was recommended for adoption by the Public Safety Committee at its meeting of July 22, 2003, and was adopted by the City Council at its meeting of July 29, 2003.
- II. At its meeting of July 15, Council considered a report on the draft housing element of the City's General Plan (also currently being prepared by CEDA). As part of its consideration, Council directed staff to address the issue of concentration of poverty in the housing element. Staff is now scheduled to return to Council on October 7, 2003, with a supplemental report responding to the Council's direction. While the supplemental report on the housing element is still in draft form (as of the preparation of this report), it will discuss the following topics related to the concentration of poverty:
  - The concentration of poverty considered City-wide, from a regional perspective: On October 7, staff will report on the Association of Bay Area Government's process for determining "fair share" allocations of lower-income housing among all the jurisdictions in the San Francisco Bay Area.
  - The concentration of poverty in pockets of the City: Staff will discuss local programs and policies to ameliorate concentrations of poverty in Oakland, including the dispersion of assisted housing, recent changes to the City's and Oakland Redevelopment Agency's affordable-housing development funds program; reconstruction of the Oakland Housing Authority's largest public housing developments; the "Section 8" voucher program for low-income households; and the recently adopted density-bonus ordinance.
  - Policies to encourage a balance between home-ownership and rental housing: Staff will discuss policies related to the provision of affordable-homeownership opportunities; to programs designed to preserve and improve the existing single-family housing stock; and to infill development.

Given the recent adoption by the City of the VPP (see paragraph I above) and in-progress revisions to the draft housing element, CEDA believes that it would be redundant for the environmental hazards element to address the issues of rising crime rates or of the concentration of poverty. In response to the Committee's second request, attached are the "Crime Prevention" chapter from the City of Long Beach's *Public Safety Element* (Attachment 1) and recommendations related to crime prevention from the same document (Attachment 2).

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Unfortunately, the Long Beach document is almost thirty years old (it is dated May 1975) and contains far fewer, and far less-detailed, policies for reducing crime than the VPP.

**ACTION REQUESTED OF THE CITY COUNCIL**

This is an informational report only and requires no action.

Respectfully submitted,



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Claudia Cappio  
Director of Development

Prepared by:  
Niko Letunic, project manager  
Planning and Zoning Division

APPROVED AND FORWARDED TO THE  
CITY COUNCIL

  
\_\_\_\_\_  
Office of the City Manager

- Attachments: (1) "Crime Prevention" chapter from the City of Long Beach's *Public Safety Element*  
(2) Recommendations related to crime prevention in the City of Long Beach's *Public Safety Element*

## VI. CRIME PREVENTION

The major emphasis in this chapter will be on the matter of crime prevention through physical planning. Operational matters regarding specific programs or staffing will not be discussed at length as specialists within the Police Department can best address such subjects. Background information regarding the organizational framework of the Police Department and crime statistics is presented, however, so as to establish a better understanding of the existing status of law enforcement in Long Beach.

### Police and Society

As civilization developed and people began to live together in an organized fashion, the need for rules and regulations inevitably became apparent. Thus, laws were created establishing constraints upon individual freedoms for the mutual good and safety of all the people. The laws alone accomplished very little in the way of controlling anti-social behavior. The established laws needed to be enforced if they were to be effective. Thus, society created the policeman. Although the title was changed from time to time and from one geographical area to another, the "policeman" has been with us through all of civilization. The provision for law enforcement did not completely fulfill desires for order, harmony, and public safety, however. To accomplish criminal justice, impartial courts were needed to decide guilt or innocence and determine the penalties to be imposed upon offenders. This action, of course, created another problem: how does society handle offenders? Death, confinement, or other

constraints upon individual freedom have been the general courses of action, the theory supposedly being that punishment of the offenders would teach them "right" from "wrong" and "good" from "bad." The severity of the punishment was determined by how much the offender needed to "learn." In recent years, modern society has emphasized rehabilitation rather than merely punishment for criminal offenders, although many do not hold to this view. Various preventative measures have also been recognized by society as a means of reorienting young people away from criminal tendencies. Improved educational and employment opportunities exemplify such preventative and remedial strategies.

The above discussion was not intended to be a historical report on criminal justice. The intention was to establish two major points in regard to the role of police in society. First, it should be recognized that the need for law enforcement and safety from crime is as old as society itself. Secondly, the entire process of criminal justice and crime prevention involves more than just police. Crime as it relates to personal safety in urban areas, must include participation from various disciplinary fields as well as the citizenry at large.

#### Long Beach Police Department ★

The Long Beach Police Department has a current staff of 935 personnel. Of this number, 280 are classified as patrolmen. The complete breakdown of police department personnel by division is shown in Table 6. Overall, the police manpower per capita is 1.94 per 1000 population.<sup>1</sup> While this figure is lower than the national average, the west coast as a whole has traditionally maintained smaller law enforcement offices than many other portions of the nation.

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<sup>1</sup>This figure is based on the total number of sworn police personnel and the most current City Planning Department population estimates.

TABLE 6  
POLICE DEPARTMENT PERSONNEL BY DIVISION, 1974

Division	Numerical Strength
Administration	95
Records Division	65
Jail Division	61
Communications Division	91
Vice Division	39
Juvenile Division	62
Detective Division	97
Traffic Division	146
Patrol Division	279
Watch No. 1	71
Watch No. 2	75
Watch No. 3	133
Total Personnel	935 <sup>(1)</sup>

Source: City of Long Beach Police Department, Monthly Statistical Report (Long Beach, California, December, 1974).

(1) Of this total figure only 678 are sworn police personnel.

In terms of internal organization, Long Beach is undoubtedly rather typical in its division of labor and assignment of duties. The fact that all Police Department functions are located in one municipal building tends to facilitate communications and coordination of activities.

#### Crime in Long Beach

Crime statistics are complex, confusing, and often misleading. In attempting to compare or analyze crime data, difficulties arise as a result of differences in reporting procedures, political boundaries, operational policies, population groupings and other factors. The F. B. I. annually publishes a "Uniform Crime Report for the United States." Being cognizant of the various factors which

might lead to misinterpretation of statistics, the F.B.I. admonishes the reader against drawing conclusions from crime figures without first considering the factors involved. In any given area of consideration, various conditions exist which will affect the extent of crime and the type of crime that occurs. Some of the more significant conditions that affect crime include the following:

- Density and size of the community population;
- Economic status and values of the population;
- Age, sex, and ethnic composition of the population and the surrounding populations;
- Stability of the population;
- Educational, and cultural characteristics of the population;
- Effectiveness and strength of the police force;
- Attitude of the public toward law enforcement problems;
- Opportunity to successfully commit an offense.

All crimes are divided into two major categories entitled Part I and Part II. Part I consists of the most serious crimes including homicide, rape, robbery, assault, burglary, larceny, and auto theft. The Part II category includes such events as malicious mischief, suicide attempts, accidental injuries, accidental deaths, missing persons, and others. During the year of 1974, a total of 25,916 Part I offenses and 9,560 Part II offenses were committed in Long Beach. Of this total, 3,749 Part I and 3,671 Part II offenses were cleared by arrest.<sup>2</sup> The more serious Part I crimes not only present the greatest threat to the public safety from the standpoint of frequency of occurrence, but also pose the greatest problem in apprehension and arrest.

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<sup>2</sup>City of Long Beach, Police Department, Monthly Statistical Report (Long Beach, California, December, 1974).

Part I crimes, which are of primary concern to the Police Department, are not increasing as rapidly in Long Beach as in many other cities throughout the nation. However, every effort is being made to provide sufficient forces, equipment and new techniques of police enforcement to cope with increased criminal activity. Table 7 shows a breakdown of Part I crimes for the years between 1967 and 1974.

The rate of criminal activity fluctuates throughout the City. Generally, violent and serious crimes have occurred more frequently in and surrounding the central business district (CBD), North Long Beach, and the area west of the Los Angeles River. In the CBD the socio-economic status, particularly with respect to substantial transient movement, appears to have been a contributing factor to the rather high crime rate. This situation presents special problems for the City in protecting the many senior citizens living in the area. As in many lower socio-economic neighborhoods of American cities, many permanent residents have problems caused by limited economic resources. Revitalization and renewal in this portion of the City should contribute positively to a deterrence of criminal activities.

North Long Beach as well as the area west of the Los Angeles River have experienced an increased crime rate of relatively recent origin. It is postulated that much of the increase in criminal activity is spill-over from the neighboring cities to the north. This entire matter of spill-over cannot be ignored. Past experiences of the Police Department indicate that activities in adjacent municipalities can have a substantial effect upon the crime rate of Long Beach. For example, a 1972 Crime-Specific Burglary Program in the City of Bellflower, which consisted of a door-to-door campaign to inform citizens of



TABLE 7  
PART I CRIME RATE  
PER

100,000 POPULATION 1967-1972

Year	Total	Murder	Rape	Robbery	Aggravated Assault	Burglary	Larceny	Auto Theft
1967	3746	6.72	32.77	259.10	160.78	1558.8	2446.7	776.1
1968	4105	10.34	40.50	279.05	152.51	1677.6	2991.1	793.5
1969	4113	9.18	52.64	251.53	143.73	1625.1	2936.3	797.4
1970	4395	9.73	37.22	331.6	158.88	1797.5	3300	882.5
1971	4732	10.53	36.01	409.9	193.07	2000.8	3365.1	956.1
1972	5145	18.50	48.61	469.6	196.40	2214.3	2882.1	935.3
1973 <sup>(1)</sup>	6629	15.27	47.78	486.1	212.50	2183.8	2750.3	932.2
1974 <sup>(1)</sup>	7405	11.42	53.71	520.0	258.0	2326.6	3238.0	994.6

Source: City of Long Beach, Police Department.

(1) Crime rates for 1973 and 1974 were computed on the basis of City Planning Department population estimates for those years.

burglary prevention techniques and devices, resulted in the apparent displacement of criminals to other communities. Residential burglaries in the City of Long Beach increased by over 20 percent in that year. While a minimal increase could have been anticipated, such a disproportionate increase can only be attributed to outside factors. The primary point to be made is that Long Beach cannot deal with the crime problem in isolation from neighboring communities within the Los Angeles Basin.

By contrast to the above mentioned areas, east Long Beach, Bixby Knolls, the Harbor area, and most other portions of the City are experiencing an increase in crime against property as opposed to the more serious violations against persons.

#### Crime Prevention Through Physical Planning

Traditionally, crime has been viewed as a symptom of other factors which needed to be corrected. Police personnel are almost solely involved in the apprehension of criminals and the suppression of crime. The matter of crime prevention was primarily limited to initiating social programs, rehabilitating offenders, tightening security and the like. Additional patrolmen would be added to a force, more sophisticated equipment utilized, and residents sometimes educated with regard to security hardware such as special locks and article identification. In terms of urban form and the quality of life in urbanized areas, this traditional approach has often resulted in the construction of fortresses which isolated the residents from the surrounding community.

An example of this new lifestyle was presented by the National Commission on the Causes and Prevention of Violence: One new high cost subdivision under construction outside Washington, D.C. will be guarded by electronic alarms. The

entire development will be surrounded by two fences, broken for entry at only two points, both with guardhouses. Residents will be telephoned to approve visitors. The two miles of fencing will be surveyed by a closed circuit television system and fortified by hidden electronic sensors. All residents will carry special credentials for identification.<sup>3</sup>

In view of the above described dilemma, it has become increasingly apparent that the matter of crime prevention needed to be expanded and that new approaches needed to be explored for effectuating a crime resistant environment that is also pleasant in other respects. Policing and urban planning could no longer remain isolated functions within a municipality. It is interesting to note that while Planning Departments have traditionally maintained liason with Departments of Fire, Building and Safety, and Community Development, law enforcement has remained somewhat removed from the planning process. While this interaction is now only in its infancy, a number of research projects have been completed and the findings in many instances offer insight for both police and planning personnel.

Much of the research conducted in this field is based upon the premise that for a crime to occur, three fundamental ingredients are necessary: motive, ability, and opportunity. Programs devised to treat various social ills are primarily focused upon the motives of crime. The ability to commit a crime is, to a large extent, a function of having the opportunity. Thus, research was oriented toward the reduction of crime via the removal of opportunity, without sacrificing community cohesion or environmental quality.

Perhaps the most noteworthy single author on the subject of crime prevention via physical design is Oscar Newman, a New York city planner and architect, who has

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<sup>3</sup>National Advisory Commission on Criminal Justice Standards and Goals, Community Crime Prevention, (Washington, D.C., January, 1973). p. 195.

published a book entitled Defensible Space. Additionally, an excellent summary of information regarding the subject was compiled by the National Advisory Commission on Criminal Justice Standards and Goals. As a result of their efforts, this body set forth recommendations for various aspects of crime prevention. Locally, the Southern California Association of Governments (SCAG) authored a "Study of Crime Prevention Through Physical Planning" in 1971. These sources can be examined by those who wish to have more detailed information.

While independent, academic research was not possible within the scope of this Safety Element, the matter of public safety would not be complete without directing attention to the most significant findings of other research efforts. The facts, concepts, and recommendations, as discussed below, will be incorporated in the land use allocation process, the formulation of housing policy, and other general plan activities.

In regard to criminal behavior as it relates to land uses, the following factors are of significance:

- ° Criminal offenders tend to chose the "place" over the "victim." The location is of greatest concern to the offender. ✱
- ° Outside surveillance indicators tend to deter criminals more than inside surveillance devices.
- ° An offender will tend to select a neighborhood and specific site where opportunities for committing a successful offense are best.

In examining the location of criminal activity, the following information is applicable to land use and urban design considerations:

- ° Less violent crime or even anti-social behavior occurs in parks than on the streets. Access to recreation areas appears to be of greater concern than the design of the park itself.

- "The implementation of an adequate lighting system has been shown to have some correlation with the reduction and deterrence of crime."<sup>4</sup>
- Within most high-crime areas, most criminal activity actually occurred at certain, limited spots where opportunity was best. In other words, a high-crime area may be only deficient at a single location due to circumstances of the physical setting.

An examination of the available information clearly indicates that opportunity is directly correlated with actual criminal activity and that through the planning process, opportunity can be substantially lessened. Physical design can be accomplished in such a manner that it contributes to the creation of public spaces that serve to deter, rather than encourage crime. Specific areas of consideration should include but not be limited to the following:

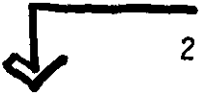
- Public access to parks and other urban uses should be designed in such a manner that surveillance is enhanced. On-street parking, foyers, and similar enclaves should be minimized.
- In multi-family structures, design provisions should be made to allow mutual surveillance. Common areas and entrance ways should be well lighted and in open view.
- Improved street lighting and pedestrian path illumination should be provided in public areas.
- Abandoned and vacant buildings should be demolished to reduce availability to potential violators.

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<sup>4</sup>Ibid. p. 198.

zoned R-4. While zoning involves the consideration of numerous other factors, fire safety should be a major factor influencing any changes in the existing zoning regulations.

19. New development should be responsive to seismic considerations. (See Seismic Safety Element).
20. Pre-1933 structures should continue to be the first priority for recycling.
21. Crime is associated with an unstable population element and efforts should be made in the planning process to encourage developments that would tend to stabilize an area.
22. Special considerations should be given to the needs of senior citizens, particularly in the downtown area. Specific areas should be designated in the land use allocation model for development of senior citizen centers, which could include residential and localized commercial uses. Public transportation should be readily available to allow access to other areas of the City.
23. In terms of crime prevention, access to recreation areas appears to be of greater concern than the design of a park or recreation site. Therefore, public access to parks and other urban uses should be designed in such a manner that surveillance is enhanced. On-street parking, foyers, and similar enclaves should be minimized.
24. In most high crime areas, much criminal activity actually occurred at certain, limited spots where opportunity was best. These locations should be identified and corrected in terms of the land usage.



25. In Multi-family structures design provisions should be made to allow for mutual surveillance. Common areas and entrance ways should be well lighted and in open view.
26. Improved street lighting and pedestrian path illumination should be provided in public areas.
27. Abandoned and condemned buildings should be demolished to reduce availability to potential law violators.
28. Parking garages should be located in close proximity to activity centers.
29. Public areas should be improved so as to attract increased numbers of people and promote high activity levels, thereby increasing the number of observers which promotes increased safety.
30. Activity nodes should be centralized so as to avoid isolated crime opportunities.
31. Neighborhood identity should be enhanced to encourage cohesion, so that potential violators might be more easily identified.
32. Landscaping that would hinder visibility or increase user fear should be avoided.
33. To assure comprehensive project review, Police Department personnel should become even more involved in the planning and development process. Proposed developments, street alterations, public facilities, and other similar projects should not be implemented without input from police personnel.
34. Consideration should be given to incorporating security factors into the existing building code. The inclusion of such security considerations is



particularly important for developments in areas which are experiencing an increasing rate of serious crimes.

35. Industrial land uses should be isolated or well buffered from any adjoining residential uses.
36. Through physical planning and spatial design (e.g. set-backs, or natural barriers), an effort should be made to buffer all urban uses from routes designated for transporting dangerous fluids, chemicals, or explosives.
37. Above ground fuel storage facilities should not be located in close proximity to the flight pattern at the Long Beach Airport.
38. Through the media, public education programs, citizen participation, and other lines of communication, a greater dissemination of safety information should be implemented.
39. It is recommended that the City encourage the use of new technology in the area of Public Safety.

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SEP 30 2003



**CITY OF OAKLAND**  
**AGENDA REPORT**

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2003 MAY 15 PM 6:40

TO: Office of the City Manager  
ATTN: Robert C. Bobb  
FROM: Community and Economic Development Agency  
DATE: May 27, 2003

RE: **INFORMATIONAL REPORT ON THE UPDATE TO THE SAFETY ELEMENT OF  
THE CITY OF OAKLAND'S GENERAL PLAN**

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**SUMMARY**

In December 2002, the Community and Economic Development Agency (CEDA), Planning and Zoning Division, began updating the safety element of the City of Oakland's General Plan. The safety element is a policy document meant to guide the city's physical growth and development with a view toward mitigating the impacts of natural and technological hazards. This will be the first update to the original safety element, adopted in September 1974. The project is expected to last approximately 12 months. The current update will examine issues related to seismic and other geologic hazards; flooding; urban and wildland fires; building hazards; hazardous materials; toxic air contaminants; emergency planning, preparedness and response capabilities; and risks to critical transportation and utility facilities.

**FISCAL IMPACT**

Since this report is informational only, no fiscal impacts are included.

**BACKGROUND**

The General Plan is a city's "constitution," providing the framework for decision-making regarding its physical growth and development. California state law requires that a general plan address locally relevant planning issues categorized under seven "elements," or subject categories. These elements are: land use, circulation, housing, conservation, open space, noise and safety.

The purpose of the safety element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-caused hazards such as earthquakes, fires and accidental releases of hazardous materials. State law mandates that safety elements examine issues related to risks associated with:

- Seismically induced surface rupture, ground shaking and failure, tsunamis, seiches, and dam failure;
- Slope instability leading to mudslides and landslides;
- Subsidence, liquefaction, and other seismic hazards and known geologic hazards;
- Flooding; and
- Wildland and urban fires

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In addition, safety elements must address the following considerations as they relate to known fire and geologic hazards: evacuation routes and signage; peak-load water supply requirements; minimum road widths and turnouts; and clearances around structures.

The City's original safety element, titled "Environmental Hazards: An Element of the Oakland Comprehensive Plan," was adopted in 1974 and has never been updated. Since then, land use patterns in Oakland have changed, Oakland's population and economy have expanded, and the City has experienced crippling natural disasters, including the 1989 Loma Prieta earthquake and a devastating firestorm in 1991. Also, as Oakland has grown, so have the potential costs to the City of future disasters.

### KEY ISSUES

The following are several issues pertaining to the update of the safety element that staff believes the Committee should be aware of:

- General plan elements are intended to guide the physical development of cities and counties. Crime and terrorism, two high-profile issues, both of which are related to public safety, will not be covered in the safety element because of their weak connection to physical planning and development.
- CEDA originally intended to update the safety and noise elements at the same time—the noise element has not been updated since its adoption in 1974 either—and to fold them into a single element. Unfortunately, the project budget has not allowed for such a broad work scope. Instead, the noise element will be updated separately once additional resources become available.
- Emergency response will not be dealt with in great detail, as the City's Office of Emergency Services (OES) last year prepared a comprehensive emergency plan for Oakland. However, the safety element will cover any issues related to disaster management and the performance of critical transportation, utility and public service facilities that were not considered in the OES plan.
- The update process is bound to raise thorny or controversial issues during the policy development phase, including the existence of non-conforming land uses; appropriate buffer zones around facilities that use or store hazardous materials; the design and potential use of streets in the Oakland Hills as emergency access and exit routes; the development potential of identified high-risk areas; incentives for the seismic retrofit of residential structures; and erosion-causing drainage from hillside properties.

### PROJECT DESCRIPTION

To conform to State mandates, the City's safety element will cover all the issues outlined above. In addition, the element will cover the following "optional" safety issues which staff has deemed to be locally relevant and related to the physical development of the City (see attachment 1 for an outline of the safety element):

- Structural hazards presented by residential, commercial, industrial and institutional buildings;

- The generation, use, storage, transport and disposal of hazardous materials and waste; and
- Air quality, to the extent that local regulations are related to this issue, and with a focus on toxic air contaminants, pollution hot spots, and large-quantity accidental releases of pollutants.

The first phase of the project, expected to last through July 2003, involves the collection of background information; analysis of existing conditions (including relevant laws, regulations, requirements, plans and programs, their strengths and shortcomings, and opportunities and constraints); and identification of specific hazards, risks and vulnerable areas and population segments. Much of the background data the City needs to perform analyses for the safety element already exists but will need to be compiled from a variety of regional, state and federal government agencies. Following the gathering and interpretation of background information, the public will be invited to comment on a draft analysis of existing conditions. (See attachment 2 for a sample of information currently being made available to the public through the safety element's webpage, at <http://www.oaklandnet.com/government/SE/default.html> .)

The second phase of the project, expected to last through December 2003, will consist of developing policies and implementation strategies to reduce risks for new development projects, mitigate risks in developed areas to acceptable levels, and minimize disruption and expedite recovery following a disaster. Staff from various City and other agencies and interested members of the public will be invited to help formulate policies and strategies to implement the safety element. The public will also have an opportunity to review and comment on a draft of the updated element, and on its adoption by the Planning Commission and City Council.

#### **SUSTAINABLE OPPORTUNITIES**

The update to the safety element will address environmental, social equity and economic opportunities as follows:

- Environmental: The City's efforts to mitigate the future impacts of floods, fire, accidental releases of hazardous materials and other natural and human-caused disasters can be expected to result in improvements in environmental quality and public health.
- Social equity: The update to the safety element will consider impacts to disadvantaged populations and areas of the City, including the interaction of industrial and residential land uses in West Oakland and the Fruitvale/San Antonio waterfront.
- Economic: By reducing the amount of property damage, and economic and social dislocation resulting from natural and human-caused hazards, the safety element update can be expected to yield obvious economic benefits.


#### **DISABILITY AND SENIOR CITIZEN ACCESS**

The update to the safety element will have no obvious impacts on equal opportunity and access to City programs, services and activities by senior citizens or people with disabilities.

**ACTION REQUESTED OF THE CITY COUNCIL**

This is an informational report only and requires no action.

Respectfully submitted,

  
Robert C. Bobb, City Manager for the  
Community and Economic Development Agency

APPROVED AND FORWARDED TO THE  
PUBLIC SAFETY COMMITTEE

Prepared by:  
Niko Letunic, project manager  
Planning and Zoning Division

Attachments: (1) Outline of the safety element  
(2) Fact sheet about the update to the safety element

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~~MAY 27 2003~~

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- DIRECTORY OF GOALS, POLICIES AND ACTIONS

## 1 INTRODUCTION

Context for the safety element

The update process

Relationship to other plans and programs

Geographic scope

Organization of the safety element

Implementing the safety element

Amending and updating the safety element

## 2 GEOLOGIC HAZARDS

### Overview

LOCAL GEOLOGIC ZONES AND SOILS

TYPES OF GEOLOGIC HAZARDS

RELATIONSHIP BETWEEN GEOLOGIC HAZARDS AND OTHER HAZARDS

### Institutional framework

#### FEDERAL

US Geologic Survey

US Natural Resources Conservation Service

#### STATE OF CALIFORNIA

State Division of Mines and Geology

California Geological Survey

California Seismic Safety Commission

Alquist-Priolo Special Studies Zone Act of 1972

Seismic Hazard Mapping Act of 1990

#### ASSOCIATION OF BAY AREA GOVERNMENTS

#### CITY OF OAKLAND

Grading ordinance

Subdivision regulations

Development review

### Seismic hazards

EARTHQUAKE MEASURING AND MONITORING

LOCAL CONDITIONS

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PUBLIC SAFETY CMTE.

MAY 27 2003

## EARTHQUAKES IN THE BAY AREA

Pre-20<sup>th</sup> Century earthquakes

The Great San Francisco Earthquake of 1906

The 1989 Loma Prieta Earthquake

SURFACE RUPTURE

GROUND SHAKING

LIQUEFACTION

OTHER

### **Non-seismic geologic hazards**

SLOPE INSTABILITY

EROSION

SUBSIDENCE

OTHER

### **Analysis of geologic hazards**

LOCAL GEOLOGIC ZONES AND SOILS

ACTIVE AND POTENTIALLY ACTIVE FAULTS

GROUND-SHAKING INTENSITY

AREAS SUBJECT TO LIQUEFACTION

ACTIVE AND POTENTIALLY ACTIVE LANDSLIDES

#### **Figure 2.1: Seismic hazards map**

- Local geologic zones
- Active and potentially active faults
- Epicenter, fault location, date and magnitude of historic local earthquakes
- Alquist-Priolo special study zones, and earthquake-hazard severity zones
- Estimated seismic ground response
- Areas with liquefaction potential

#### **Figure 2.2: Other geologic hazards map**

- Local soils zones
- Active and potentially active landslides
- Locations of other ground-failure events

## **3 STRUCTURAL HAZARDS**

### **Overview**

#### **Institutional framework**

STATE OF CALIFORNIA

SB 547 (Unreinforced masonry buildings)

Alquist-Priolo Act

Field Act of 1933

CITY OF OAKLAND

Building code

Ordinances and regulations

#### **Potentially hazardous building types**

UNREINFORCED MASONRY

"SOFT-STORY"

CONCRETE TILT-UP

NON-DUCTILE CONCRETE-FRAME

STEEL-FRAME

HISTORIC BUILDINGS

## **Building types by use**

RESIDENTIAL  
COMMERCIAL  
CIVIC, PUBLIC/SEMI-PUBLIC AND INSTITUTIONAL  
INDUSTRIAL

## **Lifeline facilities**

WATER SUPPLY  
GAS AND ELECTRICITY  
TRANSPORTATION  
SEWAGE COLLECTION  
TELECOMMUNICATIONS

## **Analysis**

VULNERABLE RESIDENTIAL AREAS  
VULNERABLE COMMERCIAL AND INDUSTRIAL AREAS  
SPECIFIC VULNERABLE PUBLIC BUILDINGS

### **Figure 3.1: Structural hazards map**

- Generalized location of UMBS
- Census tracts by percent of housing units in pre-1939 structures of at least three units
- Census tracts by estimated number of pre-1939 commercial and industrial masonry buildings
- Schools, auditoria and other assembly buildings
- Major transportation and lifeline facilities
- Alquist-Priolo special studies zones, zones by ground-shaking intensity, and areas with liquefaction and landslide potential

## **4 FIRE**

### **Overview**

MAIN CAUSES AND TYPES OF FIRES  
Wildland/brush  
Urban and industrial  
PRIMARY VULNERABILITIES  
1991 OAKLAND HILLS FIRE  
RELATIONSHIP TO EARTHQUAKE HAZARD

### **Institutional framework**

STATE OF CALIFORNIA  
California Department of Fire and Forestry  
State Fire Marshall  
Office of Emergency Services  
CITY OF OAKLAND  
Oakland Fire Department  
Other departments  
CODES AND STANDARDS  
MULTI-AGENCY COOPERATION

### **Local fire-fighting capacity**

FIRE STATIONS  
PERSONNEL  
EQUIPMENT  
INFRASTRUCTURE  
RESPONSE

## **Fire prevention**

### WILDLAND/BRUSH FIRES

- Buffer Zones
- Vegetation Management
- Other Strategies

### URBAN AND INDUSTRIAL FIRES

- Building codes
- Mid- and high-rise buildings

## **Fire hazard analysis**

### FIRE SAFETY INSURANCE RATING

### PEAK-LOAD WATER SUPPLY REQUIREMENTS

### WILDLAND/BRUSH FIRE HAZARD AREAS

- Evacuation Routes

### URBAN FIRE HAZARD AREAS

### **Figure 8.1: Fire hazards map**

- Fire stations and response-time areas
- Wildland fire-hazard areas
- Urban fire-hazard areas
- Evacuation routes

## **5 FLOODING**

### **Overview**

#### LOCAL HYDROLOGY

#### TYPES AND CAUSES OF FLOODS

#### FLOODING IN OAKLAND

### **Institutional framework**

#### FEDERAL

- National Flood Insurance Act of 1968
- Flood Disaster Protection Act of 1973
- National Flood Insurance Program (FEMA)
- US Army Corps of Engineers

#### STATE OF CALIFORNIA

- Cobey-Alquist Flood Plain Management Act
- Division of Safety of Dams (Department of Water Resources)
- Office of Emergency Services

#### ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

#### CITY OF OAKLAND

- Creek protection, storm water management and discharge control ordinance
- Subdivision regulations
- Other regulations
- Public Works Agency
- Office of Emergency Services

### **Types and causes of floods**

#### STORM-INDUCED FLOODING

#### DAM OR RESERVOIR FAILURE

#### TSUNAMIS

#### SEICHES

#### OTHER

### **Analysis of flooding hazards**



STORM-INDUCED FLOODING  
DAM OR RESERVOIR FAILURE  
TSUNAMIS  
SEICHES  
OTHER

**Figure 5.1: Storm-induced flooding hazards map**

- Watersheds and major creeks
- Major drainage channels and other flood-control facilities
- Lakes, ponds and other water-holding facilities
- Areas subject to 100- and 500-year floods

**Figure 5.2: Other flooding hazards map**

- Areas susceptible to inundation from a tsunami
- Areas susceptible to inundation from dam or reservoir failure
- Evacuation routes in case of dam or reservoir failure
- Areas susceptible to inundation due to rising sea levels

## 6 HAZARDOUS MATERIALS

### Overview

DEFINITION AND TYPES

IMPACTS TO HEALTH

SOURCES AND EXPOSURE METHODS

RELATIONSHIP TO OTHER HAZARDS

### Institutional framework

#### FEDERAL

US Environmental Protection Agency

Resource Conservation and Recovery Act (RCRA)

Comprehensive Environmental Response, Compensation, and Liability Act  
(CERCLA; Superfund)

Superfund Amendments and Reauthorization Act (SARA)

#### STATE OF CALIFORNIA

Department of Toxic Substances Control

Department of Health Services

Hazardous Waste Control Act (HWCA)

Unified Hazardous Waste and Materials Management Regulatory Program

Hazardous Materials Release Response Plans and Inventory Act (1985)

Other

#### REGIONAL

Alameda County

Association of Bay Area Governments

Bay Area Air Quality Management District

San Francisco Regional Water Quality Control Board

#### CITY OF OAKLAND

### Major sources

MOTOR-VEHICLE-RELATED FACILITIES

LEAKING UNDERGROUND STORAGE TANKS

MANUFACTURING OPERATIONS

ABANDONED CONTAMINATED SITES

HOUSEHOLDS AND SMALL BUSINESSES

ILLEGAL DISPOSAL

### **Management of hazardous materials/waste**

MANAGEMENT HIERARCHY

SITING OF FACILITIES

GENERATION, USE AND STORAGE

TRANSFER AND TRANSPORT

DISPOSAL

ACCIDENTAL RELEASES

CLEAN-UP

### **Land use conflicts**

INCOMPATIBLE LAND USES

SENSITIVE RECEPTORS

ZONING POLICIES

### **Analysis of risks**

CONTAMINATED SITES

TRANSPORT-RELATED ACCIDENTS

OTHER ACCIDENTAL RELEASES

#### **Figure 6.1: Hazardous materials overview map**

- Federal Superfund sites
- CalEPA hazardous wastes and substances sites
- DHS-designated hazardous wastes sites
- Governor's OPR list of hazardous-wastes and substances sites
- Brownfield sites
- Location of permitted underground storage tanks
- Major users or generators of hazardous materials
- Permitted generators of hazardous wastes and toxic pollutant emissions
- Fuel leak sites

#### **Figure 6.2: Hazardous materials risk analysis map**

- Truck and rail transport routes, and major destinations
- Location of high-pressure natural gas lines and petroleum pipelines
- Permitted facilities using "acutely hazardous materials"
- Industrial and residential zoning
- Sensitive receptors

## **7 TOXIC AIR CONTAMINANTS**

### **Overview**

DEFINITION

HEALTH EFFECTS

PRIMARY SOURCES

AIR-RELATED ISSUES NOT CONSIDERED IN THE SAFETY ELEMENT

### **Institutional framework**

FEDERAL HAZARDOUS POLLUTANT EMISSION STANDARDS (NESHAP/MACT)

STATE OF CALIFORNIA

Air toxics control measures (AB 1817; CARB/BAAQMD)

AB 2588 (Tanner)

SB 1731

BAY AREA

Air toxics "hot spots" program and emissions inventory (AB 2588/Tanner)

Review of new and modified sources (BAAQMD)  
Risk reduction audits and plans (SB 1731; BAAQMD)  
Risk evaluation procedures and risk management policies (BAAQMD)  
Ambient monitoring network (BAAQMD)

CITY OF OAKLAND

**Major indirect sources**

FREEWAYS AND OTHER MAJOR THOROUGHFARES  
PORT OF OAKLAND'S SEAPORT  
OAKLAND INTERNATIONAL AIRPORT

**Major stationary sources**

TOXIC RELEASE INVENTORY DATABASE (US EPA)  
REGIONAL EMISSIONS INVENTORY DATABASE (BAAQMD)  
FACILITIES REQUIRING PUBLIC NOTIFICATION UNDER THE "HOT SPOTS" PROGRAM  
AIR POLLUTION INCIDENTS AND COMPLAINTS (BAAQMD)

**Land use conflicts**

INCOMPATIBLE LAND USES  
SENSITIVE RECEPTORS  
ZONING POLICIES

**Analysis of health risks**

LIFETIME CANCER RISKS AND SOURCE FACTORS  
ACCEPTABLE LEVELS OF CANCER RISK  
EXCESS CANCER RISK FROM LOCAL SOURCES  
DETAILED HEALTH RISK ASSESSMENTS FOR LOCAL SOURCES  
ASTHMA RISKS

**Figure 7.1: Toxic air contaminants hazards map**

- Major indirect sources
- Major stationary sources
- Monitoring stations
- Industrial and residential zoning
- Sensitive receptors

**8 EMERGENCY MANAGEMENT**

**Overview**

RELATION TO CITY'S EMERGENCY MANAGEMENT PLAN

PHASES OF EMERGENCY MANAGEMENT

Pre-event planning and mitigation  
Emergency response and evacuation  
Post-event recovery

MULTI-EMERGENCY SCENARIOS

**Institutional framework**

FEDERAL EMERGENCY MANAGEMENT AGENCY

STATE OF CALIFORNIA

Office of Emergency Services  
Standardized Emergency Management System (SEMS)  
Emergency Services Act

CITY OF OAKLAND

Oakland Fire Department  
Office of Emergency Services

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Emergency operations center  
Risk manager

NON-GOVERNMENTAL ORGANIZATIONS

**Pre-emergency planning and mitigation**

CITY'S EMERGENCY MANAGEMENT PLAN

TRAINING

PUBLIC EDUCATION

OTHER STRATEGIES

**Evacuation and emergency response**

PUBLIC NOTIFICATION

EVACUATION

FIRST (IMMEDIATE) RESPONSE

SUBSEQUENT RESPONSE

INTER-AGENCY COORDINATION

**Post-emergency recovery**

PUBLIC SERVICES

FINANCIAL AND LOGISTICAL AID

RECONSTRUCTION

**Figure 8.1: Emergency management map**

- Fire and police stations, hospitals, and other critical facilities
- Mass-care centers, staging areas and other response facilities
- Vulnerable areas, land uses and facilities
- Evacuation routes, and roads subject to closure

**9 HAZARDS BY AREA**

**West Oakland/Seaport**

**Central Oakland/North Oakland**

**San Antonio/Fruitvale**

**North, South and Lower Oakland Hills**

**East Oakland**

**Airport**

- **GLOSSARY**
- **PERSONS CONSULTED**
- **BIBLIOGRAPHY**
- **ONLINE RESOURCES**
- **INDEX**
- **APPENDICES**

# UPDATING THE SAFETY ELEMENT OF THE OAKLAND GENERAL PLAN

The City of Oakland's Planning and Zoning Division is in the process of updating the safety element of the City's general plan. The project is expected to be completed 12 months from now, in January 2004.

## → What's a general plan?

California state law requires that each city and county adopt a "comprehensive, long-term general plan for the physical development" of that community (Government Code Section 65300). The general plan can be thought of as a community's constitution, providing the framework for rational decision-making regarding its growth and development. The law mandates that general plans include "elements" covering, at minimum, the following seven topics: land use, circulation, housing, conservation, open space, noise, and safety.

## → What's the safety element?

The safety element seeks to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from natural and human-caused hazards. A safety element typically includes an analysis of existing conditions identifying specific hazards, risks, and vulnerable areas or populations; and a set of policies and implementation strategies to reduce risks for new development projects, mitigate risks in developed areas to acceptable levels, and minimize disruption and expedite recovery following a disaster.

## → Why's the safety element being updated?

Oakland's safety element was originally adopted in 1974, and has never been updated. Since then, local land use patterns have changed, the City's population and economy have expanded, and Oakland has experienced two crippling natural disasters (the 1989 Loma Prieta earthquake and the 1991 Oakland Hills firestorm). Updating the safety element will help prepare Oakland in managing future disasters.

## → Issues to be covered

The safety element will examine the issues related to protecting the City from the risks of geologic and seismically induced hazards, landslides, flooding, wildland and urban fires, building hazards, hazardous materials, and toxic air pollution. In addition, the safety element will consider the City's disaster planning, preparedness and response capabilities, and risks to critical transportation and utility facilities.

## → Public participation

Following the gathering and interpretation of background information, the public will be invited to comment on a draft analysis of existing conditions. More importantly, the public will also be invited to help formulate policies and strategies to implement the safety element. Finally, the public will have an opportunity to review and comment on a draft of the updated element, and on its adoption by the planning commission and City council.

## → For more information

To find out more about the update to the safety element, contact Niko Letunic, manager of the project, at 510/238.6447 or at [nletunic@oaklandnet.com](mailto:nletunic@oaklandnet.com). The following online resources contain general information about general plans and their elements, including the safety element:

- State of California *General Plan Guidelines*: <http://www.spc.ca.gov/planning/PDFs/genplan.pdf>
- Government Code Sections 65300 to 65307 ("Authority for and Scope of General Plans"):  
<http://www.spc.ca.gov/planning/PDFs/genplan.pdf>

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