

COVINA GENERAL PLAN SAFETY ELEMENT



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EXECUTIVE SUMMARY

The Safety Element of the General Plan serves to protect the community from any unreasonable risks associated with the effects of potential natural and man-made disasters, including earthquakes, geologic hazards, such as landslides, floods, fires, and hazardous materials accidents. In other words, the Safety Element aims to reduce death, injuries, property damage, and the economic and social dislocation resulting from major disasters by establishing and applying safety-related policies, standards, designations, and programs to land use and development decisions and actions. Recognizing and appropriately handling potential disasters of all types are important for maintaining a community's overall functionality, vitality, image, and quality of life.

The entire contents of this Element are based on State planning law requirements (Section 65302(g) of the California Government Code) and the California Office of Planning and Research (OPR) General Plan Guidelines, an advisory document on general plan preparation. Under law, as is the case with all chapters of the general plan, the State establishes the overall data and analysis requirements, while allowing local governments to address their safety issues and challenges in a manner tailored to local conditions and circumstances. Therefore, the Element has been organized and prepared in a manner that the City feels is most appropriate and logical and best suited for carrying out planning activities.

Covina (population 46,452, 1997 estimate) is a mature, suburban community located in the eastern portion of the San Gabriel Valley, approximately twenty-three miles east of downtown Los Angeles. Covina is generally flat, though contains a hilly enclave in the southeastern area (Covina Hills), and is today almost completely built-out. However, future growth in the City is expected, considering the remaining vacant and many underutilized properties as well as market trends. The community, which possesses a historic downtown that is the social and economic focus of the City, is characterized by predominately low rise/low intensity residential, commercial, and light manufacturing uses. For a suburban city, Covina has a relatively high percentage of commercial and industrial areas, which illustrates a strong, diversified economic base. Despite Covina's stability, positive image and appearance, and reputation as a good community in which to live, work, shop, and seek recreation and entertainment, the City is susceptible to some natural and man-made hazards because of regional geography (i.e., being in earthquake-prone southern California), urbanization (in which fires and hazardous materials accidents could occur in structures and on roads), topography (in which wild land fires and landslides and mudslides could take place in the hilly Covina Hills area), hydrology (considering that major flooding could occur around the unimproved portion of Walnut Creek in Covina Hills, being located downstream from the major Bonelli Park flood control complex), future development, and other factors. The Covina General Plan covers a ten square mile Planning Area, which includes seven square miles of incorporated territory and a three square mile Sphere of Influence/unincorporated area (designated for eventual Covina annexation). Refer to Section "A" of the Land Use Study of the Land Use Element for more information on location, character, and the Covina Planning Area.

The Safety Element is divided into twelve chapters. The first chapter introduces and presents general information on the Element process, as mentioned above, as well as below-described Element contents.

In section number two, potential seismic and geologic hazards are identified, to the extent applicable to Covina, and appraised and mapped. The key issues in this area include: 1) monitoring the two potentially active earthquake faults in Covina for any movement and, if detected, taking appropriate actions; 2) coping with possible ground shaking hazards and concomitant effects and risks in Covina that could occur as a result of movement along any of the several active earthquake faults throughout southern California; 3) coping with possible landslide and mudslide hazards and concomitant effects and risks in Covina Hills that could occur as a result of continuous erosion processes or the simultaneous interaction of an unstable surface condition with either an earthquake or a heavy rain; and 4) promoting earthquake preparedness in the community by participating in various programs. Other salient issues here pertain to: 5) maintaining current seismic- and structural-related codes and standards and grading and construction practices; 6) continuing to retrofit older, unreinforced masonry and similar buildings; and 7) recognizing and appropriately handling the unique geological, soil, and topographic conditions in and near the Covina Hills area.

The third chapter discusses and analyzes potential flooding hazards. The primary issues consist of: 1) supporting and working with Los Angeles County in maintaining the existing flood control infrastructure serving Covina; 2) supporting and working with Los Angeles County in enhancing the local storm drainage system in particular areas to address local minor flooding and ponding problems; and 3) coping with seasonal moderate flooding and erosion problems in and around the unimproved section of the Walnut Creek Flood Control Channel in Covina Hills, which is related to the excessive release of storm waters from the upstream Puddingstone Reservoir and Dam complex. Other key issues in this area include: 4) studying and monitoring the cumulative effects and implications of property damage, human danger, and soil erosion and concomitant threats to wildlife in and adjacent to the unimproved section of Walnut Creek relative to existing, seasonal flooding and 5) following appropriate Uniform Building Code provisions regulating earth work and grading during construction and pertaining to other matters to minimize erosion along the banks of, again, the unimproved section of Walnut Creek.

Section number four focuses on dangers associated with possible fires. The key issues in this area include: 1) coping with potential urban or structure-oriented fires, particularly regarding older, larger apartment and commercial and industrial buildings that lack automatic sprinklers and other fire prevention features; 2) coping with potential wild land or hillside oriented fires, a threat that exists in and adjacent to the Covina Hills area because of the district's proximity of a relatively large number of residential houses to combustible plant materials; and 3) continuing to maintain appropriate Building and Safety, Fire, and Planning Department/Division requirements and standards for new construction and for substantial additions to existing structures to prevent and minimize potential urban and wild land fires in the community. Additional noteworthy issues here pertain to: 4) maintaining ongoing fire inspection, neighborhood preservation, general code enforcement, and business monitoring programs that reduce fire and other dangers associated with residential, commercial, industrial, and institutional buildings and 5) continuing with existing citywide fire prevention/education programs to bolster public awareness of the disastrous impacts that fires can have on the community.

The fifth chapter discusses and analyzes issues pertaining to hazardous materials, particularly potential accidents. The salient hazardous materials issues are: 1) dealing with the ongoing generation, use, and storage of various hazardous materials in Covina, which raises the possibility of chemical spills, gas leaks, explosions, structural fires, and resource contamination; 2) continuing to maintain information on City businesses and entities that handle hazardous materials to best respond in the event of an accident or to call upon Los Angeles County officials for assistance; 3) continuing to maintain City Building and Safety Division and Fire Department inspections and efforts to identify hazardous materials use and storage in various businesses and activities; 4) dealing with the ongoing transport of large quantities of hazardous materials through and near Covina along the San Bernardino Freeway, the Metrolink Commuter Rail Line, and via major arterial streets; and 5) dealing with the treatment and disposal of hazardous wastes from commercial, industrial, and institutional uses. Other key issues in this area include: 6) dealing with the disposal of household items considered hazardous; 7) dealing with potential or actual underground hazards from storage tanks, septic tanks, and natural gas distribution lines, which, in some cases, have led to soil contamination; 8) continuing to cooperate with the appropriate State and County departments on the identification, monitoring, and remediation of subsurface pollution, particularly from underground storage or septic tank leakage, through appropriate actions; 9) cooperating with appropriate agencies in preventing waste disposal as well as all non-storm water discharges into the storm drainage system; and 10) cooperating with Los Angeles County and all other levels of government in incorporating into the General Plan applicable portions of the Los Angeles County Hazardous Waste Management Plan, which concerns the treatment and disposal of hazardous materials at the municipal level, particularly sections on the location identification and siting criteria of, the analysis of, the application of conditions to, and the inclusion of public participation on potential hazardous waste treatment or disposal facilities.

Section number six of the Safety Element focuses on risk assessment. The chapter expands on the risks pertaining to the previously-mentioned seismic and geologic conditions, flooding, fires, and hazardous materials by presenting various criteria that further assess and describe the potential for hazard-related community upset. The key issues here include: 1) recognizing ground shaking, ground lurching, flooding around Walnut Creek, urban fires, and underground storage tank problems as having the highest potential of occurring; 2) recognizing ground shaking and flooding around Walnut Creek as potentially causing the most extensive overall upset to the community; 3) acknowledging that the actual/quantifiable risks associated with potential disasters cannot be predicted with certainty because their incidence

in Covina sometimes depends on the occurrence of unusual circumstances; and 4) acknowledging the need to prevent and prepare for a disaster by promoting emergency preparedness activities, by supporting adequate public safety personnel and resources, and by following related strategies.

The seventh chapter concludes the "assessment" sections of the Element by presenting emergency preparedness and related and general matters. Under this topic, the primary issues are: 1) maintaining and periodically revising the Covina Emergency (preparedness) Plan as a viable tool to prepare, mobilize, and employ public and private resources to meet essential needs in a serious natural or man-made emergency as well as to restore normal conditions as quickly as possible; 2) utilizing appropriate inter-agency processes and mutual aid agreements in emergency preparedness planning and during an actual disaster to most effectively deal with other entities and to address community needs; 3) supporting community programs that train volunteers to assist City staff in emergency preparedness planning; and 4) promoting public awareness concerning emergency preparedness matters. The other chief issues in this area include: 5) continuing to supply the Covina Fire and Police Departments with adequate personnel, equipment, resources, and facilities to perform their many duties, including responding to disasters, emergencies, and everyday public safety-related service requests and participating in emergency preparedness planning; 6) maintaining fire-, paramedical-, and police-related mutual aid agreements with surrounding communities for supplemental emergency service assistance, when needed; 7) ensuring that future firefighting, paramedical, and police protective resources and services keep pace with projected moderate growth and redevelopment activities; 8) ensuring that new, expanded, or altered potentially problematic developments mitigate any public safety-related impacts; and 9) continuing with various fire and crime prevention programs. The final noteworthy issues concerning emergency preparedness and related issues consist of: 10) maintaining the San Bernardino Freeway and the major roads as Covina's evacuation routes in significant emergencies; 11) maintaining adequate water pressure flow capacity in Covina and sufficient fire hydrants to allow for proper firefighting capabilities; 12) maintaining adequate public and private road provisions and site design standards to ensure that hazardous incidents and emergencies can be quickly accessed by emergency vehicles and personnel; and 13) maintaining a coordinated, inter-departmental approach in reviewing public and private projects and proposals to facilitate implementation of all City public safety-related codes and standards.

In section number eight, the goal and policies of the Safety Element are presented. Goals and policies are important because they serve as the chief tools with respect to private development and public project evaluation and decision-making and overall local direction setting as well as the primary basis for the Element's implementation measures, discussed in the subsequent chapter. A goal is defined as a general expression of an ideal future condition or state toward which the community wishes to advance. A policy, on the other hand, is a statement that most directly guides decision-making and actions. In applying the two terms to Covina, one goal and several policies are utilized. The goal is:

A community in which the loss of lives, serious injuries, major damages to public and private structures/properties, the loss of natural resources, economic and social dislocation, and the disruption of vital services associated with a potential natural or man-made disaster are prevented.

The policies are listed within a framework relative to the following five topical areas:

1. Potential seismic and geologic hazards.
2. Potential flooding hazards.
3. Potential fire hazards.
4. Hazardous materials.
5. Emergency preparedness and related and general matters.

Thus, the categorization of policies generally follows the previous chapters on hazard identification and analysis. The key policies for the first topical area, potential seismic and geologic hazards, call for the City to require all new and expanded or improved buildings and structures to comply with current seismic-related codes, standards, and construction practices; to require adequate soils, geologic, and/or structural studies/evaluations prior to any building construction, particularly in the Covina Hills area, to identify appropriate, development-accommodating engineering and development siting measures; to follow all applicable development and grading standards and practices in the Covina Hills area; to continue with voluntary seismic retrofitting of older, unreinforced masonry and similar buildings in conjunction with ongoing commercial revitalization, community development, and general renovation activities for the orderly and effective abatement of potentially hazardous structures; and to consider the aesthetic, historic, and/or cultural significance of a building to be upgraded for seismic safety and, to the greatest extent possible, to avoid demolition or alteration of a structure's appearance or character in seismic retrofitting. Other noteworthy policies under potential seismic and geologic hazards require Covina to request that Los Angeles County develop a program and funding mechanism to seismically reinforce Puddingstone Dam to protect the City and other downstream areas from possible major flooding; to monitor the dormant/potentially active Indian Hill and Walnut Creek Fault systems in Covina for any officially documented movement and, if detected, to closely investigate the matter, including determining the exact location and nature of the fault, probable extent of earthquake activity, and the appropriate development policies and standards to adopt; where slope-denuding fires strike in the Covina Hills area, to maintain or encourage reasonable replanting efforts on public and private properties to stabilize bare hillsides against possible landslides or mudslides during subsequent rain storms; to further investigate and collect additional data on seismic, geologic, and soil conditions affecting the community, particularly in the Covina Hills area; and to promote earthquake preparedness within the community by participating in quake awareness programs, such as the distribution of brochure materials and informative literature on methods to safeguard lives and property during seismic events.

The main policies for the second area, potential flooding hazards, call for the City to support the efforts of and work with Los Angeles County to maintain the existing flood control infrastructure serving Covina to meet the community's drainage needs; to support the efforts of and work with Los Angeles County to enhance the local storm drainage system in particular areas to relieve local minor flooding and ponding problems and to accommodate future moderate growth; to work with the State, Los Angeles County, and other officials to attain a permanent solution to Walnut Creek flooding and erosion problems, such as by developing a program to seismically reinforce the upstream Puddingstone Dam or by having the County lower the Puddingstone Reservoir water level during the winter months; to continue to require that all new and significantly expanded developments incorporate sufficient measures to mitigate flood hazards, such as the design of on-site drainage systems to link with the citywide flood control infrastructure; and to maximize permeable surface area to reduce site runoff, like by imposing reasonable landscaping requirements. Other important policies under potential flooding hazards require the City to address, to the greatest extent possible, the short-term or day-to-day effects and problems in and adjacent to the unimproved portion of Walnut Creek relating to seasonal flooding by prohibiting the construction of habitable structures within or near the wash, administering additional reasonable development standards for properties abutting the Creek, and following other appropriate measures; to study and monitor the long-term or cumulative effects and implications of property damage, human danger, and soil erosion and concomitant threats to wildlife in and adjacent to the unimproved section of Walnut Creek relating to existing, seasonal flooding conditions; to adhere to appropriate Uniform Building Code provisions regulating earth work during construction to minimize erosion along the banks of the unimproved section of Walnut Creek; and to improve emergency preparedness activities in areas subject to potential dam failure-generated inundation by following various measures.

The third policy area deals with potential fire hazards. Here, the key policies indicate that the City will maintain a preventative approach in handling potential urban and wild land fires; maintain all fire-inhibiting Building and Safety and Fire Department requirements and standards for new construction and for substantial additions to existing structures, including those for fire-resistant building and roofing materials and detector and alarm systems; maintain all fire-inhibiting Planning Department requirements and standards for new construction and for substantial additions to existing structures, including those for site planning, building setback, landscape design, and minimum road and driveway widths; and maintain ongoing fire and business license inspection and business monitoring programs as well as code enforcement activities, particularly relating to establishments using or storing hazardous materials. In addition, the City would continue to follow weed abatement programs in Covina Hills to reduce the amount of combustible vegetation;

continue with existing citywide fire prevention/education programs; and maintain and periodically review procedures for dealing with potential urban and wild land fires and hazardous materials accidents in the Covina Emergency Plan.

Under the fourth topical area, hazardous materials, Covina commits to continue to cooperate with all applicable laws and agencies concerning the regulation of the use, storage, and disposal of hazardous materials; to continue to contract with Los Angeles County to administer various State-required monitoring activities and permitting processes regarding the utilization, storage, and transportation of hazardous materials and to respond to major hazardous materials accidents; to support City Fire Department general inspections in identifying and addressing hazardous materials; to support City Building and Safety Department efforts to identify hazardous materials use and storage in the business license inspection process; and to implement a storm water/urban runoff management program to prohibit all waste disposal and non-storm water discharges into the public storm drainage system (related policies are also documented). Other salient policies on hazardous materials call for the City to prohibit high intensity or high risk industrial uses in the community; to inform residents of the types of household hazardous wastes and the proper manner of disposal thereof; to support strong and consistent enforcement of all laws pertaining to hazardous materials transport in and adjacent to Covina; to continue to identify, address, and resolve underground contamination through various local processes; and to support Federal, State, and County efforts to identify, monitor, and remediate subsurface pollution created by underground storage or septic tank leakage. Lastly, key policies here state that the City will require all new development to be connected to public sewers; appropriately handle septic tanks, when found in conjunction with development activities; prevent hazards relating to major high-pressure natural gas distribution lines that underlie Covina by appropriately conducting various permit issuance processes and supporting other measures; implement the Los Angeles County Hazardous Waste Management Plan, while paying particular attention to sections on the location identification and siting criteria of, the analysis of, the application of conditions to, and the inclusion of public participation on potential hazardous waste treatment facilities to further community health, safety, welfare, and integrity; and maintain and periodically review procedures for dealing with potential hazardous materials accidents of all types in the Covina Emergency Plan.

The key policies for the last topical area, emergency preparedness and related and general matters, call for the City to maintain and occasionally update the Covina Emergency (preparedness) Plan to allow the local government, residents, and businesses to handle a natural or man-made disaster in an efficient, organized, and expedient manner and to restore normal conditions as quickly as possible; to continue to support, follow, and train all Covina City employees in the Standardized Emergency Management System (SEMS), the chief inter-agency process/framework relating to emergency preparedness, management, and resolution, to best handle potential disasters and to most efficiently and effectively deal with other entities; to promote continuing public awareness concerning emergency preparedness matters by preparing and distributing various information to the community; to sponsor and support community programs that train volunteers to assist City staff in disseminating information on emergency procedures and in performing effectively after an actual disaster; to establish the mitigation of earthquake hazards as a high priority for applicable City programs/strategies, both before and after an earthquake; and to develop programs, procedures, and funding sources to promote the rapid and effective reconstruction and recovery of effected portions of the City following an earthquake or other major disaster, as opportunities allow.

Additional important policies state that Covina will designate and maintain the San Bernardino Freeway and the major roads or primary arterial, secondary arterial, and collector streets (as defined in the Circulation Element) as the City's evacuation routes in relation to major emergencies; continue to supply the Covina Fire and Police Departments with adequate personnel, equipment, resources, and facilities to perform their many duties, including responding to disasters, emergencies, and everyday public safety-related service requests, and handling emergency preparedness planning, such that the community is afforded the highest quality, most efficient emergency services; constantly monitor and evaluate operations and procedures relative to emergency service provision and ensure that the quality and scope of future fire, paramedical, and police protective resources and services keep pace with projected moderate growth and redevelopment and community revitalization activities; maintain fire-, paramedical-, and law enforcement-related mutual aid and specific service agreements with surrounding communities and with Los Angeles County to best assist Covina emergency service personnel; continue with various fire and crime prevention programs; and require that new, expanded,

or altered potentially problematic or public safety-threatening developments, uses, and businesses mitigate any impacts on services that may result from the proposals. The final key policies for this fifth topical area, emergency preparedness and related and general matters, call for the City to maintain adequate water pressure flow capacity in Covina and sufficient fire hydrants to allow for proper firefighting capabilities; to maintain adequate minimum road width and other appropriate public and private street design standards (as described in the Circulation Element and Subdivision Ordinance) to ensure that hazardous incidents and emergencies can be quickly and safely accessed by emergency vehicles; to maintain adequate site design standards for public and private driveways, parking aisles, vehicular turnaround, driveway approaches, building setback, clearances around structures, and other elements (in accordance with the Zoning Ordinance, Uniform Building Code, and Uniform Fire Code) to, again, ensure that hazardous incidents and emergencies can be quickly and safely accessed by emergency vehicles and personnel; to continue to maintain a coordinated, cooperative, and inter-departmental approach in reviewing new or expanded/altered public and private developments and uses to facilitate implementation of all City public safety-related codes and standards; and to monitor future hazard- and safety-related conditions, discoveries, and local policy changes and, when necessary, make appropriate General Plan amendments.

The ninth chapter of the Safety Element discusses the programs/implementation measures, which, along with the goal and policies, serve as the backbone of the Element. Programs supplement and ensure that the Safety Element's goal and policies will reach fruition. The programs and measures are divided into six below-listed subject areas that generally follow the categorization of the policies. The subject areas are:

1. Potential Seismic and Geologic Hazards.
2. Potential Flooding Hazards.
3. Potential Fire Hazards.
4. Hazardous Materials.
5. Emergency Preparedness and Related Matters.
6. Inter-Topic General Matters.

Various specific and general programs are presented, which, again, supplement the previously-listed goal and policies.

Section number ten discusses the Safety Element's relation to and consistency with other General Plan chapters. The Safety Element is most closely related to the Land Use Element, the central chapter that focuses on the long-term general distribution/location and development intensity of residential, commercial, industrial, and other uses. There is a close tie to the Land Use Element because, under State law, the proposed land use development scenario must reflect the community's identified potential hazards and corresponding mitigation or abatement measures. In addition, under State law, the Safety Element must be consistent with all other chapters, and vice versa, in terms of everything from supporting data and information to policy orientation to implementation. The City of Covina has met this consistency requirement by updating all General Plan Elements simultaneously, including utilizing one common data and information base and cross-checking all goals, policies, and plans/implementation measures among the various Elements. This inter-Element consistency will also ensure that implementation of the Safety and all other Elements will realize the same results. In addition, if the Safety Element is amended in the future, the City will verify that the change is consistent with other chapters and/or modify the accompanying Elements to maintain overall conformity.

The eleventh chapter lists the various measures that the City has undertaken to guide citizen participation in the General Plan update process. These items include questionnaires; public forums; cable television segments; and flyers, press releases, and articles. In addition, City staff received numerous citizen and business comments on the phone, at the public counter, and in the course of site-specific project reviews and met with and elicited the views of various City

advisory bodies involved with safety issues. Public comments elicited from the measures were carefully studied by the City and have been incorporated into the body of data and information that was used in formulating the Element's identification and discussion of potential hazards facing Covina and, therefore, in developing the safety goal, policies, and programs/implementation measures. State planning law places a strong emphasis on citizen participation in the General Plan preparation as well as implementation and amendment processes.

The twelfth and final chapter of the Safety Element discusses monitoring implementation, which is also a State requirement and is important to ensure that the Element fulfills its primary purpose of protecting the community from any unreasonable risks associated with the effects of potential natural and man-made disasters. The City will fulfill its obligation to monitor implementation by preparing a State-required annual report on this matter to the Planning Commission and City Council. Any identified underutilized policies or programs will be adequately handled and problems or deficiencies will be carefully studied and appropriately managed to ensure that the desired Safety Element goal is met. Because the Safety Element is an important chapter and closely tied to the central Land Use Element, monitoring is particularly relevant here.

Much of the background information and facts and analysis of data for this Element appear in the accompanying Technical Appendix, a consultant-prepared compilation of primarily seismic and geologic subjects, with some materials on flooding and fire issues. Though separate, the Technical Appendix is legally part of the Safety Element. The City believes that this two-document organization best addresses applicable planning statutes and policies as well as local conditions and needs.

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I. INTRODUCTION/BACKGROUND

The Safety Element of the General Plan serves to protect the community from any unreasonable risks associated with the effects of various potential natural and man-made disasters. Under State planning law (discussed below), possible hazards include: 1) seismic (or, earthquake-related); 2) geologic (e.g., landslides); 3) tsunami (or, tidal waves); 4) flooding; 5) fires; and 6) hazardous materials accidents. The potential disasters must be identified, appraised, and mapped (where possible) as well as addressed in terms of evacuation routes, peakload water supply requirements (pertaining mainly to fires and hazardous materials incidents), minimum road widths, and clearances around structures. In other words, the Safety Element aims to reduce death, injuries, property damage, and the economic and social dislocation resulting from major disasters by establishing and applying safety-related policies, standards, designations, and programs to land use and development decisions and actions. Because Covina is, as clarified below, a generally mature suburban community in the east San Gabriel Valley (an inland subregion) of (earthquake-prone) greater Los Angeles, has many commercial and industrial businesses, and has extensive infrastructure, safety issues in the community center primarily around potential earthquakes, fires, and hazardous materials accidents and concomitant risks and effects. However, because the southeastern part of the community is, in many places, hilly, very low density, and traversed by a partly unimproved wash linked to a major flood control facility (at Bonelli Park, which is upstream to the east), possible landslides and major flooding also pose threats to this area and therefore are noteworthy matters as well. Recognizing and appropriately handling potential disasters of all types are important for maintaining a community's overall functionality, vitality, image, and quality of life. From the standpoint of the entire General Plan process, the Safety Element is closely related to the chapters on Land Use, Circulation, Housing, and Natural Resources and Open Space.

The complete contents of this Element are based on State planning law requirements (Section 65302(g) of the California Government Code) and the California Office of Planning and Research (OPR) General Plan Guidelines, an advisory document on general plan preparation. Under law, as is the case with all chapters of the general plan, the State establishes the overall data and analysis requirements, while allowing local governments to address their safety issues and challenges in a manner tailored to local conditions and circumstances. Therefore, as indicated below, the Element has been organized and prepared in a manner that the City feels is most appropriate and logical and best suited for carrying out planning activities.

The Safety Element is divided into twelve chapters. Following this Background chapter, the second section presents an identification, discussion, and mapping of the potential seismic and geologic hazards affecting Covina, which primarily emanate from, respectively, active earthquake faults located throughout southern California (but which do not pass through Covina) and possible landslides or mudslides in the topographically varied Covina Hills area. There is also a section on local structural conditions and seismic retrofitting efforts. Here, reference is made to an accompanying communitywide seismic and geologic assessment that functions as the Technical Appendix to this Element. The third area exhibits an identification of and discussion on possible flooding hazards, which, as indicated above, focus on the section around Walnut Creek in Covina Hills. Areas in the predominant flat territory of Covina that experience minor flooding and ponding problems are also mentioned. Section number four presents the potential fire hazards, which are broken down according to the flatland and hillside areas. The fifth chapter identifies and discusses possible dangers associated with the handling of hazardous materials and the generation of hazardous wastes by both businesses, which pose the greatest threats, and households. Other topics discussed here include the transportation of hazardous wastes in Covina, identified and potential problems related to underground storage and septic tanks and high-pressure natural gas distribution lines, and the Los Angeles County Hazardous Waste Management Plan, a key regional-oriented document that brings cities into the hazardous waste treatment process. The sixth area approaches the previously-identified potential disasters by presenting various criteria that further estimate risks associated with these hazards and that assess and describe the likely extent of upset to the community and surrounding area that would occur as a result of various disasters.

Chapter number seven concludes the informational/factual portion of the Element by presenting emergency preparedness and related information as well as general State-required matters, including the Covina Emergency (preparedness) Plan, evacuation routes, emergency response personnel (i.e., the City Fire and Police Departments), peakload water supply requirements, and minimum road widths and clearances around structures (which pertain to emergency personnel/vehicle accessibility). Following this chapter, the eighth section lists the Safety Element goal and policies, an important component that bridges the gap between where the City is and what type of community it wishes to become. The ninth chapter describes programs/implementation measures, which supplement and ensure fruition of the goal and policies. Sections ten, eleven, and twelve conclude the document by discussing, respectively, the relation to and consistency with other General Plan Elements, citizen participation in Element formation, and monitoring Safety Element implementation.

Covina (population 46,452, 1997 estimate) is a mature, suburban community located in the eastern portion of the San Gabriel Valley, approximately twenty-three miles east of downtown Los Angeles. Covina is generally flat, though contains a hilly enclave in the southeastern area (Covina Hills), and is today almost completely built-out. However, future growth in the City is expected, considering the remaining vacant and many underutilized properties as well as market trends. The community, which possesses a historic downtown that is the social and economic focus of the City, is characterized by predominantly low rise/low intensity residential, commercial, and light manufacturing uses. For a suburban city, Covina has a relatively high percentage of commercial and industrial areas, which illustrates a strong, diversified economic base. Despite Covina's stability, positive image and appearance, and reputation as a good community in which to live, work, shop, and seek recreation and entertainment, the City is susceptible to some natural and man-made hazards because of regional geography (i.e., being in earthquake-prone southern California), urbanization (in which fires and hazardous materials accidents could occur in structures and on roads), topography (in which wild land fires and landslides and mudslides could take place in the hilly Covina Hills area), hydrology (considering that major flooding could occur around the unimproved portion of Walnut Creek in Covina Hills, being located downstream from the major Bonelli Park flood control complex), future development, and other factors. The Covina General Plan covers a ten square mile Planning Area, which includes seven square miles of incorporated territory and a three square mile Sphere of Influence/unincorporated area (designated for eventual Covina annexation). Refer to Section "A" of the Land Use Study of the Land Use Element for more information on location, character, and the Covina Planning Area.

II. IDENTIFICATION AND APPRAISAL OF SEISMIC AND GEOLOGIC HAZARDS

A. General

As stated in the previous chapter, under this topic, State law requires the identification and mapping of known, potential seismic and geologic hazards, including ground shaking, ground lurching, ground rupture, tsunami, seiche, and ground failure, which encompasses liquefaction, settlement, subsidence, and landslides and mudslides. This identification is intended to serve as a basis for the Safety Element goal, policies, and programs on the management, mitigation, and, if possible, prevention of adverse effects or community upset associated with these hazards.

In Covina, as explained below, there are no major earthquake faults, though the City lies in a seismically active region and two dormant faults pass through the community. This means that Covina could experience ground shaking and ground lurching hazards from movement along active faults in adjacent or distant areas but faces limited susceptibility to ground rupture, a phenomenon that occurs only immediately around the active faults. And because Covina is predominantly flat and geologically stable, most ground failure problems, namely liquefaction, settlement, and subsidence, have not been identified in the past and appear unlikely to occur in the future. However, in the topographically-varied Covina Hills area, where many homes were developed on fill, landslides or mudslides may take place. Regarding tsunami, inasmuch as Covina is an inland community, the hazard would not affect the City. (Seiches are discussed in the subsequent chapter under flooding.) Thus, from a planning standpoint, certain seismic or geologic hazards could cause damages in the community while others are relatively or totally insignificant. The following chapter, therefore, discusses these matters to the extent that they pertain to Covina.

It is noted that information and facts relating to the City's seismic and geologic setting are clarified in the accompanying Technical Appendix, which is a detailed, consultant-prepared report on existing topical conditions. Though separate, the Technical Appendix is legally part of this Element. Matters relating to other areas, as stated below, are referenced from general documents and correspondence on file in the Covina Planning Division.

B. Seismic and Geologic Setting and Faults and Earthquakes

The City of Covina lies within a metropolitan area that has historically been seismically active. Earthquakes occur as the result of movement along breaks in the crust of the earth, which are called faults. The earthquake is basically the effect of the shock waves generated by the break. If the area of the break is small and limited to the deeper part of the crust, then the resulting movement would be small. However, if the fracture is large and extends to the surface, the break can result in a major earthquake.

Faults are prevalent throughout California and are commonly classified as either "active" or "potentially active." An active fault is a break that has moved in recent geologic time (the last 11,000 years) and that is likely to move within the next approximately 100 years. Active faults are the primary focus of concern in attempting to prevent earthquake hazards. A potentially active fault is one that has shifted but not in the recent geologic period (or, between 11,000 and 3,000,000 years ago) and is therefore considered dormant or unlikely to move in the future. The Technical Appendix should be referenced for more general information on this topic.

No active faults have been identified within or adjacent to the boundaries of the Covina Planning Area, which, most importantly, indicates that the community does not fall under either the State Earthquake Fault Zoning Act or the State Hazards Mapping Act. These Acts basically require that local governments, in the general plan update process, adopt policies and criteria to ensure the structural adequacy of buildings erected across active faults for human occupancy. In some cases, the development of structures must be prohibited. Verification that the above Acts do not pertain to Covina was obtained through correspondence with the State Department

of Conservation and is on file with the City Planning Division.

According to the Technical Appendix, there are two potentially active earthquake faults that pass through Covina, therefore indicating, as previously stated, that they would not pose a significant seismic threat or hazard to the community. The two faults are: 1) the Indian Hill Fault, which runs through a portion of the northeastern section of the City and 2) the Walnut Creek Fault, which traverses southeastern Covina along Walnut Creek. Nevertheless, because below-described hazards could theoretically occur, the City will take note of and monitor these fault systems with respect to future development and planning matters, to the greatest extent possible. For clarification on the faults, refer to the Technical Appendix and accompanying Seismic Hazards Map.

Despite the fact that Covina faces limited threats from interior seismicity, there are a number of active faults in southern California that could potentially move and thus result in hazards to the community. The Technical Appendix describes these faults in detail, including their distances from Covina, lengths, maximum (Richter Scale) magnitudes of historical quakes, and maximum probable earthquake (again, Richter Scale) magnitudes that could be expected. Noteworthy, relevant information is summarized below.

The closest active faults to Covina are the Sierra Madre and Duarte and Lower Duarte Faults, which are approximately between 2 and 4 miles north of the City, as also shown on the Seismic Hazards Map. This fault zone is believed to have moved during the 1971 San Fernando earthquake, which reached a magnitude of 6.4. In addition, a segment of the well-known San Andreas Fault, the portion of which runs between San Bernardino City and Parkfield (southeast Monterey County) and is considered most capable of generating a large earthquake upsetting Covina as well as the surrounding region, lies only about 20 miles northeast of the City. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 quake (comparable to the great San Francisco earthquake of 1906) within the next 30 years. The other active faults closest to or within 20 miles of Covina include the Whittier-Elsinore Fault (10 miles to the southwest), the Norwalk Fault (20 miles to the southwest), and the Raymond Fault (15 miles to the northwest). The previously-mentioned San Andreas and other active Faults close to Covina are mapped on Figure 3 of the Technical Appendix. A significant earthquake originating along any of these or other regional faults could cause damage to buildings and infrastructure as well as injuries and fatalities in Covina.

The above-noted earthquake-related potential problems or disturbances pertaining to Covina would actually occur as a result of primary and secondary effects or hazards associated with subsurface movement, such as ground shaking and ground failure, which are discussed in the following section. Generally, in a community like Covina, where there are no active faults, the probable extent of hazards related to crustal movement in adjacent or outlying areas would be a function of the City's geologic, soil, and topographic conditions. Most of Covina is located in the relatively flat San Gabriel alluvial fan, which is comprised of relatively deep sedimentary deposits derived from rocks exposed in the northerly San Gabriel Mountains. Geologic hazards under these conditions are limited to ground shaking. However, the southeastern portion of Covina (comprised primarily of residential properties) tends to be hilly and is underlain with thinner alluvium and bedrock, which, in certain sections, may be prone to ground failure, including landslides. For more information on Covina geology, refer to the Technical Appendix and the Seismic Hazards Map. Regarding the entire community, with very few exceptions, geologic, soil, and seismic hazards do not resist development, though do occasionally establish a need for particular types of detailed investigations that should be conducted prior to construction.

C. Overview of Potential Seismic and Geologic Hazards and Concomitant Effects and Risks Relating to Covina

1. General

As indicated in the previous section, although there are no active faults within the City of Covina, seismic hazards and risks are not necessarily restricted to those areas directly along or surrounding a fault. Depending on the type of fault system, its depth, and other factors, earthquake waves produced by a seismic incident could have far-reaching impacts. Therefore, to ascertain the ramifications that earthquakes might have for and to protect the public health and safety of Covina, it is necessary to inventory and discuss potential seismic and geologic hazards and concomitant effects and risks relating to the community. It must also be noted here that, as stated in the prior section and in the Technical Appendix, the community could theoretically face seismic problems from the two potentially active faults that run through Covina.

Seismic and geologic hazards are typically classified from a sequential standpoint. Initially, the earthquake-related shock waves generated by movement along an active fault lead to what are called primary hazards, which include ground shaking, ground lurching, and ground rupture. Secondary hazards are defined as the interaction of one or more primary factors with existing ground instabilities, resulting in ground failure, such as liquefaction and landslides and tsunamis. Concerning both types of hazards, it is noted that the City's susceptibility thereof varies considerably. In other words, as explained below, in the event of a major earthquake in the area, while some hazards could be considered inevitable, others are unlikely to occur but are noted for documentation purposes.

2. Ground shaking

Ground shaking is the movement of the earth's surface in response to a seismic event and, in general, is the primary cause for the collapse of buildings and other structures, injury, and loss of life. The intensity of the ground shaking and the extent of resultant damages are a function of the magnitude of the earthquake, distance from the fault movement, the characteristics of the surface and subsurface, geology, and a community's building types and intensities and daytime and nighttime populations.

Because of Covina's proximity to several previously-identified active faults and because of the prevalent, motion-susceptible alluvium that underlies the community, the City will experience ground shaking in the future. (And as indicated earlier, this activity could theoretically occur as a result of the two potentially active faults that lie within the community.) Ground shaking would likely be strongest in roughly the upper two-thirds of Covina, which is the closest to the northerly Sierra Madre and Duarte and Lower Duarte Faults. Refer to Seismic Hazards Map for clarification. And the fact that the City is generally built-out indicates the potential for considerable damage to structures as well as injuries and loss of life in the event of a major earthquake. The structures that are particularly vulnerable to damage are the older, unreinforced masonry buildings generally in the downtown. (See Section "D" below.) However, Covina's potential for major upset in a seismic incident could be tempered by the fact that the City has few multi-story structures. Nevertheless, in recent years, Covina has attempted to mitigate potential earthquake problems—or best protect public health and safety during foreseeable ground shaking—through the following of various seismic-related building codes (again, refer to Section "D" below) and emergency preparedness activities (discussed in Chapter VII). All in all, it is believed that whatever risks Covina faces from matters discussed herein are not unreasonable compared to surrounding areas.

3. Ground lurching

As earthquake waves travel through subsurface materials, the materials are stressed. If the amplitude of the earthquake waves is great enough, the earth materials could be overstressed and break, resulting in cracks, fissures, and displacement in the ground at places other than directly above the active fault. Unconsolidated and poorly solidified materials are most susceptible to ground lurching, but the phenomenon can occur in

bedrock as well. Therefore, all areas within the City of Covina have a moderate or high potential for lurching. However, the problem per se is not considered to pose a health or safety threat.

4. Ground rupture

Ground rupture refers to the fracturing or vertical or lateral displacement of the earth's surface along a fault, which is caused by underlying crustal movement. The degree of displacement is a function of the intensity of an earthquake and may range from a few millimeters to several feet. However, only buildings and structures straddling faults would be subject to major damage. Covina's susceptibility to this type of hazard is limited because there are no active faults in the community. Whatever risks the community does face here concerning its two potentially active faults are believed to be reasonable—or not warranting any remedial action.

5. Ground failure

a. General

As mentioned earlier, ground failure is classified as a secondary seismic hazard, which refers to the interaction of one or more primary hazards—such as ground shaking—with existing surface instabilities and results in liquefaction, settlement, subsidence and/or landslides or mudslides. In short, ground failure is the inability of the earth to maintain its normal strength. This area of discussion states whether and, if applicable, to what extent these hazards pertain to Covina.

b. Liquefaction

Liquefaction is a phenomenon that occurs when water-laden, loose, and cohesionless soils are subject to intense seismic shaking and form a quicksand- or fluid-like soil condition below the ground surface. As a result, structural damage may occur as building foundations lose ground support. Liquefaction typically occurs in areas where the ground water is less than 30 feet from the surface and where the soils are composed of predominantly poorly consolidated fine sand. In Covina, liquefaction has not been a problem in the past and appears to have very limited future hazard potential because the water table is generally more than 50 feet deep and there are believed to be no areas of loose, cohesionless soils. This has been clarified on the Seismic Hazards Map. Also, it is noted that the City's geological and soil conditions have precluded this hazard from occurring in Covina's two ground water recharge basins/flood control spreading grounds, Ben Lomond, at the southwest corner of Arrow Highway and Barranca Avenue, and Walnut Wash, at the easterly terminus of Workman Avenue. Refer to Chapter III below and to the Natural Resources and Open Space Element for clarification on these facilities. Notwithstanding the above facts, the City will monitor this topic for future changes.

c. Settlement

Settlement of the ground may occur in poorly consolidated or particular soils or improperly compacted fills during earthquake shaking, though the problem could also arise during heavy rains. As a consequence, structural damage may take place. However, this activity is not of major concern to Covina because of generally favorable soil conditions and because the City has long-adhered to all applicable building code provisions in hillside developments.

Regarding the underlying soils, as stated in the Natural Resources and Open Space Element, the Soil Conservation Service of the U. S. Department of Agriculture maps and classifies this matter with respect to their suitability for resource conservation and agriculture as well as urban development. In that Element, it was noted that the two soil associations in the Covina area, Hanford (2-5% slopes) and Romona-Placentia (2-5% slopes), were generally suitable for urbanization, as opposed to agriculture. Mentioned here is the "limitation rating," which relates to the soils' capacity to support load and resist settlement. A rating of "slight" refers to soil properties that are favorable for construction. A "moderate" rating means that some soil properties are

unfavorable, but construction can take place with special design/planning features. Soils with a "severe" rating require major soil reclamation and/or special design before any construction can take place. Most of the Covina Planning Area has a "slight" rating; some areas in the eastern, particularly southeast, part of the community are classified as "moderate." This means, again, that soil characteristics are generally favorable, though on certain properties construction would require special design/planning features. (It is noted that portions of a few properties backing up to Walnut Creek in the Covina Hills area have experienced some soil erosion caused by Creek inundation. This matter is discussed in conjunction with flooding hazards in the following chapter.)

d. Subsidence

Although it is typically not induced by seismic activity, subsidence may result in settling, tilting, or uneven land surfaces and therefore is worthy of discussion here. Subsidence generally occurs in areas of loose and soft soil materials when ground water is withdrawn to the extent that surface deformation takes place. Because of decreasing amounts of water extracted from below the surface in Covina in recent years, subsidence has not been viewed as a problem.

e. Landslides and mudslides

A landslide is defined as a falling mass of soil or rocks. This occurrence, which often constitutes a continuous erosional process, is considered a geologic, rather than seismic, hazard because the basis for a slide is an unstable surface condition, not an earthquake. The earthquake may, however, provide the triggering force to initiate the downward movement. In addition, landslides may also take place as a result of heavy rains, particularly after a major fire, or construction grading. The Technical Appendix lists common types of this phenomenon, including mudslides (generally, rapid downslope movement of saturated soil, sub-soil, and/or weathered bedrock) and rockfalls (basically, an avalanche of loose rock, disturbing more material as it cascades down a slope).

To identify where and to what extent landslide hazards are likely to occur in a community, it is necessary to locate hilly areas with particular rock types (e.g., fill, siltstone, or sandstone or poorly-compacted soils) and steep slopes (natural or man-made, generally exceeding 20%) as well as to ascertain where the hazards have been mapped or are known to exist. In Covina, although there have been no documented cases of major landslides (the community being predominantly flat), the problem is believed to have the potential for occurring in certain sections of the Covina Hills area, as indicated in the Technical Appendix and shown on the Seismic Hazards Map. This district, which is comprised of generally large-lot single-family homes and one business park, tends to be hilly and has many fill slopes. However, the City will continue to follow appropriate development standards and practices in Covina Hills to prevent possible problems. Also, where slope-denuding fires strike, the community will maintain reasonable replanting efforts to stabilize bare hillsides during subsequent rain storms. These obviations are particularly applicable to mudslides, which tend to be triggered as a result of a combination of fire and heavy rain, as opposed to geologic and slope instability alone, and therefore could be more difficult to foresee. But all in all, City officials believe that communitywide risks associated with landslide hazards are not unreasonable.

6. Tsunami

A tsunami is a sea wave, commonly referred to as a tidal wave, generated by an underwater seismic disturbance, such as sudden faulting or landslide activity. Tsunami generally affect low-lying coastal areas. Because Covina is an inland community (approximately 40 miles east of the Pacific Ocean), the City could not experience this phenomenon. (Seiches, earthquake-induced waves in a lake or reservoir, could theoretically upset Covina and, therefore, are discussed in the following section under "flooding hazards.")

D. Local Structural Conditions and Seismic Retrofitting Efforts

Regarding the above-noted potential seismic hazards, the topic must also be considered in relation to communitywide structural integrity because damaged buildings are generally a key factor in causing earthquake-related deaths and injuries. Experience has shown that newer, low- to moderate-intensity residential and non-residential structures constructed from well-built timber, regardless of whether they meet the most current seismic codes, have performed satisfactorily in past earthquakes. Therefore, the majority of buildings in Covina should provide a relatively low risk to loss of life and property during future fault movements. However, high occupancy commercial, industrial, and public buildings, which exist throughout the community, constitute greater though unquantifiable risks.

The highest potential for loss of life and injury during an earthquake is associated with buildings constructed prior to the adoption of seismic-resistive codes (or, before 1933), particularly structures of unreinforced masonry wall materials. These types of buildings pervade in the older downtown area and have been long regarded as a statewide concern, prompting State officials over the years to strengthen structure-related codes and, most notably in 1986, to pass significant legislation addressing the problem. The law, promulgated as Chapter 12.2 of the Government Code, required local governments in seismically active areas, by January 1, 1990, at a minimum 1) to identify all unreinforced masonry buildings and other potentially hazardous structures within their respective jurisdictions, 2) to notify the property owners of the applicable buildings' status, and 3) to report and file all information on potentially hazardous buildings to, respectively, the local legislative body and State Seismic Safety Commission. This legislation also authorized communities to adopt a program to mitigate potentially hazardous buildings through various measures, including seismic rehabilitation and demolition.

As described in the Technical Appendix, the City of Covina has complied with the above-mentioned seismic law. Notably, 72 structures in the downtown were placed on the community's official list of potentially hazardous buildings. Since this list was adopted, the community has been attempting to address the vulnerable structures by encouraging applicable owners to voluntarily pursue seismic retrofitting during remodeling. Renovation and thus retrofitting activities often occur in conjunction with the Redevelopment Agency's building façade enhancement program, which offers rebates of construction costs and other incentives to participants. A more aggressive, obligatory effort may be initiated in the future, too. It is noted that the above 72 "problem" structures represent only a fraction (less than 1%) of all buildings in the City. And each recent development in Covina meets every applicable seismic code so as to best resist earthquake motion. The seismic- and structural-related codes are generally administered by the Covina Building and Safety Division of the Community Development Department, though the State has jurisdiction over certain types of development, such as public schools, hospitals, and mobile home parks. Concerning areas with the potential for landslides and mudslides, as previously mentioned, the City attempts to prevent these problems to the greatest extent possible through following appropriate development and grading standards and practices. Again, for more information on structural performance, refer to the Technical Appendix.

E. Listing of Key Existing Seismic and Geologic Issues

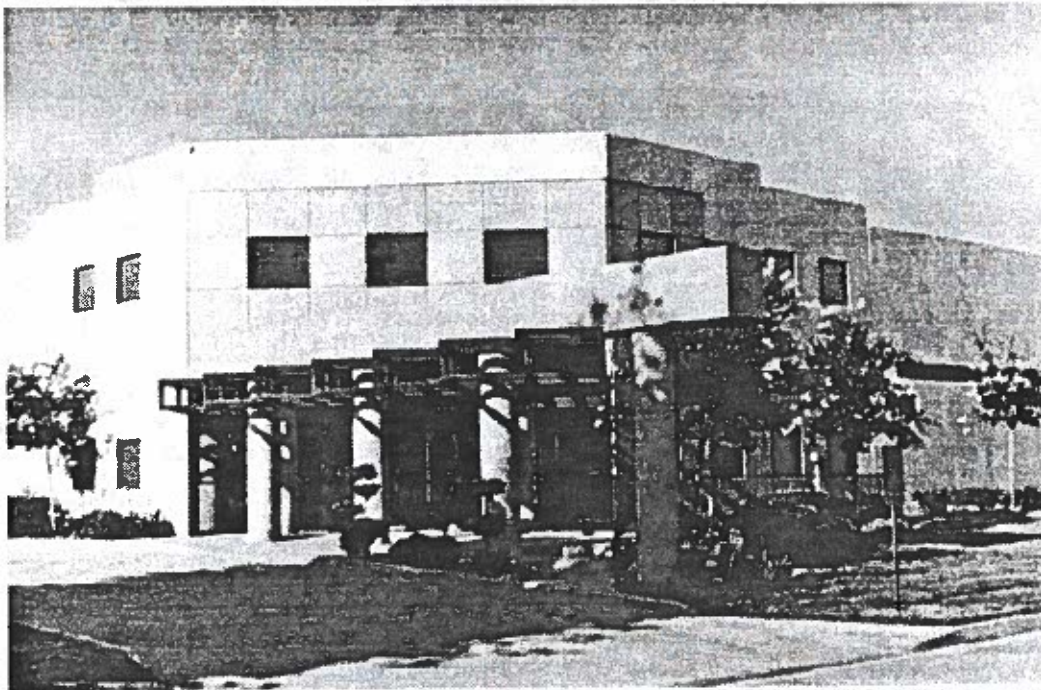
This area of discussion lists the key Covina seismic and geologic issues, which are based on the facts and information presented in the previous sections, related, salient material, and community input (see Chapter XI for clarification). Issues are important because they clarify key seismic and geologic matters warranting attention and because, along with a detailed identification and discussion of local seismic and geologic conditions themselves (the preceding sections and Technical Appendix), issues form the basis for the below-listed goal and policies and programs/implementation measures. Refer to the previous section and to the accompanying Technical Appendix for clarification on these issues and for underlying data and information. (In addition, see the Land Use Element and Land Use Study for an expanded discussion on matters relating to land use.)

The seismic and geologic issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Monitoring the two potentially active earthquake faults in Covina for any movement and, if detected, taking appropriate actions to restrict but permit development.
2. Coping with possible ground shaking hazards and concomitant effects and risks in Covina that could occur as a result of movement along any of the several active earthquake faults in the area and throughout southern California.
3. Handling problems and nuisances in Covina relating to ground lurching associated with movement along any of the many nearby and distant active earthquake faults.
4. Maintaining current seismic- and structural-related codes and standards and grading and construction practices on and continuing to require adequate soils, geologic, and/or structural studies for new and expanded or improved buildings to best prepare for potential earthquakes.
5. Recognizing and appropriately handling the unique geological, soil, and topographic conditions in and near the Covina Hills area with respect to grading and development proposals.
6. Continuing to retrofit older, unreinforced masonry and similar buildings that pervade in the downtown and considering to expand existing efforts thereof.
7. Monitoring the City for incidents of liquefaction, settlement, or subsidence and, if identified, taking necessary measures to restrict but permit construction.
8. Coping with possible landslide and mudslide hazards and concomitant effects and risks in Covina Hills that could occur as a result of a continuous erosion process or the simultaneous interaction of an unstable surface condition with either an earthquake or a heavy rain.
9. Maintaining replanting efforts after slope-denuding fires occur in Covina Hills to stabilize bare hillsides against possible ground failure during subsequent rainstorms.
10. Promoting earthquake preparedness in the community by participating in various programs and by maintaining the multi-hazard Covina Emergency Plan.



PICTURE 1. TYPICAL COMMERCIAL BUILDING IN RETAIL CENTER, AT CITRUS AVENUE AND PUENTE STREET. MODERN BUILDING CODES ENSURE THAT DEVELOPMENTS SUCH AS THIS ONE ARE STRUCTURALLY ADEQUATE AND THUS BEST SERVE THE COMMUNITY.



PICTURE 2. TYPICAL INDUSTRIAL BUILDING IN ARROW-GRAND BUSINESS PARK, NEAR GRAND AVENUE AND ARROW HIGHWAY. CURRENT STRUCTURE-RELATED CODES FURTHER GUARANTEE THAT LIGHT MANUFACTURING AND OTHER BUILDINGS THAT ARE IMPORTANT TO COVINA ARE SAFE AND FUNCTIONAL.

III. IDENTIFICATION AND APPRAISAL OF FLOODING HAZARDS

A. General

As stated in the Introduction above, under State planning law, the City must identify and appraise potential flooding hazards, particularly related to rivers, streams, and creeks, dam failure, seiches, and tsunamis. The identification serves as a foundation for the Safety Element goal, policies, and programs on the management, mitigation, and, if possible, prevention of adverse effects or community upset associated with flooding dangers.

In Covina, except for the area around Walnut Creek in Covina Hills, the City has not experienced major flooding problems in recent years principally because of the community's favorable climate and developed, generally adequate infrastructure. This chapter begins by discussing these two factors and then explains that identified flooding, which typically occurs during heavy rains, has been minor in nature, confined to only a few intersections or stretches of major streets, and could be easily resolved through enlarging existing or constructing new storm drains. It is also mentioned here that according to a branch of the Federal Emergency Management Agency (FEMA) that oversees matters pertaining to this topic, Covina does not contain any Special Flood Hazard Areas. FEMA classifies the entire community as an area of minimal flooding. However, during heavy rains, some flooding takes place around Walnut Creek, a potentially hazardous situation that is subsequently discussed. This flooding, which results primarily from the controlled release of water from the upstream Puddingstone Reservoir and Dam complex, inundates portions of the back yards of up to 20 Creek-rearing homes. Because Covina also therefore faces flooding risks from Dam failure and seiches, these possible hazards are presented as well. Lastly, tsunami, a non-issue considering the community's inland setting, relates more to seismicity and was discussed in the previous chapter.

From a planning standpoint, then, particular flooding hazards could cause upset in Covina and therefore are identified and evaluated below. In some cases, follow-up analyses may be appropriate. Information and facts relating to the community's storm drainage system and flooding situation are based on discussions with various City and Los Angeles County officials and are referenced from general documents and correspondence on file in the Covina Planning Division.

B. Local Setting

In recent decades, except for the area around Walnut Creek in Covina Hills, Covina has not experienced major flooding problems primarily because of the community's favorable Mediterranean climate and developed storm water and related infrastructure. (Because flooding around Walnut Creek is somewhat of an anomaly and pertains to unique though potentially dangerous circumstances, the matter is discussed separately under "potential flooding hazards" in the following section.) Regarding the climate, rainfall averages only about 18 inches each year, nearly all between November and April. Precipitation during the summer period is infrequent, and rainless times of several months are common. Concerning the infrastructure, Covina is served by an extensive storm drainage system that is comprised of six large, fully improved, and generally open concrete-lined channels, which are operated and maintained by the Los Angeles County Flood Control District, and numerous smaller, below-ground channels that are the responsibility of the Covina Public Works Department. The large, open channels or washes, of which the small lines or typical storm drains feed into, traverse Covina in various areas and are illustrated in the accompanying Existing Land Use and General Plan Maps. (It is also noted that segments of two flood control channels, one in the Covina Hills neighborhood and the other in Wingate Park (just south of Rail Line between Grand and Glendora Avenues) are unimproved or were never reinforced with concrete and steel to appropriate engineering standards because of their value as an important natural resource (riparian habitat) and, in the case of the Covina Hills facility, because of use as a County horse and hiking trail. Refer to the Land Use and Natural Resources and Open Space Elements for clarification on these special, sensitive areas. As indicated above and as clarified in the following section, the unimproved Walnut Creek channel does, however, experience some potentially hazardous flooding because of the release

of water at the upstream Puddingstone Reservoir and Dam.) Another component of the County-operated flood control infrastructure are two large flood control spreading grounds (at the southwest corner of Arrow Highway and Barranca Avenue and at the easterly terminus of Workman Avenue), facilities that serve as generally temporary catch basins for waters diverted from channels and washes in the region and function to reduce pressure on the overall system. Collected water subsequently percolates into the ground, thus also serving as ground water recharge facilities (an aspect of the spreading grounds clarified in the Natural Resources and Open Space Element). As further described in the Land Use and Natural Resources and Open Space chapters, the spreading grounds may eventually serve a recreation function as well. The large, above-noted channels are components of an extensive, countywide flood control network that ultimately sends storm water out to the Pacific Ocean. Most portions of the community's major streets and nearly all districts and neighborhoods have stormdrains or are linked to the flood control system.

The above-discussed storm drainage system is designed and generally succeeds to accommodate local runoff and to eliminate or reduce localized flooding and ponding during rainstorms. In the past, only minor flooding has occurred, in typically older areas, because of inadequate storm drain capacities or, in a few cases, there being a major street or intersection completely lacking such facilities. (The City's definition of "minor flooding" generally refers to situations during heavy rains where water rises above a curb and flows onto private property, usually for short periods. However, the definition is more subjective in cases where street curbs do not exist.) The problem has been somewhat exacerbated by development, which increases local runoff volumes as more and more solid surfaces become covered by impervious materials. Many of the drainage deficiencies have been rectified. Specifically, the City and Los Angeles County have independently or jointly constructed several new storm drains and appurtenant components and enhanced existing infrastructure. However, some inadequate areas have not yet been addressed and therefore remain prone to minor flooding. These sections are listed below (in no particular order):

TABLE 1. COVINA AREAS SUBJECT TO MINOR FLOODING DURING HEAVY RAINSTORMS*

<u>AREA</u>	<u>PROBLEM</u>
1. North Half of Badillo Street, East of Barranca Avenue	Street Flooding
2. La Serena Drive, North of Rowland Street and East of Barranca Avenue	Street Flooding
3. Lark Ellen Avenue at San Bernardino Road	Street Flooding
4. Intersection of San Bernardino Road and Rimsdale Avenue	Street Flooding
5. Badillo Street, From Hollenbeck Avenue East to Fourth Avenue	Street Flooding

*Other flooding problems contained entirely within private properties may also exist. And as previously indicated, this table does not include the area around Walnut Creek in Covina Hills, which, because of its unique situation, is discussed in the following section.

The information on which Table 1 is based was obtained from the Covina Public Works Department, which, along with the County Public Works entity, has studied minor flooding within the community and made recommendations on improving the drainage control network. It is believed that as more (local and County) funding is made available, the City and County will resolve the listed deficiencies through enlarging existing or constructing new storm drains and related facilities, as has been done in the past. In sum, despite a few shortcomings, engineering officials from the City of Covina and Los Angeles County have stated that the existing flood control system serving Covina is functionally sufficient, so as not to pose any serious hazards,

can accommodate the type of moderate growth (refer to Land Use Element for clarification) the City envisions and desires, and will be enhanced in the near future.

An important, noteworthy point that underscores the community's generally adequate flood control network and corresponding limited potential for major flooding is that the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA), which oversees matters and establishes regulations pertaining to this topic, has determined that the City does not have any Special Flood Hazard Areas (SFHAs). According to the FIA mapping system, the entire community is classified as "Zone C," which indicates "areas of minimal flooding." (Technically, Zone C means that a 100-year flood would be contained within existing channels.) Under the voluntary Federal National Flood Insurance Program (NFIP), the FIA offers low-cost flood insurance to property owners in SFHA-applicable communities in exchange for the local governments committing to administer various Federally-approved flood plain management measures. The Zone C classification that is applied to Covina and many other places therefore means that Federal flood insurance is available, though the cities need not comply with FIA regulations.

C. Overview of Potential Flooding Hazards and Concomitant Effects and Risks Relating to Covina

1. General

As stated above, although Covina has generally not experienced major flooding, the area around Walnut Creek in Covina Hills does get inundated during rainstorms and poses some negative effects or hazards for the community. This flooding results primarily from Los Angeles County Flood Control District release of water from the upstream Puddingstone Reservoir and Dam complex. Therefore, it is appropriate to present the matter under this section. In addition, because Walnut Creek could theoretically become flooded in the event of either a seismically-induced failure of Puddingstone Dam or earthquake-prompted seiches, these potential hazards must be discussed as well.

2. Controlled release of stormwater into Walnut Creek

The area around Walnut Creek in Covina Hills experiences some flooding during periods of heavy rain. Flooding occurs primarily because of the release of water from the easterly Puddingstone Reservoir as a means of managing the facility's insufficient flood water storage capacity. The storage capacity limitation relates to both Los Angeles County and State actions that are clarified below.

Puddingstone Reservoir and Dam were built in the 1920s to control flooding in Covina and other downstream communities. For many years after its construction, the County Flood Control District-managed complex adequately performed this function, and downstream water flows were year-round and reasonable. However, in the '70s, as the surrounding Bonelli Regional Park began developing, County Flood Control officials started retaining a high level of water during all seasons to serve various recreational activities and in response to restrictions imposed by the State Department of Water Resources regarding the seismic stability of the Dam (discussed in the following section). To also serve the Park's increasing recreational function, the County began to maintain a minimum water level as well. The County's limits on the maximum and minimum water levels, which were subsequently continued and reinforced as more development occurred, particularly uses and structures below and to the west of the Dam, necessitated the releasing of water through the Dam on a managed basis during winter rainstorms.

Today, during heavy rains, the controlled release of water from Puddingstone Dam into the stretch of Walnut Creek that meanders through Covina, which is approximately 2 1/2 miles downstream and just upstream from where the Creek becomes an improved, concrete-lined channel, floods portions of the back yards of up to 20 Creek-rearing homes with as much as 3 to 4 feet of water. The inundation typically covers open areas and, if existing and toward the rear, accessory structures (such as storage buildings, barns, and/or corrals), thus sometimes resulting in minor property damage and threatening public safety. Depending on the intensity of

the storm activity, varying quantities of water from the Dam may be released for up to 30 days during the rainy season. Flood waters also cause some soil erosion around the banks of the Creek. (Soil erosion is a natural process by which material is removed from the earth's surface.) Although the severity of this problem is not known and requires further study, in general, the cumulative effects of erosion could also threaten structures and public safety plus existing wildlife. (As discussed in the Natural Resources and Open Space Element, the unchanneled segment of Walnut Creek supports various bird, reptile, and animal species, though none are considered endangered. Also, the creek functions as a wilderness area/trail, which provides recreational and educational opportunities. These functions could therefore be undermined as well.) It is noted that general runoff into all portions of Walnut Creek from abutting residential properties, including those upstream in San Dimas, is a contributing though somewhat lesser factor in the above-noted flooding and erosion. As more development has occurred, so has increased drainage into the Creek.

In sum, the loss of flood water storage capacity at and concomitant stormwater management practices associated with the Puddingstone Reservoir and Dam complex result in some inundation (again, during the rainy season) and could potentially cause major flooding hazards on downstream properties in Covina that warrant attention, particularly in light of current plans to commercialize more of Bonelli Park. Such proposals would exacerbate the problem and further prevent operation of the Dam to meet the purpose for which it was constructed. Therefore, in the past, the City of Covina has officially stated that any Bonelli Park expansion plans should resolve local flooding concerns, such as by developing a program to seismically reinforce the Dam or convincing the County to lower the Reservoir water level during the winter months. Until a permanent solution is made, the City should monitor and address the situation, particularly with respect to cumulative effects, prohibit habitable structures from being built within or near the wash, and, to the greatest extent possible, continue communicating with County Flood Control District officials on water release matters. Regarding the latter point, on days in which water is to be under controlled release, Flood Control officials at the Dam notify the Covina Fire Department so the Department can best respond to telephone inquiries and requests for service in the area. Fire officials are informed about the quantity of cubic feet of water per minute that is released and other relevant facts. But the City must also continue with its emergency preparedness activities (see Chapter VII below) to handle a worst case scenario or possible major flood or Dam failure (again, discussed below).

3. Dam failure

Puddingstone Dam, which, as discussed in the previous section, is just east of and, via Walnut Creek, upstream from Covina, was built before the advent of modern seismic safety codes. Although the Dam does not overlay any earthquake faults, the facility would nevertheless be vulnerable to failure from major seismic activity in an adjacent or distant area. Dam failure would result in major, hazardous flooding and soil erosion around Walnut Creek in Covina and other downstream communities. Flooding could reach Covina in as little as 20 minutes after Dam breakage. And in the City, according to the information on file with the Covina Community Development Department, rushing waters would overflow the banks of Walnut Creek by approximately one-quarter mile on each side and travel beyond the Covina Hills area, partially inundating the portion of the community roughly south of Workman Avenue. However, the exact extent of flooding-related building and infrastructure damage and human injuries or deaths is unknown, and, because Puddingstone Dam is County owned and managed, the City has limited authority to bring the facility up to current codes. Therefore, to best handle this potential disaster and to deal with risks associated therewith, it appears that the City should follow three appropriate courses of action: 1) administer reasonable development standards for properties abutting the Creek, including those that prohibit habitable structures from being located near the wash; 2) continue with ongoing emergency preparedness activities, particularly with respect to evacuation routes (see Chapter VII below); and 3) encourage the County to develop a program and funding mechanism to seismically reinforce the Dam. (Large-scale relocation of residences from potentially effected areas would be infeasible.) In addition, although there are other reservoir-serving dams north and northeast of Covina in the San Gabriel Mountains that could break, it is believed that potentially negative impacts on the City would be minimized because these facilities are all several miles from Covina (which would enable much water to be caught by

storm drains in adjacent communities and would provide Covina officials with adequate time for emergency activities) and because segments of the community's previously described, generally adequate flood control system that pervade the upper and central portions of the town could most likely handle the incoming residual waters.

4. Seiches

Seiches are earthquake-induced waves in enclosed bodies of water, such as lakes or reservoirs, and are similar to the sloshing of water in a bucket or bowl when shaken or jarred. The waves can be tens of feet high or more and can have devastating effects on people and property within their reach. In reservoirs, dams are often overtopped, sending large volumes of water on downstream areas. This is where the potential hazard relates to Covina. Because of the presence of the easterly, upstream Puddingstone Reservoir and Dam complex (see above for clarification), and because Covina lies in a seismically active region, the City is theoretically susceptible to seiches, which would likely cause major flooding. The phenomenon would lead to considerable upset in the community if the seiches occurred simultaneously with the controlled release of water from the Reservoir. To best prepare for potential seiche-related hazards or to deal with concomitant risks, the City should follow two of the courses of action noted in the previous section on possible dam failure: 1) administer reasonable development standards for properties abutting the Creek and 2) continue with ongoing emergency preparedness activities. Lastly, it is believed that seiches from the northerly and northeasterly dams would not disrupt Covina because of distance and infrastructure factors.

D. Listing of Key Existing Flooding Issues

This area of discussion lists the key Covina flooding issues, which are based on the facts and information presented in the previous sections, related, salient material, and community input (see Chapter XI for clarification). As stated in the prior chapter, issues are important because they clarify key flooding problems warranting attention and because, along with a detailed identification and discussion of flooding problems themselves (the preceding sections and Technical Appendix), issues form the basis for the below-listed goal and policies and programs/implementation measures. Refer to the previous sections and to the accompanying Technical Appendix for clarification on these issues and for underlying data and information. (In addition, see the Land Use Element and Land Use Study for an expanded discussion on matters relating to land use.)

The flooding issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Supporting and working with Los Angeles County in maintaining the existing flood control infrastructure serving Covina.
2. Supporting and working with Los Angeles County in enhancing the local storm drainage system in particular areas to address local minor flooding and ponding problems.
3. Continuing to require that all new and significantly expanded developments incorporate sufficient measures to mitigate flood hazards.
4. Coping with seasonal, moderate flooding and erosion problems in and around the unimproved section of the Walnut Creek Flood Control Channel in Covina Hills, which is related to the excessive release of storm waters from the upstream Puddingstone Reservoir and Dam complex, through following various short-term and long-term measures. Short-term measures include prohibiting the construction of habitable structures within or near the creek and administering other reasonable development standards as well as communicating with Los Angeles County Flood Control officials on water release matters. Long-term actions consist of working with various State and County officials to attain a permanent solution to the flooding and erosion, such as developing a program and funding mechanism to seismically reinforce Puddingstone Dam or having County Flood Control officials lower the Puddingstone Reservoir water level during the winter months.

5. Ensuring that any Bonelli Park expansion plans or proposals recognize the original purpose for which the Park's Puddingstone Reservoir and Dam complex were developed and resolve downstream flooding problems and concerns in Covina.
6. Studying and monitoring the cumulative effects and implications of property damage, human danger, and soil erosion and concomitant threats to wildlife in and adjacent to the unimproved portion of Walnut Creek relative to existing, seasonal flooding.
7. Following appropriate Uniform Building Code provisions regulating earth work and grading during construction and pertaining to other matters to minimize erosion along the banks of the unimproved section of Walnut Creek.
8. Promoting emergency preparedness activities in the community with respect to potential major flooding incidents by following various measures and by maintaining the multi-hazard Covina Emergency Plan.



PICTURE 3. REAR YARD OF TYPICAL RESIDENTIAL PROPERTY IN COVINA HILLS AREA BACKING UP TO UNIMPROVED PORTION OF WALNUT CREEK. PROPERTIES SUCH AS THIS ONE FACE SEASONAL MODERATE FLOODING AND EROSION PROBLEMS PERTAINING TO THE EXCESSIVE RELEASE OF STORM WATERS FROM THE UPSTREAM PUDDINGSTONE RESERVOIR AND DAM COMPLEX.

IV. IDENTIFICATION AND APPRAISAL OF FIRE HAZARDS

A. General

The Safety Element process, as mentioned in the Introduction, aims to reduce death, injuries, and property damage resulting from both natural and man-made hazards. While the preceding two chapters discussed, respectively, potential seismic and geologic hazards and flooding risks, this division focuses on the potential for fires, the primary man-made hazard. (Hazardous materials spills, another possible man-made disaster, is discussed in the following chapter.) Potential fire hazards are thus identified and appraised to serve as a basis for the Safety Element goal, policies, and programs on the management, mitigation, and, if possible, prevention of adverse effects or community upset associated with this concern.

There are two types of fires that pose hazards to Covina, urban and wild land. Urban fires originate within a structure in the built environment of the generally flatter portions of the community and are typically caused by carelessness, ignorance of fire prevention precautions, arson, faulty equipment, or a lack of fire suppression devices, such as automatic sprinklers. Wild land fires, on the other hand, start outside of buildings in the very low density, hillside areas of southeast Covina (or Covina Hills), where there are large quantities of uncultivated, combustible plant materials, particularly near buildings, and generally occur as a result of carelessness with matches or cigarettes or, again, arson. The first section below discusses first urban and then wild land fire hazards. In Covina, urban or structure-originating fires pose the most danger to the overall community. The reason for this is that the City is predominantly flat and developed and, therefore, more susceptible to building fires, where there tends to be a greater human presence. Under urban fires, common situations/property types in which blazes have broken out as well as current fire prevention control measures and suppression programs are discussed. In the latter category, the potential for wild land fires, which have not occurred to large degrees in recent years because of existing infrastructure and other factors, is evaluated. The section subsequently lists successfully-utilized fire prevention development standards and suppression activities. It is stated that, based on past and foreseeable local fire experiences, although both classifications of blazes pose different degrees of risk to the community, the City of Covina believes that neither risk is unreasonable relative to surrounding jurisdictions.

Nevertheless, because, from a planning standpoint, potential fires could cause upset in the City, they are identified and evaluated below. Follow-up analyses may be appropriate in some cases. Information and facts relating to this hazard are based on discussions with City Fire Department personnel and are referenced from general documents and correspondence on file in the Covina Planning Division.

B. OVERVIEW OF POTENTIAL FIRE HAZARDS AND CONCOMITANT EFFECTS AND RISKS RELATING TO COVINA

1. General

This section presents potential fire hazards relating to Covina. The first area of discussion focuses on what are known as urban fires, which are fires that take place in the built environment of the generally flatter portions of the community. The second topic presents what are classified as wild land fires, they being likely to occur in the very low density, hillside areas of southeast Covina (or Covina Hills).

Because Covina is predominantly flat and built-out, urban or structure-oriented fires are of greatest concern. The types of development that pose relatively high fire hazards are older, larger apartment and nonresidential buildings that lack automatic sprinklers and other fire prevention features, smaller commercial and industrial structures of which fire sprinkler systems are not required, and commercial and industrial sites handling flammable materials. Fires occurring within these structures, which exist throughout the City, constitute the most danger or highest risks to humans and thus the overall community because of the greater probability of human presence. However, the City attempts to minimize potential urban fire hazards through various prevention

control measures, including emphasizing safety in the design, construction, access to, and use of structures, ensuring the proper storage of flammable materials, and conducting business inspections and public education. Also, the Covina Fire Department, described in Chapter VII below, maintains sufficient resources to deal with most incidents.

In addition, wild land fires pose a hazard in Covina Hills because of the area's moderate to steep slopes, large quantities of uncultivated, combustible plant materials, particularly in relation to nearby structures, and many buildings with wood-shake roofs and that lack fire sprinkler systems. Although the City has not experienced major wild land fires in recent decades, a fire in Covina Hills can occur at any time of the year as a result of lightning, spontaneous combustion, or arson. Fire is typically most likely to occur during the summer through fall "dry season." However, potential fire hazards are at least somewhat precluded by the facts that the City Fire Department (again, discussed in Chapter VII) maintains adequate personnel, equipment, and inter-agency agreements to handle most wild land fires, that water for fighting fires in Covina Hills is available via strategically placed hydrants, and that the City follows appropriate development standards, building codes, public education efforts, and activities related to trimming and clearing overgrown plant materials. All of the above matters are clarified below, along with a general discussion on Covina fire protection services. Emergency preparedness planning, which the City also employs to deal with both types of potential fire hazards, is presented in Chapter VII as well. And, based on past and foreseeable local fire experiences, although both classifications of blazes pose different degrees of risk to the community, the City of Covina believes that neither risk is unreasonable relative to surrounding jurisdictions.

2. Urban fires

As indicated above, certain types of development in Covina, pose relatively great fire hazards, they typically being 1) older, larger apartment and commercial and industrial buildings that lack automatic sprinklers and other fire prevention features, 2) smaller commercial and industrial structures (i.e., under 5,000 square feet) of which fire sprinkler systems are not required, and 3) commercial and industrial businesses of various types and sizes that generate, store, and/or use large quantities of hazardous or flammable materials (e.g., everything from gas stations to large-scale manufacturing operations). According to the Covina Fire Department, the primary agency that handles these matters (discussed in Chapter VII below), the areas that constitute the greatest fire hazard potential are presented in the following table:

TABLE 2. COVINA DEVELOPED AREAS WITH GREATEST FIRE HAZARD POTENTIAL*

<u>USE</u>	<u>AREA</u>
1. High density apartment buildings	Generally between San Bernardino Road and Badillo Street and Barranca Avenue and Charter Oak Wash (current target area for City Neighborhood Preservation Program)
2. Industrial buildings	Generally southwest from Cypress Street and Glendora Avenue (the Cypress Industrial Park)
3. High density apartment buildings	The 1100 block on North Conwell Avenue
4. High density apartment buildings	The 1100 to 1300 blocks of West San Bernardino Road

5. High intensity commercial buildings	The 100 to 400 blocks of North Citrus Avenue
6. Smaller, non-sprinklered commercial and industrial buildings	Citywide
7. Various-size commercial and industrial buildings/properties containing hazardous materials	Citywide

*Items are listed in no particular order. For clarification on locations, refer to City Street Map. **HAZARDOUS MATERIALS ARE DISCUSSED SEPARATELY IN CHAPTER V BELOW.**

Although the above notable fire hazards can be found throughout the City, the Covina Fire Department (again, discussed separately below) maintains sufficient personnel and equipment to deal with most fire situations and can call on nearby firefighting units for assistance, when needed. In general, the City attempts to minimize potential urban fire hazards through prevention control measures, which include emphasizing safety in the design, construction, access to, maintenance, and use of structures as well as ensuring the proper storage of flammable and combustible materials (described separately in the following chapter). Regarding building design and construction, modern standards require the incorporation of fire-resistant materials and alarms/detectors in all structures and automatic fire sprinklers in many types of development situations, including all new and significantly expanded residential properties and new and enlarged non-residential proposals exceeding 5,000 square feet. And wood-shake roofs are prohibited. Proper safety measures can effectively prevent the possibility of fire, thus minimizing potential human and property losses. The City also exercises fire suppression in its programs to monitor and inspect businesses and to educate the public on fire prevention methods. These activities are performed by both the Fire Department and Building and Safety Division of the Community Development Department. Other efforts pertain to disaster preparedness planning, a topic discussed in Chapter VII below. (As was the situation with seismic-related codes discussed in Chapter II above, under law or through agreement with the City, the State administers fire-inhibiting standards and practices for public schools, hospitals, mobile home parks, and other uses.) In sum, as previously stated, fire prevention in buildings and structures is of great importance to the City of Covina, which is generally urbanized or built-out and therefore particularly prone to this type of hazard. But because Covina has a low density, hillside area (Covina Hills), wild land fires, discussed below, pose a problem for the community as well.

3. Wild land fires

In addition to facing fire threats from buildings or components within the developed areas, Covina is also confronted with potential hazards relating to wild land fires in the generally hilly southeastern territory (Covina Hills). For purposes of this Element, a wild land fire is a blaze typically occurring in very low density, hillside areas with large quantities of uncultivated, combustible plants (such as chaparral and riparian communities), brush, and grasslands. Combustible plant materials subject nearby structures to latent fire risks. Most of the buildings in this approximately one square mile area are single-family homes and detached accessory structures (e.g., garages, barns, and corrals), through there is a major commercial business park around the intersection of Garvey Avenue and Holt Avenue (Village Oaks Business Park). Fire risks are somewhat heightened by the fact that many of the residential and commercial buildings in Covina Hills have wood-shake roofs and lack automatic fire sprinkler systems, and some residential sites have overgrown vegetation. Also of concern and considered under this topic of discussion are potential fire hazards occurring at the interface between hillside and developed areas. This type of fire could possibly cause the most damage to structures and loss of life because of the proximity of a relatively large number of dwelling units to combustible plant materials.

According to the Covina Fire Department, the City has not experienced major wild land fires in recent decades, though a fire in Covina Hills can happen at any time of the year as a result of lightning, spontaneous combustion, or arson. Fire is most prevalent, however, during the "dry season," which occurs primarily in the summer and fall. The drying effects of the Santa Ana Winds from the eastern deserts together with, in many situations, steep slopes and fairly remote, moistless locations increase the inherent fire hazard within this area. Covina is also susceptible to wild land fires in light of the fact that a hillside district adjacent to the City in San Dimas, according to officials from the Los Angeles County Fire Department, is particularly prone to combustion because of topography and vegetation. A fire starting here could therefore spread into Covina.

It must also be noted that, in theory, other hazards may occur as a result of fire in hillside areas. For example, a burn can destroy deep-rooted plants, which could increase the possibility of slope failure. Plants with extensive root systems prevent oversaturated soil from sliding during or after heavy rainfall. Moreover, the loss of a well-vegetated watershed increases storm water runoff, which could hasten erosion and flooding. (These matters were also discussed in Chapters II and III above.)

As was the case with urban fire hazards presented earlier, the below-described Covina Fire Department (refer to Chapter VII for clarification) maintains adequate personnel and equipment to handle most wild land fires. Where necessary, the City Fire entity can call on the Los Angeles County Fire Department for assistance in this district through an established inter-agency agreement. And according to Covina Fire, water for fire fighting is available via strategically placed water tanks and appropriately located hydrants. Furthermore, peakload water supply requirements, discussed below, are believed to be adequate. There is also a nearby helispot on a concrete-lined reservoir near the junction of the San Bernardino and Orange Freeways. Generally, the City endeavors to minimize potential wild land fire hazards through appropriate, prevention-oriented development standards relating to architectural design, site planning (e.g., setbacks from slopes), building and roof components (e.g., fire-resistant wall materials and tile or composition shingle roofs—wood-shakes are prohibited), landscape design, and minimum road widths. (It is noted that in accordance with State planning law, minimum road widths and building setbacks or clearances around structures are evaluated separately in Chapter VII.) Moreover, current codes would require fire alarms/detectors and automatic fire sprinklers in all primary structures in this area. Proper development measures can affectively prevent the possibility of fire, thus minimizing potential human and property losses. Finally, the City exercises fire suppression in Covina Hills through other avenues as well, including programs to trim and clear overgrown plant materials from public and private properties, monitor and inspect commercial businesses (in the Village Oaks Business Park), educate the public on fire prevention methods, and work on disaster preparedness planning (also discussed in Chapter VII below).

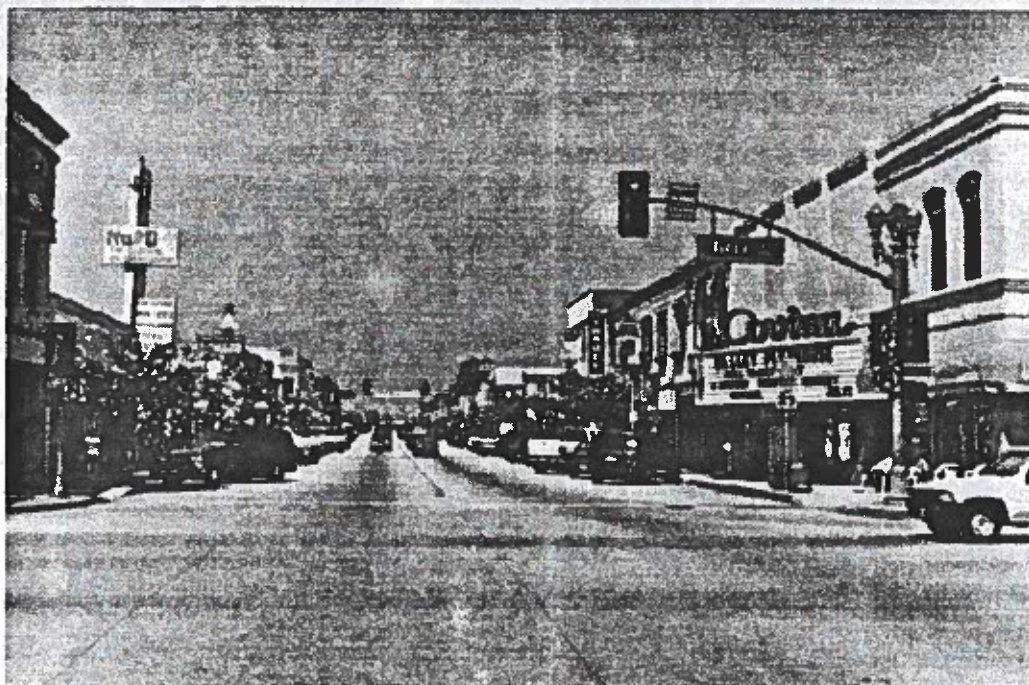
C. Listing of Key Existing Fire Issues

This area of discussion lists the key Covina fire issues, which are based on the facts and information presented in the previous section, related, salient material, and community input (see Chapter XI for clarification). As stated in the prior chapters, issues are important because they clarify key fire matters warranting attention and because, along with a detailed identification and discussion of potential fire hazards themselves (the preceding section and Technical Appendix), issues form the basis for the below-listed goal and policies and programs/implementation measures. Refer to the previous section and to the accompanying Technical Appendix for clarification on these issues and for underlying data and information. (In addition, see the Land Use Element and Land Use Study for an expanded discussion on matters relating to land use.)

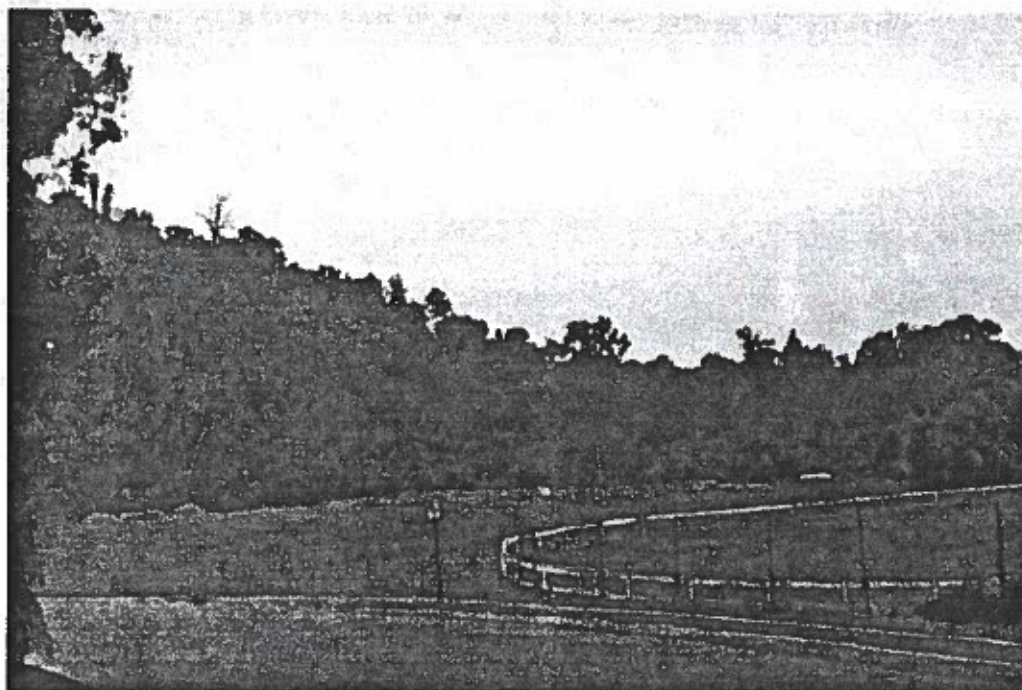
The fire issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Coping with potential urban or structure-oriented fires, particularly regarding older, larger apartment and commercial and industrial buildings that lack automatic sprinklers and other fire prevention features, which pose the most danger to the overall community.

2. Coping with potential wild land or hillside-oriented fires, a threat that exists in and adjacent to the Covina Hills area because of the district's proximity of a relatively large number of residential houses to combustible plant materials.
3. Continuing to maintain appropriate Building and Safety, Fire, and Planning Department/Division requirements and standards for new construction and for substantial additions to existing structures to prevent and minimize potential urban and wild land fires in the community. Building and Safety and Fire provisions relate to fire-resistant building materials and roofing components; building construction; detector and alarm systems; fire service equipment; automatic fire sprinklers; one-hour fire walls; clearances around structures; accessibility to and into buildings; and the proper storage of flammable and combustible materials. Planning provisions pertain to architectural design; site planning; building setback; landscape design; minimum road and driveway widths; and property usage and maintenance.
4. Maintaining ongoing fire inspection, Neighborhood Preservation, general Code Enforcement, and business monitoring programs that reduce fire and other dangers associated with residential, commercial, industrial, and institutional buildings.
5. Continuing with weed abatement programs in Covina Hills, which involve trimming and clearing overgrown plant materials from public and private properties, to reduce the amount of combustible vegetation.
6. Maintaining sufficient personnel, equipment, and resources in the Fire and Police Departments to handle fire incidents.
7. Continuing with existing citywide fire prevention/education programs to bolster public awareness of the disastrous impacts that fires can have on the community.
8. Promoting emergency preparedness activities in the community with respect to potential urban and wild land fires by following various measures and by maintaining the multi-hazard Covina Emergency Plan.



PICTURE 4. VIEW OF CITRUS AVENUE IN DOWNTOWN, LOOKING NORTH FROM BADILLO STREET. THOUGH A TREASURE TO AND THE HEART OF THE CITY, THE DOWNTOWN HAS MANY OLDER BUILDINGS LACKING AUTOMATIC SPRINKLERS AND OTHER FIRE PREVENTION FEATURES.



PICTURE 5. COVINA HILLS AREA, LOOKING WEST FROM REEDER AVENUE, SOUTH OF BADILLO STREET. FIRES POSE A THREAT IN AND ADJACENT TO THIS DISTRICT BECAUSE OF THE PROXIMITY OF A GREAT DEAL OF COMBUSTIBLE PLANT MATERIALS TO RESIDENTIAL PROPERTIES.

V. IDENTIFICATION AND APPRAISAL OF HAZARDOUS MATERIALS

A. General

As described in the Land Use, Circulation, and Housing Elements, the City of Covina is a predominantly residential community with an economic base that includes a variety of small- to medium-size and some larger light industrial and commercial businesses. This base, while vital to the economic health of the City, represents a potential source of problems from improper management of hazardous materials. In other words, the ongoing generation, use, storage, and disposal of hazardous materials in Covina present threats to the safety of the community by raising the possibility of chemical spills, gas leaks, explosions/structural fires, and resource contamination. Hazardous materials are also transported through and near the community along the San Bernardino Freeway, on the Metrolink Commuter Rail Line (during freight operations in the late-night hours only), and via major arterial streets, thus constituting another area where accidents could occur.

According to the State General Plan Guidelines, a hazardous material is defined as “an injurious substance, including pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals, and nuclear fuels.” These materials, which may cause serious injury, illness, or death to humans and/or destruction to property, can be further classified into four basic categories: toxics, corrosives, reactives, and ignitables. Toxics include a broad range of typically industrial chemicals and gasses whose ingestion can result in serious illness or death. Through body contact (rather than ingestion), corrosives can cause inflammation or destruction of living tissue. When mixed with other substances, reactives can cause damage from blast and flash fire. And ignitables pose the threat of combustion at low ignition temperatures and rapid burning.

Of particular concern regarding hazardous materials is the treatment and disposal of hazardous wastes. Hazardous wastes include a spectrum of dangerous by-products generated from, for example, the manufacturing of common items, including electric components, medical devices, and plastic containers and the operation of typical commercial businesses like dry cleaning, film processing, and automotive painting and general repair. Enterprises such as these are located throughout Covina. In addition, substances or waste materials from household items, such as pesticides, used motor oil, paint, and cleaning solutions, are to varying degrees hazardous as well.

All through the United States, there has been little regulation of the disposal of industrial, commercial, and residential wastes until recently. This lack of regulation has resulted in the indiscriminate dumping of hazardous wastes in general landfills and along roadsides and in open fields, causing polluted ground and surface water, soil, and air. Because of these problems, various Federal and State laws have been passed to provide government with greater leverage for regulating the generation, use, storage, and disposal of hazardous materials to protect human life and the environment. In terms of the general plan process, cities may address hazardous materials in the safety element. The City of Covina believes that it is appropriate to discuss the matter in this Element because hazardous materials constitute an identified and real threat to public safety. Leaks or explosions could cause considerable upset in the community.

In addressing this area relating to Covina, the Safety Element must include a discussion of potentially injurious substances. The first section below therefore presents an overview of existing hazardous materials in the City and concomitant effects and risks. Three different facets of the topic are explored: general hazardous material types and the sources thereof; transportation of hazardous wastes; and underground hazards (i.e., storage tanks, septic tanks, and natural gas distribution lines). Regarding all three subtopics, it is stated that although dangerous materials pose different threats and risks to the community, the City believes that the presence of such materials, which is unavoidable in a contemporary developed community, poses only moderate or reasonable risks compared to similar cities in the region. The second and final principal section of this chapter discusses the Los Angeles County Hazardous Waste Management Plan, of which Covina is required to follow applicable portions thereof. Concerning matters presented in the Waste Management Plan and in some situations with respect to the underlying hazardous materials discussion, follow-up studies and analyses will be necessary.

As was the case with the three previous hazard-related chapters, the material presented herein serves as a basis for the Safety Element goal, policies, and programs. Information and facts mentioned in this chapter are based on discussions with City Fire Department personnel and are referenced from various documents and correspondence on file in the Covina Planning Division.

B. Overview of Existing Hazardous Materials and Concomitant Effects and Risks Relating to Covina

1. General

The following section presents key matters pertaining to hazardous materials within a framework relative to three areas of discussion: 1) hazardous material types and sources; 2) the transport of hazardous wastes; and 3) underground hazards. These items constitute the focus of this topic. Basically, hazardous materials and substances are a direct result of society's technology and high standard of living. Many of the products people use in everyday living contain substances that are harmful to the environment. The production and use of these materials often leave toxic or other potentially injurious matters that require proper disposal to ensure that the detrimental effects can be reduced or eliminated altogether. In any society, a balance must inevitably be found between economic prosperity and the well-being of the environment.

Under the first area of discussion, hazardous material types and sources, such materials are defined, typical substances are listed, and common local businesses and activities that use, generate, store, and must dispose of hazardous substances are mentioned. Other matters presented include hazardous waste disposal, an important issue later expanded upon, oversight and regulation of hazardous materials handlers, and household hazardous wastes. The second area examines the transport of these substances, which covers both various materials and waste products, and potential problems associated therewith. Underground hazards constitute the third and final subject. The potential underground hazards consist of storage tanks, septic tanks, and natural gas distribution lines. These items pervade the community and therefore warrant discussion as well. For example, in several cases, leaking underground storage tanks have caused soil contamination, a major local problem. For all three areas of concern presented below, appurtenant risks involved and major emergency preparedness practices are also mentioned. Generally, the City believes that, relative to surrounding communities, none of the risks are unusual or unreasonable. And regarding emergency preparedness planning, which the City performs to be ready for any and all contingencies, it is noted that the matter is further presented in Chapter VII below.

2. Hazardous materials and sources

As indicated above, the City of Covina has several industrial and commercial businesses that use, generate, store, and must dispose of hazardous materials. (Refer to previous sections for the definition of these substances.) According to the Covina Fire Department, which maintains records on City companies involved with hazardous materials, there are 145 hazardous materials handlers within the community. The 145 businesses (list on file in Covina Planning Division) consist of a wide variety of company types, such as manufacturing, processing, and printing operations, machine shops, contractors' storage yards, service stations, automobile-related facilities, equipment rental sites, pool and pest control services, dry cleaning and film processing enterprises, and some hardware and larger food stores. In addition, certain institutional uses possess hazardous substances, including hospitals, utility company sites, and public school properties. These 145 activities are located throughout the community, frequently abutting residential property, and handle various types of materials, such as gases, oils, cleaning solvents, and chemicals, which are toxic, corrosive, reactive, and/or ignitable (refer to previous sections for clarification). Problems could also arise during construction or demolition activities. Therefore, the subject materials constitute risks for Covina or threaten public safety because accidents or spills have the potential to affect large segments of the population. The quantitative aspect of hazardous materials usage in the City is unknown, though business-related hazardous substance utilization and waste generation are expected to increase at least slightly in the years ahead as a result of ongoing and future population growth, redevelopment, commercial revitalization, businesses retention, and economic development efforts. Unfortunately, hazardous

materials constitute an unavoidable consequence of the community's need to maintain a strong economic base, which is thus dependent upon supporting sufficient daytime as well as nighttime populations. Regarding the City's residents, as previously indicated, many common household items, such as paint, cleaning solutions, and used motor oil, are potentially harmful as well, and these substances will likely be in greater supplies as the population increases.

As mentioned above, the Covina Fire Department maintains information on City businesses and entities that use, store, or generate hazardous materials so that in the event of an accident or fire Covina emergency personnel may either respond appropriately or call upon Los Angeles County officials, who also have these records, for assistance. Under special agreement, the City contracts with the Los Angeles County Fire Department, Hazardous Materials Division to address major incidents and to administer various State statutes, a key one of which requires applicable businesses to submit plans for the handling of hazardous materials. The initial information on hazardous materials users is typically ascertained by the City Building and Safety Division in the granting or renewing of business licenses. (For more information on emergency response, see Chapter VII below. It is noted that if a disaster is epidemic or threatens to spread by contaminated air or water, the Los Angeles County Public Health Department becomes the primary agency dealing with this aspect of the emergency.) Many of the above-noted State statutes came from "right-to-know" laws that enable local governments to identify high-risk industries and commercial operations and work towards protecting public health and safety. Besides Los Angeles County, other agencies also play key roles in regulating the storage and use of hazardous materials to further public vitality as well as environmental quality. These agencies are 1) the United States Environmental Protection Agency, 2) the California Department of Health Services, 3) the California Department of Industrial Relations, and 4) the California Regional Water Quality Control Board. Regarding environmental quality, unfortunately, according to the County and State agencies, certain occupied and vacant Covina sites have been contaminated from either leaching above-ground hazardous materials or leaking below-ground storage tanks. (This matter is discussed separately below.) But under direction of the above entities, appropriate remediation has been and will continue to take place on these properties.

A separate though also important issue is waste disposal. Industrial and commercial businesses in Covina generate a diverse mix of hazardous wastes requiring various treatment technologies. Historically, hazardous waste disposal and removal have been regional concerns managed by Los Angeles County. Because of this situation as well as land use concerns and economic factors, no hazardous waste treatment, storage, or disposal plants were ever developed in Covina. (The generation of hazardous wastes by the above-mentioned establishments is ancillary to their primary operations.) Therefore, all of the City's waste materials have been transported to and treated in distant facilities. However, recent changes in State law, as promulgated through the Los Angeles County Hazardous Waste Management Plan, call for cities to play a more active role in this area. Specifically, cities must identify suitable sites and appropriate siting criteria for allowing waste processing and disposal facilities, which have major land use and other implications. The Plan is discussed below. Covina has and will continue to maintain a cooperative and reasonable stance in regional hazardous waste disposal efforts.

The City will further cooperate with the appropriate agencies in preventing another problem associated with waste disposal of all types and related matters, the inadvertent or deliberate discharge of non-storm water or possibly environmentally harmful substances into the storm drainage system. Although the extent of this problem in Covina is unknown, under the Federal NPDES (or, National Pollutant Discharge Elimination System) program, which aims to protect the water quality of receiving water sources (in this case, the Pacific Ocean) by effectively prohibiting non-storm water discharges into the public drainage network, Covina has been working with Los Angeles County to implement a storm water/urban runoff management program. This program, of which Los Angeles County is the lead agency, regulates discharges from all land use types, including industrial, commercial, institutional, and residential. The non-storm water discharges that the program addresses actually pertain to typical or above-described waste materials as well as various matters that have historically also contributed to storm water pollution (again, by getting washed into storm drains during rain),

particularly from a cumulative standpoint. These other matters include grading and construction activities, some outside commercial and industrial operations, excessive erosion, sediment build-up, and insufficient impermeable surfaces or excessive water runoff. Therefore, it is necessary for the policies and programs of the Safety Element to deal with the latter through equally important NPDES issues as well. NPDES is described in greater detail in the Background Study of the Land Use Element.

The ongoing use, storage, and generation of various hazardous materials in Covina present threats to the community in terms of potential chemical spills, gas leaks, structural fires, and resource contamination. Although these risks are real and identifiable, they are not believed to be "unreasonable" or excessive. The above-noted businesses and places in which hazardous incidents could occur are found in most communities and, as previously indicated, are essential for the City's economy and vitality. It must be reiterated that the generation of hazardous wastes by those City properties is ancillary to their primary operations. In addition, Covina possesses sufficient emergency service resources to adequately monitor and regulate the identified facilities and to respond to accidents. And the City is able to reduce the risks of injury and property loss in an undesirable event through emergency preparedness planning (see below) as well as sound land use planning and the implementation of appropriate development standards. Concerning potential dangers posed by household hazardous wastes, although there is little the City can do in this area, it is possible that Federal regulations and market considerations may lead to the replacement of many such products by innocuous materials. In addition, the County runs quarterly household hazardous waste roundups for residents of all incorporated and unincorporated communities. These roundups accept many types of household hazardous items and are believed to alleviate the problem somewhat.

3. Transportation of hazardous wastes

As indicated above, Covina is also susceptible to hazardous materials accidents or spills from the transport of hazardous substances through and near the community along the San Bernardino Freeway, on the Metrolink Commuter Rail Line (during freight operations in the late-night hours only), and via major arterial streets. Under this topic, hazardous materials movement includes both the transport of general products to particular business types (such as gasoline going to service stations) and the hauling off of waste materials (like cleaning solvent residue from certain manufacturing operations). Thus, for any particular hazardous matter passing through Covina, the City or any other community could be the origin or destination of the material.

Typically of greatest concern to local governments—because of the increased risks involved—are the transport of large quantities of hazardous materials and wastes. On major roads and freeways, such passage occurs in the form of large, heavy trucks. For the rails, train cars of varying size and type are typically involved. The City of Covina maintains some regulatory control over the bigger trucks within the town through local ordinances, particularly one on truck routes, which was also a topic in the Circulation Element. Like many communities, Covina has designated certain generally larger streets as truck routes to facilitate truck access, to bolster communitywide safety, and to protect, to the greatest extent possible, persons in sensitive uses (such as residential, nursing homes, and schools) from truck noise, vibrations, and other disturbances. (Refer to Circulation Element for clarification.) However, the primary preempting regulations come from the United States Department of Transportation, which also oversees all rail hazardous substances movement, the California Department of Health Services, and the California Highway Patrol. In addition, these three entities control the transport of dangerous materials on the San Bernardino and all other Freeways. It is noted that although a wide variety of hazardous materials could be shipped through Covina, under Federal and State regulations, certain particularly dangerous matters, including explosives, cargo tanks of fuming nitric acid, anhydrous hydrazine, and liquid nitrogen tetroxide, may only be moved via the Freeways. And future changes in City street routes could occur depending on the extent of City adherence to the below-described Los Angeles County Hazardous Waste Management Plan. Apparent in this discussion is the fact that Covina has absolutely no authority over hazardous materials being transported on roads abutting or near the City.

To best prepare for possible transport-related accidents or spills in the City, as is the case with potential on-site incidents, the Covina Fire Department engages in emergency preparedness planning and contracts with the Hazardous Materials Division of the Los Angeles County Fire entity to address and resolve emergency situations. The County has sufficient resources to handle most scenarios, though, if necessary, other agencies can be summoned to mitigate a problem. Because of strong, consistent enforcement of all applicable laws by various levels of government, the City of Covina has had essentially no serious movement-related hazardous materials accidents in recent years. All in all, City staff do not believe that this potential problem constitutes an unreasonable hazard or risk for the community.

4. Underground hazards

Potential hazards from various underground sources is a related topic that warrants consideration in the General Plan process. These sources consist of the following:

- a. Storage tanks
- b. Septic tanks
- c. Natural gas distribution lines

It is noted that the City of Covina does not have any active or closed waste landfills or hazardous materials dumps. Although the adjacent communities of West Covina and Azusa have landfill sites, the facilities appear to be far enough away from Covina's boundaries to cause underground problems in the community. City of Covina staff regard none of the following items as constituting an unusual risk to the community. But should a hazard occur, it is believed that the City's execution of emergency preparedness activities, emergency resources, and inter-agency agreements would handle the situation sufficiently. Many of these issues are regulated by agencies of the State and Federal governments.

a. Storage tanks

It is common for certain industrial, commercial, and other uses to store toxic materials, including manufacturing-related wastes and gasoline, in underground storage containers. In general, the overfilling of storage tanks or aging, leaking containers and/or pipes can result in soil contamination. Covina has numerous underground tanks on the sites of the above-mentioned 145 hazardous materials handlers. Unfortunately, according to the State Water Resources Control Board, which is the primary agency that monitors subsurface pollution, in recent years about 49 of the sites have been identified as contaminated. Thirty-seven cases pertained to leaking underground storage tanks, though approximately 12 situations involved the leaching through the soil of various substances contained above the surface. It is noted that three of the contaminated properties have been vacated (e.g., closed service stations).

Based on data and information received by the City on this matter, underground tank leakage appears to have posed the greatest environmental hazards for the community. Gasoline and diesel are the primary contaminants, though waste oil and hydrocarbons have been identified as well. The Los Angeles County Department of Public Works, Waste Management Division conducts an underground tank program that monitors tank safety. Where leakage has occurred, the program calls for remediation plans to decontaminate effected soil. Tanks are typically removed or, if appropriate, filled in place. Of the 37 previously-mentioned identified sites with leaking underground containers, the County has currently resolved 20 of the cases and is in different stages of remediation on the remaining 17. Other County and State agencies are involved in below-surface pollution abatement efforts as well. In addition, the City of Covina often serves as the impetus for addressing and resolving such environmental problems in the site plan and environmental impact review and building permit issuance processes.

Hazardous materials seepage from various underground tanks (i.e., not necessarily those noted above) has also manifested itself in generalized ground water contamination. As discussed in the Natural Resources and

Open Space Element. Covina as well as other communities in the San Gabriel Valley have been plagued by ground water pollution problems, which have resulted in shutting down or appropriately treating the water in many wells. Much of this contamination, however, occurred in prior decades as a result of insufficient regulation of hazardous materials storage or, relating specifically to Covina, may have moved from surrounding communities. Since the 1970s, State and Federal officials have been working with cities in the area to remedy the problem to the greatest extent possible. Covina has very little leverage for addressing this aspect of the contamination issue, though the City will continue to cooperate with the applicable government agencies here and, concerning site-specific pollution, regarding monitoring and remediation activities.

b. Septic tanks

Although the overwhelming majority of properties in Covina are connected to a network of public sewers (refer to Circulation Element for clarification), there are a few remaining places served by on-site, underground septic tanks. These places consist primarily of 1950s-era and older houses in various portions of the community. In addition, the City possesses an unknown number of dormant or sealed-off septic tanks and possibly cesspools—also situated throughout Covina. The rupture of these tanks or disturbance of their leachfields could result in ground water or soil contamination. In recent years, the City has required soil testing to detect the presence of underground septic tanks in most new development. If a septic tank is found, it must be removed, filled, or circumvented by revision of the site plan.

c. Natural gas distribution lines

The Southern California Gas Company, which provides natural gas service to Covina and all of the greater Los Angeles area, has several major, high-pressure natural gas distribution lines that, in Covina, underlie generally a few bigger streets. Although these pipelines are believed to be well-constructed and maintained, construction or excavation in the vicinity of a particular pipe creates a potential hazard if the line is ruptured. Hazards include explosion, fire, spillage, and earth and ground water contamination. The Southern California Gas Company and the United States Department of Transportation, Office of Pipeline Safety are the primary agencies responsible for inspection and maintenance of pipelines running through the City. Although Covina does not have regulatory mandate over the pipes, the City is able to prevent hazards through reviewing plans and information related to various permit issuance processes, notably for public right-of-way work. Moreover, recently enacted State legislation requires persons who plan to do any digging or excavating on public or private property to inform a regional notification center (called DigAlert) at least 2 working days in advance. The notification center, in turn, informs all entities who have underground lines in the area or who may have an interest in the project and thus serves as a key mechanism for alerting the City and others about digging as well as avoiding accidents. Because of existing development patterns and the built-out situation of the City, the role of future land use planning in dealing with this issue appears to be minimal. Lastly, it is noted that Covina does not have any major underground petroleum pipelines, which would constitute another hazard.

C. Discussion of Los Angeles County Hazardous Waste Management Plan

1. Background

Under the Los Angeles County Hazardous Waste Management Plan (HWMP), local governments have greater authority and responsibility for handling hazardous waste treatment and disposal. The Plan was prepared in response to various Federal and State laws mandating better government oversight and management in this area and restricting direct land disposal of untreated hazardous wastes in distant, out-of-County facilities (what had been the County's primary disposal method). Regarding the former factor, the HWMP addresses on a countywide level waste disposal problems that have been exacerbated over the last several years because of the increased use of hazardous materials in industrial, commercial, and institutional activities as well as in the home. Basically, more wastes have been generated, though fewer remote sites have become available for waste treatment and disposal. Another problem has been the persistent illegal dumping of hazardous waste

materials along roadsides and in other areas, resulting in explosions, fires, contaminated ground water, and air pollution. (For definitions and examples of "hazardous wastes," refer to the above sections. In general, hazardous waste is defined as any waste or combination of wastes that, because of its quantity, concentration, or physical, chemical or infectious characteristics may exhibit toxicity, corrosivity, flammability, and/or reactivity). Thus, the Plan, which has been formally adopted by the County and the City of Covina, aims 1) to encourage and facilitate the establishment of needed hazardous waste programs and facilities in cities and in unincorporated communities by the private sector to minimize untreated hazardous wastes leaving the County and 2) to ensure that all future hazardous waste disposal will be accommodated in environmentally safe, effective, and economical facilities and managed and handled in a cooperative, balanced, and multi-faceted fashion among government, the private sector, and the public. Although waste minimization, the most environmentally sound and economically feasible means of addressing the growing hazardous waste problem, is actually the primary goal of the Plan, for reasons previously indicated, the HWMP states that additional off-site hazardous waste management facilities within the County must be developed. According to the Plan "hazardous waste management facilities" are complexes of various sizes and features that perform a particular primary function upon receiving hazardous wastes, including transferring and storing, treating, recycling, solidifying and stabilizing, and incinerating. And "off-site" means that the facility serves more than one producer of hazardous wastes. Therefore, for purposes of complying with the HWMP, places with facilities that are on-site or serve only one producer are not considered to be a "hazardous waste management facility." Inasmuch as the establishment of a complex that handles hazardous materials fulfills and is part of a countywide process, each facility of a particular community could receive wastes from throughout the County. For additional information on the foregoing, refer to the Plan documents or to the Background Study of the General Plan Land Use Element.

The Plan itself is a four-volume document that describes and defines existing conditions, projects future waste streams and needed off-site hazardous waste management facilities, sets countywide objectives, policies, plan recommendations, and programs, describes criteria to be followed in siting new waste facilities, a key area that is expanded upon below, and lists the general procedures for establishing additional facilities. Various other topics, including public participation, emergency response, and recommended legislation (to implement and fund certain programs) are also presented.

According to the appurtenant State statutes, each city within Los Angeles County must take one of the following actions in Hazardous Waste Management Plan implementation:

- 1) Incorporate, by reference, applicable portions of the final HWMP into the city's general plan,
- 2) Adopt a city hazardous waste plan that is consistent with the HWMP and contains all the elements required by Section 25135.1(d) of the State Health and Safety Code, or
- 3) Enact an ordinance that requires all applicable zoning, subdivision, conditional use permit, and variance decisions to be consistent with the portions of the final HWMP that identify the general areas and siting criteria for off-site hazardous waste management facilities.

In the past, the City of Covina, following formal adoption of the Plan, has opted to pursue the first alternative, which calls for incorporating portions of the document into this General Plan Safety Element. The most important section of the HWMP that will be included in the Safety Element pertains to the siting criteria to be used to evaluate the suitability and compatibility of off-site hazardous waste management facilities with surrounding land uses and the immediate environment. Siting criteria is a significant, complex issue in the HWMP process that carries many potential land use, compatibility, accessibility, safety, and environmental quality impacts and implications and, therefore, inevitably raises concerns within the local population. However, the State legislation on which the Plan is based indicates that cities must follow the law and cannot prohibit the siting of hazardous waste facilities in their jurisdictions. The referenced standards that the City will utilize in this area are presented in the following section. But first, it is appropriate to discuss salient, background information on hazardous waste facility siting criteria.

There are actually two facets to the above-discussed standards of evaluation by which off-site hazardous waste facilities are to be located: 1) the general geographic areas (e.g., zoning districts) that are particularly suitable for hazardous waste facilities and 2) the waste facility siting criteria that must be followed in considering facility proposals. Regarding the first facet, the Plan recommends that previously-mentioned storage, treatment, recycling, solidifying/stabilizing, and incinerating facilities be located in industrial or manufacturing areas, where hazardous wastes are typically generated. The Plan contains a County map designating the general geographic areas within cities and unincorporated areas that could be potentially suitable for new hazardous waste management facilities. According to the HWMP, these possible waste complex locations are based on a study of municipal and unincorporated land use patterns, general plan and zoning designations, demographic and environmental factors, and other data. Generally, as indicated above, the specified areas pertain to industrial/manufacturing districts, where a great deal of the hazardous wastes are generated. In Covina, for example, various stretches along the railroad track, which are all designated for light manufacturing uses, have been so denoted. (In addition, the County has highlighted a large area just westerly of the City in Irwindale.) The Plan emphasizes, however, that the County map is only for illustrative purposes; it does not identify any specific properties. Cities and the County may, but are not required to, use the map in considering general geographic areas.

Concerning the second aspect of the HWMP process, the Plan includes various criteria that are intended to assist local communities in making informed decisions on any proposed hazardous waste management facility. The criteria have been developed around the following eight objectives:

- a. Protect the residents;
- b. Ensure the structural stability and safety of the facility;
- c. Protect surface water;
- d. Protect ground water;
- e. Protect air quality;
- f. Protect environmentally sensitive areas;
- g. Ensure safe transportation of hazardous waste; and
- h. Protect the social and economic development goals of the community.

Cities must utilize this criteria, which, again, relates to the previously-mentioned geographic designations or guidelines, in approaching the matter. However, to best protect public health, safety, and welfare, the Plan expressly permits cities to adopt more stringent siting criteria and land use policies for hazardous waste facilities than those approved by the County as long as the criteria and policies are consistent with the HWMP. In addressing local concerns, communities may also attach reasonable conditions to the issuance of any such facility.

As indicated above, the siting of a hazardous waste management facility raises many questions pertaining to potential land use, compatibility, accessibility, safety, and environmental quality impacts and implications. All of such impacts and implications will in large part be determined according to where the facilities will be permitted (particularly in relation to non-industrial uses) and the standards by which they are to be evaluated, the focus of the section below. In other words, problems or hazards could occur, and legitimate local concerns are inevitably raised. Therefore, appropriate analysis of all issues involved and sufficient public participation are essential components of this process to further community health, safety, welfare, and integrity. Regarding the latter matter, according to the HWMP, public involvement is intended to be a key step in all levels of hazardous waste management planning, including development of the Plan itself. This means that the public will continue to be provided with opportunities to review and comment on any future proposals for waste facilities in Covina. As was the case with other aspects of hazardous wastes stated previously in this chapter, various Federal and State agencies are involved in HWMP activities as well, particularly the California Department of Health Services. But the primary responsibility for implementation rests with the County.

2. City of Covina adherence to key applicable provisions

The Los Angeles County Hazardous Waste Management Plan (HWMP) is a tool for addressing countywide waste treatment and disposal matters. One of the primary purposes of the Plan is to encourage and facilitate the establishment of needed, previously defined off-site hazardous waste facilities in cities and in unincorporated communities by the private sector to minimize untreated hazardous wastes leaving the County. Under HWMP provisions, the City of Covina, which has formally adopted the Plan, is required to incorporate, by reference, applicable portions of the document into this General Plan Safety Element. The most important section of the Plan describes the siting criteria to be used to evaluate the suitability and compatibility of hazardous waste management facilities with surrounding land uses and the environment. As mentioned in the prior section, siting criteria is a significant, complex issue in the HWMP process that carries many potential land use, compatibility, accessibility, safety, and environmental quality impacts and implications. Therefore, appropriate analysis of all matters involved, considering all relevant factors, and sufficient public participation, are essential to protect community health, safety, welfare, and integrity.

Siting criteria, as also mentioned in the prior section, refers to 1) the general geographic areas (e.g., zoning districts) that are particularly suitable for hazardous waste management facilities and to 2) the standards and guidelines that must be followed in considering facility proposals. Regarding the first aspect of this topic, using the HWMP as a guide, the City believes that any waste management facility location must meet all provisions of Table 3 below:

TABLE 3. GEOGRAPHICAL AREAS FOR PERMITTING HAZARDOUS WASTE MANAGEMENT FACILITIES

SUBJECT	PROVISION
1. Zoning	M-1 (Light Manufacturing)
2. Minimum Property Size	One Acre
3. Relation to Surrounding Uses and Activities	Cannot Abut or be Adjacent to Any Residential District or Use/Facility with an Immobile Population*

*An immobile population includes, but is not limited to, the following uses: all public and private schools (excluding trade schools), child day care centers, hospitals, and nursing homes.

Furthermore, concerning the accompanying standards and guidelines to be followed in reviewing hazardous waste facility requests, Covina shall utilize the criteria outlined in the County Plan. A general description of these siting objectives, factors, and criteria is illustrated in the following table:

TABLE 4. HAZARDOUS WASTE MANAGEMENT FACILITY SITING FACTORS

OBJECTIVE	SITING CRITERIA
1. Protect the residents	◦ Consider proximity to populations (distance from residences); and ◦ Consider proximity to immobile populations (distance from immobile populations).*

2. Ensure the structural stability and safety of the facility

Avoid locating the facility near:

- Flood hazard areas/floodplains;
- Areas subject to tsunamis, seiches, and storm surges;
- Active or potentially active faults; and
- Dam failure inundation areas.

Require engineering design safety features for:

- Slope stability (unstable soils); and
- Subsidence/liquefaction.

3. Protect surface water

- Avoid facility location near aqueducts and reservoirs.

4. Protect ground water

- Avoid facility location near:

- Supply wells and well fields; and
- Major aquifer recharge areas.

5. Protect air quality

Consider avoiding:

- PSD+ air areas; and
- Nonattainment air areas.

6. Protect environmentally sensitive areas

Avoid facility location in:

- Wetlands;
- Close proximity to habitats of threatened and endangered species;
- Prime agricultural lands;
- Recreational, cultural, and aesthetic resource areas;
- Close proximity to public facilities; and
- Areas of potential mineral deposits/resources.

Permitted on case-by-case basis:

- Federal and State lands.

7. Ensure safe transportation of hazardous waste

Consider:

- Proximity to areas of waste generation (waste generation stream);
- Locating close distance to waste generation source, except for residuals repositories;
- Proximity to major transportation routes;
- Highway accident rates; and
- Capacity vs. AADT+ of access routes.

8. Protect social and economic development goals of the community
- Facilities shall locate in industrial zoned lands (M-1) only;
 - Potential changes in real property values require independent study; and
 - Potential changes in employment require independent study.

*An immobile population includes, but is not limited to, the following uses: all public and private schools (excluding trade schools), child day care centers, hospitals, and nursing homes.

+Abbreviations: PSD - Prevention of Significant Deterioration
AADT - Average Annual Daily Traffic

Any facility proposed for the City will need to conform to all of the above land use guidelines and siting provisions. The City believes that the guidelines and provisions are reasonable, address the community's physical characteristics, and are consistent with the HWMP. Regarding the land use policies, many of Covina's industrial properties are relatively small (under 30,000 square feet) and/or located within close proximity to residences, thus precluding the placement of hazardous waste management facilities. (Refer again to Table 3.) It is noted that no sites suitable for a disposal facility (i.e., landfill) were identified. In addition, to ensure protection of community health, safety, welfare, and integrity, in reviewing any waste facility proposal, the City will supplement the siting criteria with appropriate project-specific conditions. Such conditions would pertain to various engineering, site design, aesthetic, and operational matters to bolster suitability and compatibility with surrounding activities, viable accessibility thereto, and harmony with the environment. Furthermore, because the siting provisions of the County do not provide for any buffer or minimum distance requirement between a hazardous waste treatment facility and any residential district or immobile population, in accordance with preempting State law, the City will also require that a comprehensive health and safety risk assessment be performed by an applicant proposing to site any facility within 2,000 feet of property zoned for residential use or any public or private school, child day care center, hospital, nursing home, and similar use. This assessment, using guidelines developed by the Federal Environmental Protection Agency for superfund sites, would have to demonstrate that the facility will not present any unusual health or safety risks to the surrounding residential area or to a special, sensitive use. Thus, while the above siting criteria provides a sufficient foundation for hazardous waste facility analysis and evaluation, technically the criteria functions as the overall framework upon which additional standards and provisions are to be utilized to protect the community.

Lastly, in accordance with the County Hazardous Waste Management Plan process, the City of Covina agrees to follow all other applicable sections of the HWMP, notably those dealing with waste management facility definitions, public participation, emergency response, and waste minimization. These portions are to be followed on an as-needed basis. According to the HWMP, public involvement constitutes a particularly important step in hazardous waste management planning in that citizen review and comment were a significant factor in the development of the Plan and that the public, including municipal legislators, must continue to be given opportunities to provide input on future Plan revisions and all proposals for waste management facilities. The City will monitor any changes in the Plan, especially the siting criteria and related matters, ascertain in what ways the changes might impact Covina, and respond accordingly.

D. Listing of Key Existing Hazardous Materials Issues

This area of discussion lists the key Covina hazardous materials issues, which are based on the facts and information presented in the previous sections, related, salient material, and community input (see Chapter XI for clarification). As stated in the prior chapters, issues are important because they clarify key hazardous waste matters warranting attention and because, along with a detailed identification and discussion of hazardous wastes themselves (the preceding sections), issues form the basis for the below-listed goal and policies and

programs/implementation measures. Refer to the previous sections for clarification on these issues and for underlying data and information. (In addition, see the Land Use Element and Land Use Study for an expanded discussion on matters relating to land use.)

The hazardous waste issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Dealing with the ongoing generation, use, and storage of various hazardous materials in Covina, which raises the possibility of chemical spills, gas leaks, explosions, structural fires, and resource contamination.
2. Dealing with the treatment and disposal of hazardous wastes from commercial, industrial, and institutional uses.
3. Dealing with the disposal of household items considered hazardous.
4. Dealing with the ongoing transport of large quantities of hazardous materials through and near Covina along the San Bernardino Freeway and the Metrolink Commuter Rail Line and via major arterial streets.
5. Dealing with potential or actual underground hazards from storage tanks, septic tanks, and natural gas distribution lines, which, in some cases, have lead to soil contamination.
6. Cooperating with agencies of all levels of government regarding the regulation of the generation, use, and storage of hazardous materials.
7. Continuing to maintain information on City businesses and entities that handle hazardous materials to best respond in the event of an accident or to call upon Los Angeles County officials for assistance.
8. Continuing to contract with the Los Angeles County Fire Department, Hazardous Materials Division to address major hazardous materials incidents and to administer various statutes.
9. Continuing to maintain City Building and Safety Division and Fire Department inspections and efforts to identify hazardous materials use and storage in various businesses and activities.
10. Maintaining sufficient personnel, equipment, and resources in the Building and Safety and Fire Departments to provide general regulation of hazardous materials handlers and to respond to certain hazardous materials accidents.
11. Attempting to control the transport of large quantities of hazardous materials through enforcing local truck routes and various applicable Federal and State regulations.
12. Continuing to cooperate with the appropriate State and County departments on the identification, monitoring, and remediation of subsurface pollution, particularly from underground storage or septic tank leakage, through appropriate actions.
13. Ensuring that major, high-pressure natural gas distribution lines that underlie Covina streets are inspected and maintained by the appropriate agencies as well as protected during digging or excavating activities.
14. Cooperating with all levels of government, particularly Los Angeles County, in incorporating into the General Plan applicable portions of the Los Angeles County Hazardous Waste Management Plan, which concerns the treatment and disposal of hazardous materials at the municipal level.
15. Encouraging overall waste minimization as an important activity in the hazardous waste management process.

16. Cooperating with appropriate agencies in preventing waste disposal as well as all non-storm water discharges into the storm drainage system.
17. Regarding the Los Angeles County Hazardous Waste Management Plan, identifying suitable locations and appropriate siting criteria for and applying reasonable conditions to potential waste treatment facilities and handling all land use, compatibility, accessibility, safety, and environmental quality impacts and implications associated therewith.
18. Analyzing all issues involved with and having sufficient public participation pertaining to the potential siting of a hazardous waste management facility to further community health, safety, welfare, and integrity.
19. Appropriately regulating industrial and other activities that use, produce, and/or store hazardous materials from a general land use standpoint.
20. Implementing a storm water/urban runoff management program.
21. Promoting emergency preparedness activities in the community with respect to potential hazardous materials incidents by following various measures and by maintaining the multi-hazard Covina Emergency Plan.



PICTURE 6. OLMEC HEAD STATUE IN FRONT OF COVINA PUBLIC SAFETY COMPLEX, AT CITRUS AVENUE AND SAN BERNARDINO ROAD. THE STATUE, A GIFT TO THE COMMUNITY BY ITS SISTER CITY, XALAPA, MEXICO, AND CONSIDERED AN IMPORTANT CULTURAL RESOURCE, LIES IN FRONT OF THE PUBLIC SAFETY COMPLEX, WHICH CONTAINS COVINA'S FIRE AND POLICE HEADQUARTERS AND SERVES AS A KEY ACTIVITY CENTER FOR HANDLING HAZARDOUS MATERIALS INCIDENTS AND OTHER EMERGENCIES.

VI. ASSESSMENT OF RISKS FOR ALL POTENTIAL HAZARDS

A. General

This section of the Safety Element focuses on risk assessment. Chapters II through V above discussed potential hazards and concomitant general risks with respect to seismic and geologic conditions, flooding, fires, and hazardous materials. The following section expands on the appurtenant risks by presenting various criteria that further assess and describe the potential for hazard-related community upset. For clarification on the subject hazards, refer to the previous chapters. It is noted that the criteria utilized here is from the State Office of Emergency Services (EOS), which oversees and manages matters in this area as well as emergency preparedness (see Chapter VII).

B. Risk Assessment

As indicated above, this section focuses on risk factors relating to previously-described potential disasters in Covina. Table 5 below lists these hazards (in generally the same order in which they are discussed in Chapters II through V) and further describes and evaluates the disasters by four different criteria. The criteria are 1) potential of occurrence, 2) scope of risk, 3) emergency response, and 4) event duration.

"Potential of occurrence" means the potential threats to public safety and welfare that the hazard constitutes. Hazards have thus been assessed according to the following:

- °Low Risk - The level of risk below which no specific action is deemed necessary. The occurrence of a specific event is unlikely;
- °Medium Risk - The level of risk above which specific action is required to protect life and property, though the probability of the event taking place is low to moderate; and
- °High Risk - Risk levels are significant and occurrence of a particular emergency situation is highly probable or inevitable.

The "scope of risk" refers to the geographic area that could be potentially affected with the occurrence of one of the hazards. The scope of risk includes three levels:

- °Site- The particular geographic area that is directly affected would be site-specific;
- °City - The affected area would include a significant portion or all of the City; and
- °Regional - The affected area would include the entire City and the surrounding region.

Furthermore, the "emergency response" pertains to three levels of emergency response to peacetime contingencies, which are based on the severity of the situation and the availability of local resources to respond to the emergency. The three levels of emergency response include:

- °Level 1 - A minor to moderate incident where local resources are adequate to deal with the emergency;
- °Level 2 - A moderate to severe emergency where local resources are not adequate in dealing with the emergency and mutual assistance would be required on a regional or statewide basis; and
- °Level 3 - A major disaster where local resources are overwhelmed by the magnitude of the disaster and State and Federal assistance are required.

Finally, "event duration" refers to the length of occurrence for a particular hazard. This fourth criteria functions as another noteworthy hazard assessment descriptor. (The residual effects of an incident are not considered here, though they may be long-term in nature. An earthquake, for example, may last for only several seconds but aftershocks could continue for many days, months, or even years. Fault displacement may result in permanent alterations in topography. And property damage may be so extensive that complete recovery would take years.) The following three categories are used in classification of event duration:

- *Immediate - The occurrence of a particular incident is instantaneous and measurable in terms of seconds or minutes;
- *Short-Term - The duration of a particular incident is generally measured in terms of hours or days; and
- *Long-Term - The duration of a particular incident extends for a much longer period of time. Specific hazards that are considered continuous or ongoing are included in this category.

TABLE 5. ENVIRONMENTAL RISK ASSESSMENT FRAMEWORK

ENVIRONMENTAL HAZARD	CRITERIA											
	POTENTIAL OF OCCURRENCE			SCOPE OF RISK			EMERGENCY RESPONSE			EVENT DURATION		
	LOW	MEDIUM	HIGH	SITE	CITY	REGIONAL	LEVEL	LEVEL	LEVEL	IMME- DIATE	SHORT- TERM	LONG- TERM
							1	2	3			
SEISMIC & GEOLOGIC												
GROUND SHAKING		*			*		*	*	*	*		
GROUND LURCHING		*			*	*	*		*	*		
GROUND RUPTURE	*			*			*	*		*	*	
LIQUEFACTION	*			*			*					*
SETTLEMENT	*			*			*					*
SUBSIDENCE	*			*			*					*
LANDSLIDES & MUDSLIDES		*		*			*	*			*	*
TSUNAMI	*			N/A			N/A			N/A		
FLOODING												
MAJORITY OF CITY AROUND WALNUT CREEK	*			*			*	*		*	*	
DAM FAILURE			*	*	*			*	*		*	
SEICHES			*	*	*			*	*		*	
FIRE												
URBAN			*	*			*	*			*	
WILD LAND		*		*			*	*			*	
HAZARDOUS MATERIALS ACCIDENT												
ON-SITE, ABOVE GROUND		*		*	*			*			*	
IN TRANSPORT		*		*	*			*			*	
UNDERGROUND STORAGE TANKS			*	*				*				*
UNDERGROUND SEPTIC TANKS		*		*				*				*
UNDERGROUND GAS LINES	*			*				*				*
LOCAL WASTE MANAGEMENT FACILITIES		*		*	*			*			*	

Those hazards of greatest concern to the people who live and work in Covina, such as seismic, flooding, and fire, are evident from examining Table 5, particularly the "potential of occurrence" row. And it is noted that seismic and flooding dangers appear to pose the most extensive overall upset to the community. In other words, as stated previously in this Element, certain potential disasters are real. However, because their incidence in Covina sometimes depends on the occurrence of unusual circumstances, the actual/quantifiable risks of these hazards cannot be predicted with certainty. To best prevent and prepare for a disaster, various activities, such as emergency preparedness planning and public safety support, must be considered. These and related matters are discussed in the following chapter.

C. Listing of Key Existing Risk Assessment Issues

The following discussion lists the key Covina risk assessment issues, which are based on the facts and information presented in the previous section and in prior chapters. Issues are important because they clarify key risk assessment matters warranting attention and because, along with a detailed identification and discussion of potential hazards and concomitant risks themselves (the preceding section and prior chapters), issues form the basis for the below-listed goal and policies and programs/implementation measures. Refer to the previous section and prior chapters for clarification on these issues and for underlying data and information.

The risk assessment issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Recognizing ground shaking, ground lurching, flooding around Walnut Creek, dam failure, seiches, urban fires, and underground storage tank problems as having the highest potential of occurring.
2. Recognizing ground shaking, flooding around Walnut Creek, and dam failure or seiches as potentially causing the most extensive overall upset to the community.
3. Acknowledging that the actual/quantifiable risks associated with potential disasters cannot be predicted with certainty because their incidence in Covina sometimes depends on the occurrence of unusual circumstances.
4. Acknowledging the need to prevent and prepare for a disaster by promoting emergency preparedness activities, by supporting adequate public safety personnel and resources, and by following related strategies.

VII. EMERGENCY PREPAREDNESS AND RELATED AND GENERAL MATTERS

A. General

The previous chapters of this Element presented and discussed potential seismic and geologic, flooding, fire, and hazardous materials disasters and concomitant effects and risks pertaining to Covina. Throughout these discussions, references were made with respect to emergency preparedness planning, methods of both reducing the likelihood of hazards from occurring and, should a disaster take place, limiting the negative impacts on the community, and key personnel who are involved with these activities and who respond to hazardous incidents. The following chapter expands on the foregoing by presenting all applicable and State-required matters relating to emergency preparedness. Topics discussed include the City of Covina Emergency Plan, which serves as the community's chief guidebook for emergency preparedness planning and for comprehensively managing any type of major contingency, evacuation routes to be followed in an emergency, they generally pertaining to the major streets, and emergency response personnel or the primary agencies that initially react to disasters as well as everyday public safety-related service requests in Covina, which are the Covina Fire and Police Departments. The latter matters presented here are peakload water supply requirements, minimum road widths, and clearances around structures. As indicated above, all of these items basically seek to control and reduce and, if possible, prevent various potential hazards by providing the City with viable tools, resources, procedures, and standards on which to base decisions and conduct actions. This chapter further serves as a basis for the Safety Element goal, policies, and programs/implementation measures.

B. City of Covina Emergency Plan

The City of Covina takes seriously its responsibility in planning for a major disaster. Informing citizens and businesses of potential concerns, taking appropriate steps to minimize damage and injury in a hazardous incident, and ensuring effective communication and efficient service when a disaster occurs are all important goals of the Covina Emergency Plan. This Plan (last revised in 1994) serves as the community's chief guidebook for emergency preparedness planning and for comprehensively managing any type of major emergency, which is defined as "a situation that requires immediate action beyond the scope of normal City operations." According to the Emergency Plan, its purposes are as follows:

1. To answer, during emergencies, who is in charge, what should be done, and by whom;
2. To provide for the continuity of government during emergencies;
3. To facilitate public understanding of Covina emergency organization;
4. To provide guidance for disaster education and training; and
5. To provide references to additional, more detailed information.

Covina's Emergency Plan was developed using a common-sense approach to disaster management, while at the same time meeting all applicable legislative mandates and achieving consistency with other local, County, and State documents of this nature.

The Emergency Plan uses simple action checklists for basic functions. These checklists can be expanded or contracted based on the size and complexity of the disaster. This organization is based on the Incident Command System (ICS), which is routinely used by fire and police departments and provides clear authority, direction, and communication during an emergency.

The disaster response is directed from the City's Emergency Operating Center (EOC), to where key personnel must report. The EOC is designated as the Fire and Police Department complex at 400 to 444 North Citrus Avenue, with alternate facilities identified if the primary location is unusable. Although the Emergency Plan

is designed so that any trained person can step in and follow the action checklists, the position of Director of Emergency Services oversees the EOC. This position is filled by the City Manager, Fire Chief, Police Chief, or City employee with the highest degree of expertise in the type of emergency at hand. In general, however, emergency preparedness and disaster management activities in Covina are controlled and coordinated by the City Fire Department.

An emergency changes working relationships in that several departments and/or agencies that would normally function independently may work under the direction of one person, the Section Chief. The Covina Plan calls for four Sections: Operations, Planning, Logistics, and Finance. In addition, special-purpose units may be formed to address concerns outside of the City's normal sphere of responsibility, such as food distribution, emergency shelter, and transportation.

Because Covina's resources may be stretched to exhaustion during a disaster, mutual aid agreements are in place with other cities, Los Angeles County, and the State of California. And to facilitate inter-agency cooperation and coordination in responding to a major emergency, Covina follows the Standardized Emergency Management System (SEMS) of the State Office of Emergency Services (EOS), which provides an organizational framework and guidance for operations at each level of the State's emergency management system. (EOS, as mentioned in the prior chapter on risk assessment, is the State level agency that coordinates emergency preparedness and related matters.) In accordance with SEMS requirements, all City of Covina employees have been provided general training in the management system. Also, the employees were briefed on the City Emergency Plan. Both of these activities are important because in case of an emergency, any and all City personnel are required to provide assistance, when requested by the Director of Emergency Services. It is noted that in preparing this Safety Element, in accordance with State law, the City of Covina has received supplemental SEMS and, as previously indicated, additional emergency-related information from the State EOS.

The City Emergency Plan further establishes a basis for other organizations and agencies to participate in disaster planning efforts, including the American Red Cross, Salvation Army, and National Guard. Concerned citizens, businesses, and school district personnel are also involved in a variety of ways as part of Covina's Organized for Potential Emergencies (COPE), a new community-based program. One of COPE's primary tasks is to encourage familiarity of the Emergency Plan and appurtenant provisions.

Thus, the Covina Emergency Plan serves as a viable tool to prepare, mobilize, and employ public and private resources to meet essential needs in a serious emergency as well as to restore normal conditions as quickly as possible. Recent generally successful City staff simulation training has been occurring, which underscores the effectiveness of the process and identifies areas where improvements are needed. It is imperative that the Plan remain up-to-date and continue to respond to all safety issues and potential hazards, particularly those identified in this Element. Copies of the Emergency Plan are in the possession of all key individuals, agencies, and organizations who are involved with its implementation and are on file in the Covina Public Library for general reference.

C. Evacuation Routes

Under State planning law, the City must address evacuation routes in relation to potential hazards. According to the Covina Fire Department, which, as indicated above, controls and coordinates local emergency preparedness activities, all major public streets serve as the principal evacuation routes. (The previously described Covina Emergency Plan does not address this issue.) All such roads are illustrated on the accompanying Land Use Map, where they are officially designated as one of the following: 1) San Bernardino Freeway, 2) primary arterial street, 3) secondary arterial street, and 4) collector street. These principal access ways are all well-maintained and should support an evacuation function. In any disaster warranting evacuation, the exact emergency routes used would depend on a number of variables, including the type, scope, and location of the incident. (Or, an emergency could render some streets or portions thereof obstructed or inaccessible.) It is the responsibility of emergency service and/or appropriate public officials to adequately assess the situation so that safe and efficient evacuation routes are selected.

D. Emergency Response Personnel

The two primary agencies that initially react to disasters and emergencies as well as everyday public safety-related service requests in Covina are the City Fire and Police Departments. The Covina Fire Department, first of all, maintains 43 sworn and 2 support personnel, 12 vehicles, and various equipment out of 3 stations. (Station No. 1, the headquarters, is at 400 North Citrus Avenue. This station abuts the Police facility at the City's Public Safety Complex. Fire Stations Nos. 2 and 3 are located at, respectively, 1577 West Cypress Street and 807 East Cypress Street.) With approximately 1 firefighter for every 1,000 residents, the minimum recommended acceptable level of fire response, according to national standards, the Department reacts to fires and other emergencies, such as certain hazardous materials accidents, trapped victim calls (pertaining to, for example, vehicle accidents and structure collapse), and downed power lines; provides paramedical services; and affords fire prevention assistance. Regarding fire prevention, as indicated in Chapter IV above, the City attempts to minimize potential urban and wild land fire hazards through various preventative control measures, including enforcement of fire-related codes and ordinances pertaining to automatic sprinklers, fire-resistant building materials, safe site design, emergency personnel and vehicle accessibility, and the storage and use of hazardous materials; plan checks (generally related to ensuring compliance with Fire's codes and ordinances); inspections for both businesses and residential buildings; brush trimming; and public education/awareness programs. And as also indicated in Chapter IV above, the City contracts with Los Angeles County to respond to major hazardous materials accidents and to administer various programs in managing and overseeing businesses and institutional uses that utilize these materials. The County maintains various facilities throughout the San Gabriel Valley with abundant resources in this area. In short, the City places a strong emphasis on fire prevention, an activity that is linked to emergency preparedness planning. As indicated previously in this section, the City maintains an important Emergency Plan that serves to prepare, mobilize, and employ public and private resources to meet essential needs in a disaster, and the Covina Fire Department controls and coordinates this related process. The Emergency Plan sets forth the assignments to be carried out by Fire as well as other City personnel in a time of major emergency. Again, refer to Section B above for clarification in this area.

Each year, the Fire Department responds to approximately 1,000 fire- and 2,000 medical-related calls. In addition to maintaining sufficient resources to handle most incidents, the Department provides adequate response times for service. Furthermore, the overall fire/insurance rating is "Class 3," (out of a possible 10, with 10 being the lowest). This rating underscores the high level and good quality of fire protection services available. But if needed, the City can call on surrounding communities and on Los Angeles County for assistance, in accordance with established mutual aid agreements. It is noted that certain fire protection matters that the State requires cities to address in the general plan update process, including peak load water supply requirements, minimum road widths, and clearances around structures, are discussed in separate sections below.

The other primary entity that provides everyday safety service as well as the first line of defense in disaster situations is the Covina Police Department. With 57 sworn and 30 non-sworn employees, Covina residents are protected with a ratio of 1.3 officers for every 1,000 residents, which slightly exceeds the minimum commonly accepted ratio (1.0). Police personnel also have generally sufficient, up-to-date equipment and resources, including a canine unit. The City operates a full-service police facility, organized around Patrol and Detective Divisions, at the northern side of the Public Safety Complex, 444 North Citrus Avenue, adjacent to the Fire headquarters. Long-term booking facilities are provided under an agreement with Los Angeles County. The Police Department operates the City's emergency communications networks, including a computer-aided dispatch system, which are used jointly by the Police and Fire entities. Police further manages several viable crime prevention programs, such as DARE (Drug Abuse Resistance Education), Neighborhood Watch, Graffiti Abatement, Home Security Check, and Safety Fairs. The City has had a longstanding commitment to local law enforcement on the belief that minimal criminal activity in the community enhances the commerce and living environments. A low crime rate helps to keep existing and attract new businesses, gives residents a greater sense of security and community pride, and reinforces the City's goal to maintain public safety. As is the case with Fire, the Police Department maintains mutual aid contracts with other jurisdictions and, according to Police officials, response times are reasonable. On an annual basis, the Department receives over 26,000 calls for service.

In addition to its normal law enforcement assignment, in major emergencies, Covina's Police force works with the Fire Department in a variety of capacities, including evacuation supervision (mentioned in previous section) and the particular assignments listed in the already discussed Emergency Plan. (Because Azusa Avenue is a State Highway, the California Highway Patrol could also be involved in evacuation as well as other activities.) As stated in the Emergency Plan, although Police and Fire would be the primary responding departments in a disaster, if called upon, other City personnel and non-City agencies would provide supporting roles in stabilizing the situation.

The City of Covina believes that its Fire and Police Departments presently provide local residents, workers, and others with sufficient, quality fire protection and law enforcement with respect to everyday calls and potential major emergencies to best protect public health, safety, and welfare. In other words, reliable protection from fire and crime risks allows the community to exist in a relatively safe and secure environment. Monitoring and evaluating operations are constantly occurring to ensure continued adequacy and to identify where any enhancements can be made, particularly with respect to emergency preparedness/management. Concerning physical development in general, in the future, the City is expected to provide fire and police services commensurate to projected moderate growth and redevelopment and revitalization. (Refer to Land Use and Housing Elements for details.) Although fire and police protection needs typically must consider building proposals and land use modifications on a project-by-project basis to ensure adequacy regarding access, clearance, response times, defensible space considerations, and other factors, the impacts of new construction and activities on existing services/resources can be mitigated through adequate inter-departmental project reviews and cooperation in the plan submittal and General Plan revision activities. The City has long followed this integrated, cooperative approach. Applicable design factors, such as access and defensible space, are discussed below.

E. Peakload Water Supply Requirements

To enable sufficient firefighting capabilities, the Covina Fire Department requires a minimum pressure flow of water. The required fire flows vary generally between 1,000 to 6,000 gallons for each minute, depending on the type of construction and building use, maximum occupancy, and whether any built-in protection systems (e.g., sprinklers) are present. According to the Fire Department, currently there are no water flow pressure problems in Covina. Furthermore, the water itself is available for firefighting citywide via ample, strategically placed hydrants. Fire officials will continue to monitor fire flows to ensure future adequacy.

F. Minimum Road Widths

In order for fires and other incidents to be contained and eradicated within reasonable time periods, they must first be quickly and safely accessed by emergency vehicles of responding personnel. Therefore, minimum road width standards constitute another secondary factor that is essential for lessening various hazards, notably fire. As presented in the Circulation Element, the City follows various public street design standards, including minimum right-of-way and curb-to-curb widths and radii for cul-de-sacs and knuckles. Generally, the minimum curb-to-curb width on the major/arterial and collector streets varies from 56 to 84 feet. On the smaller or local roads, the minimum curb-to-curb widths are typically between 36 and 38 feet. Emergency accessibility, in addition to general vehicular circulation, was considered in developing these criteria.

The City Fire, Planning, and Engineering entities implement the public street criteria in a coordinated fashion in the Site Plan Review and Building Permit Issuance processes. (These processes also ensure that other, previously-mentioned hazard reduction design requirements, such as fire-resistant building and roofing materials and automatic sprinkler systems, are met.) According to the Fire Department, whose larger emergency vehicles constitute the focus for evaluating suitable accessibility, all existing roadway standards are adequate. Design provisions for private (usually smaller) roads are the same as for public streets. The minimum width standards pertaining to public or private driveways and parking aisles are based on applicable sections of the Covina Zoning Ordinance. In major projects, such as multiple-family complexes and commercial facilities, these provisions typically range from 20 to 25 feet, with an unobstructed vertical clearance of 14 feet. The Fire

Department further applies various other standards on matters including “clear zones” in front of buildings and site access points, in accordance with the Uniform Fire Code. Verification of the adequacy of the above guidelines on private properties is also done in an inter-departmental fashion on a case-by-case basis in the Site Plan Review and Building Permit Issuance processes. It is noted that the Fire Department, which enforces these private as well as the public codes with respect to identified problems on existing access ways, has stated that standards for the private developments are sufficient. Nevertheless, the City will monitor all of the above accessibility standards to ensure they continue to fulfill their primary emergency response and other functions.

G. Clearances Around Structures

The subject of “clearances around structures” is related to the previous section on minimum road widths and, in accordance with State planning law, must also be addressed here. As was the case with above-described roads, maintaining appropriate standards for clearances around structures is essential to allow for building access during fires, geologic hazards, or other emergencies. In Covina, these many and varied standards come under the Zoning Ordinance and Uniform Building Code, which are primarily implemented and enforced by, respectively, the Community Development Department’s Planning and Zoning and Building and Safety Divisions. However, for all development proposals, each and every City Department/Division, notably Fire and Police, are jointly involved in the preliminary stages of the Site Plan Review and Building Permit Issuance processes to ensure, among other things, emergency accessibility by foot, fire containment, general safety, and vitality. Typical clearance provisions pertain to building setbacks (relating to property lines and slopes), fence/block wall height limitations, and minimum required distances between structures and block walls or fences. For example, both previously-noted codes call for a minimum 3-foot emergency access on any side of a detached house. Relating primarily to law enforcement, Planning guidelines also call for defensible space considerations in developments, which promote personal security through the use of such features as cross visibility and ample lighting. Covina emergency personnel believe that current standards in this area are adequate, though ongoing evaluation of “clearance” provisions is occurring to ensure continuing viability.

H. Listing of Key Existing Emergency Preparedness and Related Issues

This area of discussion lists the key Covina emergency preparedness and related issues, which are based on the facts and information presented in the previous sections, related, salient material, and community input (see Chapter XI for clarification). As stated in the prior chapters, issues are important because they clarify key emergency preparedness and related matters warranting attention and because, along with a detailed identification and discussion of emergency preparedness and related topics themselves (the preceding section), issues form the basis for the below-listed goal and policies and programs/implementation measures. Refer to the previous sections for clarification on these issues and for underlying data and information. (In addition, see the Land Use Element and Land Use Study for an expanded discussion on matters relating to land use.)

The emergency preparedness and related issues are listed below in no particular order. It should be noted that the issues are not necessarily mutually exclusive.

1. Recognizing the City’s responsibility to plan for a major disaster.
2. Maintaining and periodically revising the Covina Emergency (preparedness) Plan as a viable tool to prepare, mobilize, and employ public and private resources to meet essential needs in a serious natural or man-made emergency as well as to restore normal conditions as quickly as possible.
3. Utilizing appropriate inter-agency processes and mutual aid agreements in emergency preparedness planning and during an actual disaster to most effectively deal with other entities and to address community needs.

4. Supporting community programs that train volunteers to assist City staff in emergency preparedness planning.
5. Promoting public awareness concerning emergency preparedness matters.
6. Establishing the mitigation of earthquake hazards as a high priority for City emergency preparedness and post-disaster programs/strategies.
7. Maintaining the San Bernardino Freeway and the major roads or Circulation Element-defined primary and secondary arterial and collector streets as Covina's evacuation routes in relation to major emergencies.
8. Continuing to supply the Covina Fire and Police Departments with adequate personnel, equipment, resources, and facilities to perform their many duties, including responding to disasters, emergencies, and everyday public safety-related service requests and participating in emergency preparedness planning.
9. Ensuring adequate fire, paramedical, and police response times in the community.
10. Continuing with various fire and crime prevention programs.
11. Monitoring operations and procedures relating to fire protection and paramedical services and law enforcement to identify where improvements can be made.
12. Ensuring that future firefighting, paramedical, and police protective resources and services keep pace with projected moderate growth and redevelopment activities.
13. Ensuring that new, expanded, or altered potentially problematic developments mitigate any public safety-related impacts.
14. Maintaining fire-, paramedical-, and police-related mutual aid agreements with surrounding communities for supplemental emergency service assistance, when needed.
15. Maintaining adequate water pressure flow capacity in Covina and sufficient fire hydrants to allow for proper firefighting capabilities.
16. Maintaining adequate public and private road provisions and site design standards to ensure that hazardous incidents and emergencies can be quickly accessed by emergency vehicles.
17. Maintaining a coordinated, inter-departmental approach in reviewing public and private projects and proposals to facilitate implementation of all City public safety-related codes and standards.
18. Ensuring that the Covina Fire Department continues to enforce codes and standards regarding the obstruction of approaches needed for emergency vehicle accessibility.

VIII. GOAL AND POLICIES

A. General

As stated in the Introduction above, the goal and policies of this General Plan chapter are important because, along with the below-presented implementation measures, they serve as the chief tools concerning local decisions and actions on potential natural and man-made hazards affecting Covina and in evaluating public projects and private developments and proposals from the standpoint of preventing adverse impacts in the City. The goal and policies, again as previously indicated, are based on the community's key safety-related conditions and issues (described in Chapters II through VII above), which were both identified by City staff and ascertained through public comment. In theory, then, the goal and policies presented here (and accompanying implementation measures) bridge the gap between where the community is and what type of city it wishes to become. As was the case with the discussion of conditions and issues, the safety goal and policies are presented below in separate sections, a format that the City believes is most appropriate.

A goal is defined as a general expression of an ideal future condition or state toward which the community wishes to advance. A policy, on the other hand, is a statement that most directly guides decision-making and actions. In order for policies to be meaningful and useful, they must be clear and unambiguous, a guideline that this Element has followed. Policies should also indicate clear local government commitment. Therefore, all below policies are listed within the context of "The City shall . . ." and are worded in plain English.

B. Goal and Policies

In applying the two terms to the Safety Element, one goal and several policies are utilized. All policies are listed within a framework relative to five topical areas, which are based on different potential hazards and emergency preparedness matters. The City believes that this organization is most logical and best suited for protecting public health and safety. The goal is:

A community in which the loss of lives, serious injuries, major damages to public and private structures/properties, the loss of natural resources, economic and social dislocation, and the disruption of vital services associated with a potential natural or man-made disaster are prevented.

The remainder of this chapter is devoted to the policies. For each topical area, policies are listed in no particular order. The five topical areas are:

1. Potential seismic and geologic hazards
2. Potential flooding hazards
3. Potential fire hazards
4. Hazardous materials
5. Emergency preparedness and related and general matters.

The topical areas are not entirely mutually exclusive, and, therefore, some policies from different groupings are similar. Also, the goal and policies are applied on a citywide basis, unless expressly stated otherwise.

1. Policy Area 1

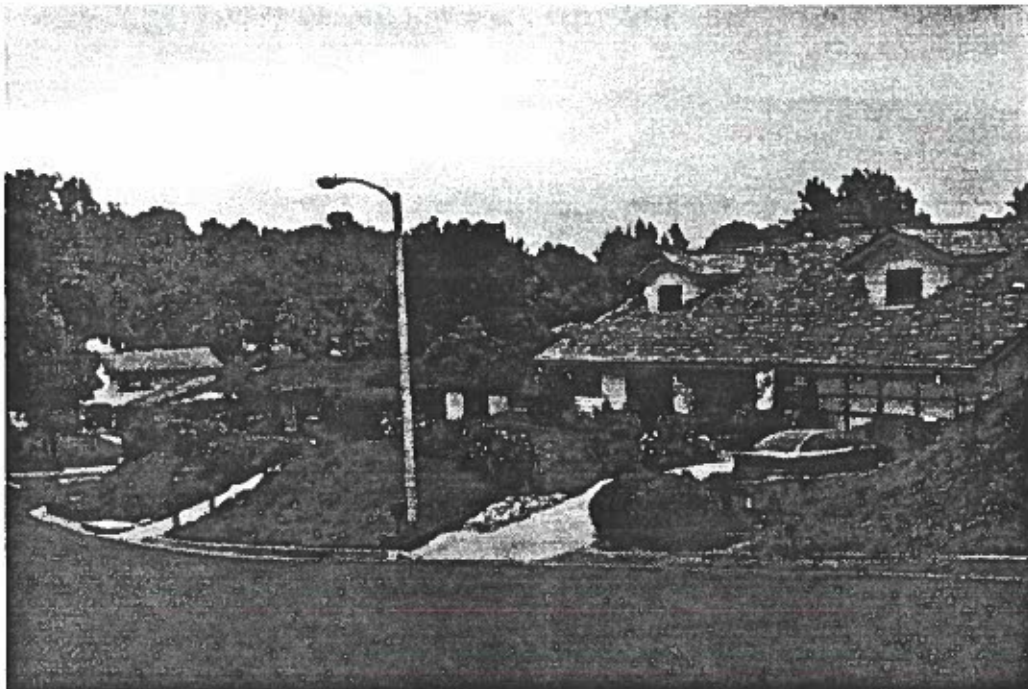
Potential Seismic and Geologic Hazards

The City shall:

- a. Require all new and expanded or improved buildings and structures to comply with current seismic-related codes, standards, and construction practices.
- b. Require adequate soils, geologic, and/or structural studies/evaluations prior to any building construction, particularly in the Covina Hills area, to identify appropriate, development-accommodating engineering and development siting measures.
- c. Ensure, to the greatest extent possible, that buildings/uses of which the State has permitting authority over, such as public schools, hospitals, and mobile home parks, comply with current, applicable seismic and general building codes, standards, and construction practices.
- d. Follow all applicable development and grading standards and practices in the Covina Hills area.
- e. Continue to review and, where necessary, modify general building-related codes and seismic design standards to better protect the City against the adverse effects of strong ground shaking.
- f. Continue with voluntary seismic retrofitting of older, unreinforced masonry and similar buildings in conjunction with ongoing commercial revitalization, community development, and general renovation activities for the orderly and effective abatement of potentially hazardous structures.
- g. Attempt to regularly update its inventory of unreinforced masonry structures in the community.
- h. Consider to adopt a mandatory seismic retrofitting program, if necessary and feasible, including a funding mechanism, to assist applicable property owners.
- i. Consider the aesthetic, historic, and/or cultural significance of a building to be upgraded for seismic safety and, to the greatest extent possible, avoid demolition or alteration of a structure's appearance or character in seismic retrofitting.
- j. Regard the cost of seismic reinforcement as an inadequate justification for demolition of a structure in Covina determined to be historic.
- k. Request that the Los Angeles County Flood Control District (LACFCD) develop a program and funding mechanism to seismically reinforce Puddingstone Dam to protect Covina and other downstream areas from potential major flooding.
- l. Monitor the dormant/potentially active Indian Hill Fault and Walnut Creek Fault systems in Covina for any officially documented movement.
- m. Should either of Covina's two dormant faults become active, closely investigate the fault, including determining the exact location and nature of the fault and probable extent of earthquake activity, follow applicable State mandates, and adopt appropriate development policies and standards.
- n. Where slope-denuding fires strike in the Covina Hills area, maintain or encourage reasonable replanting efforts on public and private properties to stabilize bare hillsides against possible landslides or mudslides during subsequent rain storms.



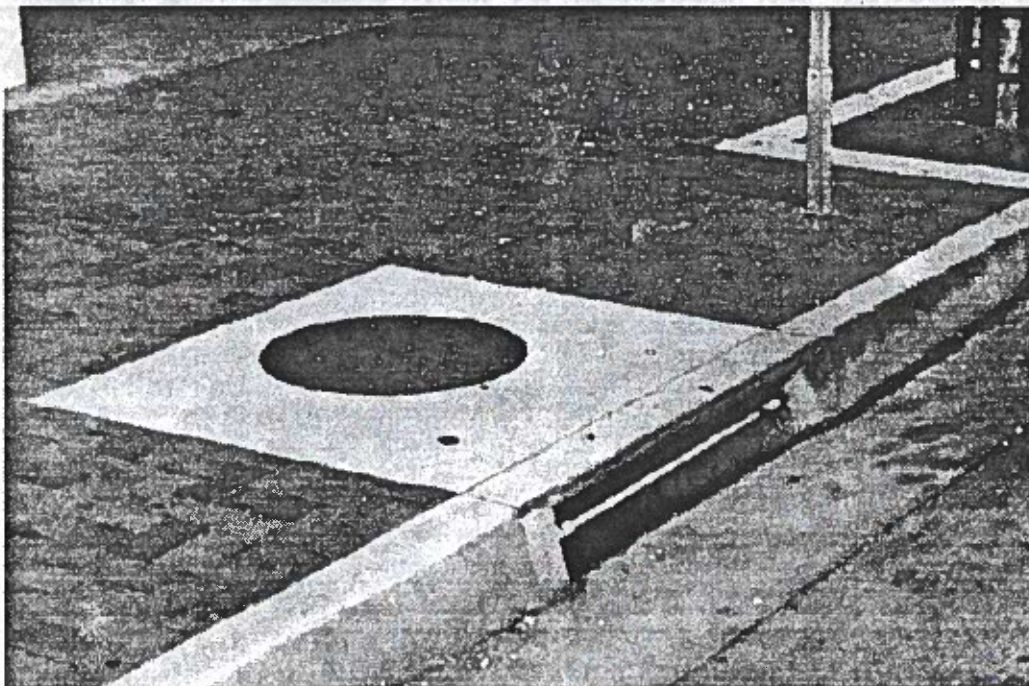
PICTURE 7. TYPICAL COMMERCIAL BUILDING, ON GRAND AVENUE NEAR COVINA BOULEVARD. GENERAL PLAN POLICY CALLS FOR ALL NEW AND EXPANDED STRUCTURES TO COMPLY WITH CURRENT SEISMIC-RELATED CODES AND STANDARDS.



PICTURE 8. RESIDENTIAL PROPERTIES IN COVINA HILLS AREA. THE SAFETY ELEMENT REQUIRES SOILS, GEOLOGIC, AND/OR STRUCTURAL STUDIES PRIOR TO ANY BUILDING CONSTRUCTION HERE AND ELSEWHERE IN THE COMMUNITY.



PICTURE 9. VIEW OF THE UNDEVELOPED PORTION OF WALNUT CREEK, LOOKING WEST FROM THE BRIDGE SECTION OF THE CURVE THAT SERVES AS THE TRANSITION FROM SOUTH REEDER AVENUE TO EAST PUENTE STREET. THE PICTURE SHOWS THE EFFECTS OF FLOODING AND EROSION IN THIS SENSITIVE AREA, PROBLEMS THAT THE SAFETY ELEMENT SEEKS TO COUNTERACT AND REMEDY.



PICTURE 10. TYPICAL STORM DRAIN INLET. BECAUSE OF THE ESSENTIAL FUNCTION THAT IT SERVES, THE GENERAL PLAN ADVOCATES MAINTAINING AND, WHERE NECESSARY, IMPROVING THE STORM DRAINAGE SYSTEM.

- o. Further investigate and collect additional data on seismic, geologic, and soil conditions affecting the community, particularly in the Covina Hills area.
- p. Should liquefaction, settlement, or subsidence be identified in any areas, closely investigate the hazard, including determining the exact location and extent of the problem, and require special, site-specific studies to identify engineering and development siting measures to permit construction to occur.
- q. Promote earthquake preparedness within the community by participating in quake awareness programs, including, but not limited to, the distribution of brochure materials or informative literature on methods to safeguard lives and property during seismic events.
- r. Maintain and periodically update, as appropriate, the Covina Emergency Plan with respect to emergency procedures to be followed in a potential seismic hazard or geologic incident.

2. Policy Area 2

Potential Flooding Hazards

The City shall:

- a. Support efforts of and work with Los Angeles County to maintain the existing flood control infrastructure serving Covina to meet the community's drainage needs.
- b. Support efforts of and work with Los Angeles County to enhance the local storm drainage system in particular areas to relieve local minor flooding and ponding problems and to accommodate future moderate growth.
- c. Continue to require that all new and significantly expanded developments incorporate sufficient measures to mitigate flood hazards, including the design of on-site drainage systems to link with citywide flood control infrastructure, the gradation of sites such that runoff does not impact adjacent private properties or structures, and the location of structures above and away from any flooding elevation.
- d. Work with State of California, Los Angeles County, and other officials to attain a permanent solution to Walnut Creek flooding and erosion problems, such as by developing a program and funding mechanism to seismically reinforce the upstream Puddingstone Dam or by having the County lower the Puddingstone Reservoir water level during the winter months.
- e. Strive to ensure that any Bonelli Park expansion plans or proposals recognize that the Park's Puddingstone Reservoir and Dam complex was originally developed to resolve downstream flooding problems and concerns in Covina and other communities.
- f. Address, to the greatest extent possible, the short-term or day-to-day effects and problems in and adjacent to the unimproved portion of Walnut Creek relating to seasonal flooding through appropriate measures, including, but not limited to, prohibiting the construction of habitable structures within or near the wash and administering other reasonable development standards for properties abutting the Creek, inclusive of those clarified under the Zoning Ordinance and Design Guidelines, communicating with County flood control officials on water release matters, and conducting emergency preparedness activities.
- g. Study and monitor the long-term or cumulative effects and implications of property damage, human danger, and soil erosion and concomitant threats to wildlife in and adjacent to the unimproved section of Walnut Creek relating to existing, seasonal flooding conditions.
- h. To minimize erosion along the banks of the unimproved section of Walnut Creek as well as in any other areas, adhere to appropriate Uniform Building Code provisions regulating earth work and grading during construction

and, if appropriate, limit acreage of bare soils exposed at any one time, restrict grading to the dry season, and/or require immediate vegetation.

- i. Continue to encourage new building proposals along or near the unimproved section of Walnut Creek located upstream from Covina to mitigate potential increased flooding, erosion, and other problems in downstream areas as a condition of approval.
- j. Require the use of the greatest amount of landscaping feasible in new and significantly expanded developments to maximize permeable surface area to reduce site runoff as well as for aesthetic purposes, particularly along or near the unimproved portion of Walnut Creek.
- k. Consider to encourage, where feasible or not otherwise prohibited by Zoning, the utilization of turf block, decomposed granite, grasscrete, or similar permeable surfaces, rather than conventional pavement.
- l. Best prepare for potential seiche-related hazards by administering reasonable development standards for properties adjacent to and abutting Walnut Creek, including those clarified under the Zoning Ordinance and Design Guidelines, and by continuing with ongoing emergency preparedness activities.
- m. Improve emergency preparedness activities in areas subject to potential dam failure-generated inundation by following various measures, including shortening times required for emergency evacuation and mobilization efforts.
- n. Maintain and periodically review procedures for dealing with potential major flooding incidents in the Covina Emergency Plan.

3. Policy Area 3

Potential Fire Hazards

The City shall:

- a. Maintain a preventative approach in handling potential urban and wild land fires and possible blazes at the urban/wild land interface.
- b. Maintain all fire-inhibiting Building and Safety and Fire Department requirements and standards for new construction and for substantial additions to existing structures, including those for fire-resistant building materials; fire-resistant roofing components (untreated wood-shakes being prohibited); building construction; detector and alarm systems; fire service equipment; automatic fire sprinklers; one-hour fire walls; clearances around structures; accessibility to and into buildings; and the proper storage of flammable and combustible materials.
- c. Maintain all fire-inhibiting Planning Department requirements and standards for new construction and for substantial additions to existing structures, including those for architectural design, site planning, building setback, landscape design, minimum road and driveway widths, and property usage and maintenance.
- d. Ensure, to the greatest extent possible, that buildings/uses of which the State has permitting authority over, such as public schools, hospitals, and mobile home parks, comply with current, applicable fire-inhibiting codes, standards, and construction practices.
- e. Maintain ongoing fire and business license inspection and business monitoring programs as well as code enforcement activities, particularly relating to establishments using or storing hazardous materials, to reduce fire dangers associated with commercial, industrial, and institutional buildings.



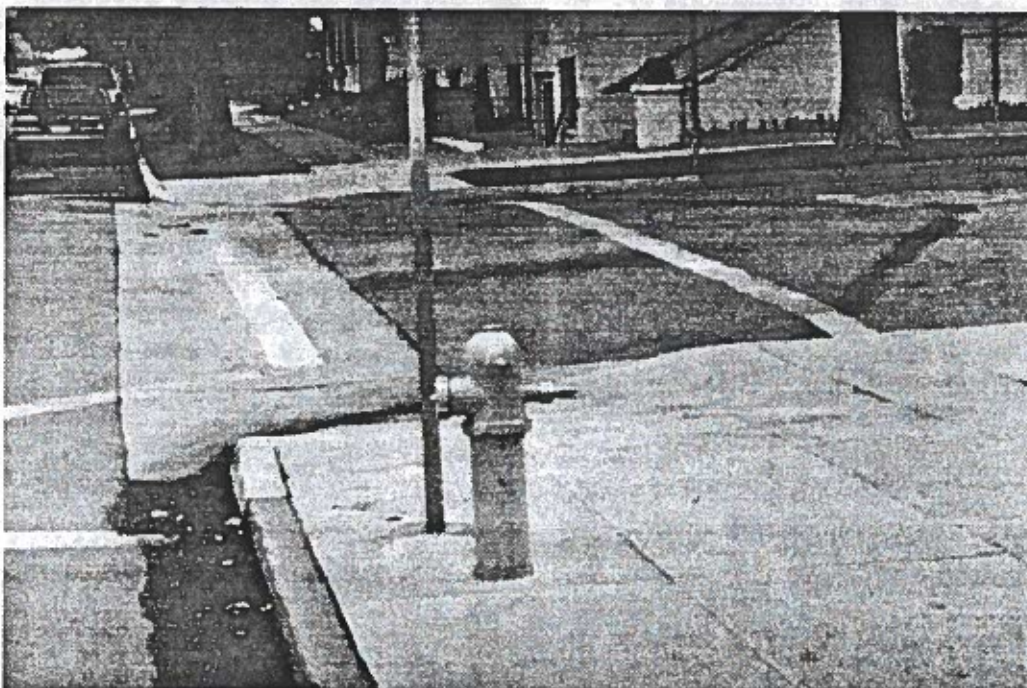
PICTURE 11. VIEW OF COVINA HILLS AREA, LOOKING SOUTH FROM REEDER AVENUE AT THE REEDER AVENUE-PUENTE STREET CURVE. SAFETY ELEMENT POLICIES AND PROVISIONS MAINTAIN A PREVENTATIVE APPROACH FOR HANDLING POTENTIAL FIRES HERE AND THROUGHOUT THE COMMUNITY.



PICTURE 12. COMMON OLDER APARTMENT COMPLEX. TO REDUCE FIRE DANGERS IN STRUCTURES SUCH AS THIS ONE, THE GENERAL PLAN CALLS FOR KEEPING ONGOING FIRE AND BUSINESS LICENSE INSPECTION AND MONITORING PROGRAMS AS WELL AS CODE ENFORCEMENT ACTIVITIES.



PICTURE 13. CONVENTIONAL MODERN HOME. THE GENERAL PLAN ESTABLISHES AN ADMINISTRATIVE STRUCTURE FOR MAINTAINING FIRE-INHIBITING REQUIREMENTS AND STANDARDS, SUCH AS TILE ROOFS, FOR NEW CONSTRUCTION AND SUBSTANTIAL ADDITIONS.



PICTURE 14. TYPICAL FIRE HYDRANT. THE SAFETY ELEMENT REGARDS THE APPROPRIATE PLACEMENT OF FIRE HYDRANTS AND RELATED INFRASTRUCTURE AS WELL AS ADEQUATE FIRE FLOW PRESSURE AS ESSENTIAL STRATEGIES IN MINIMIZING POSSIBLE FIRES.

- f. Maintain ongoing Neighborhood Preservation Program (NPP) and general Code Enforcement activities to reduce fire and other dangers in residential areas.
- g. Continue with existing citywide fire prevention/education programs to bolster public awareness of the disastrous impacts that fires can have on the community.
- h. Continue to follow weed abatement programs in Covina Hills, which involve trimming and clearing overgrown plant materials from public and private properties, to reduce the amount of combustible vegetation.
- i. Consider to require fire-retardant plantings in conjunction with new construction and major expansions, if appropriate.
- j. Continue to ensure the appropriate placement of fire hydrants and related infrastructure as well as water availability or the adequacy of fire flow pressure.
- k. Maintain sufficient personnel, equipment, facilities, and resources in the Fire and Police Departments to handle fire incidents.
- l. Maintain fire service-related mutual aid agreements with surrounding jurisdictions to supplement City personnel in fighting fires or in responding to small-scale hazardous materials incidents, when needed.
- m. Maintain and periodically review procedures for dealing with potential major urban and wild land fires and blazes occurring at the interface thereof as well as major above- and below-ground and transport-related hazardous materials accidents in the Covina Emergency Plan.

4. Policy Area 4

Hazardous Materials

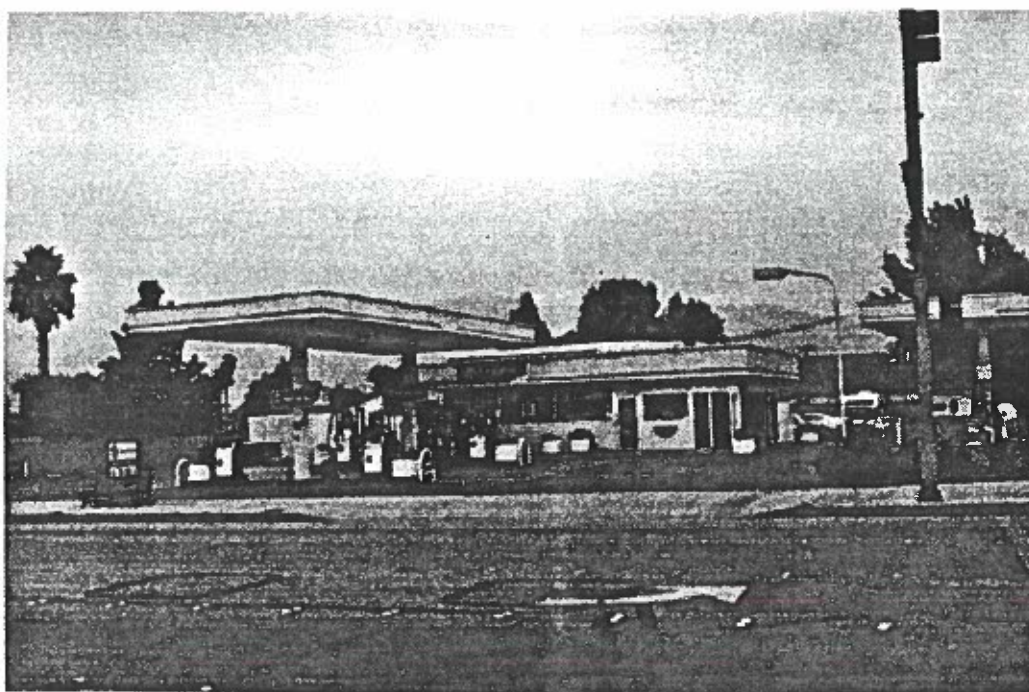
The City shall:

- a. Continue to cooperate with all applicable laws and agencies concerning the regulation of the use, storage, and disposal of hazardous materials by following this Safety Element and related documents, mandates, and matters.
- b. Enforce the "right-to-know" laws governing the disclosure of hazardous materials by maintaining information on City businesses and entities that use, store, and/or generate hazardous materials so that adequate regulation and monitoring can occur and that appropriate, effective emergency service responses can be made in the event of an accident or fire.
- c. Continue to contract with the Los Angeles County Fire Department, Hazardous Materials Division 1) to administer various State-required monitoring activities and permitting processes regarding the utilization, storage, and transportation of hazardous materials and 2) to respond to major above- and below-ground as well as transport-related hazardous materials accidents.
- d. Support City Fire Department general inspections in identifying and addressing hazardous materials.
- e. Support City Building and Safety Division efforts to identify hazardous materials use and storage in the business license inspection process.
- f. Maintain sufficient personnel, equipment, facilities, and resources in the Fire Department and Building and Safety Division to provide general regulation of and monitoring of hazardous materials handlers.

- g. Monitor and, to the greatest extent possible, work with businesses using, storing, and/or generating hazardous waste materials to ensure compliance with or facilitate business understanding of proper disposal procedures.
- h. Provide support and assistance, as appropriate, to the State and County in disseminating information needed by the public and industries to take rational steps to minimize, recycle, treat, and otherwise manage hazardous wastes.
- i. Continue to cooperate with all applicable laws, particularly the Clean Water Act, and agencies concerning the regulation of discharges or prohibition of all wastes and non-storm water materials disposed into the public storm drainage system by implementing the National Pollutant Discharge Elimination System (NPDES)-related storm water/urban runoff management program.
- j. Minimize, to the greatest extent practicable, the impacts from storm water runoff on the biological integrity of natural drainage systems and water bodies.
- k. Put an emphasis on cumulative storm water impacts and the need to mitigate cumulative impacts to less than significant levels.
- l. Maximize, to the greatest extent practicable, the percentage of permeable surfaces to allow more percolation of storm water runoff into the ground.
- m. Minimize, to the greatest extent practicable, the amount of storm water directed to impermeable areas and to the storm drainage system.
- n. Link ground water and storm water flows so that storm water is considered in the hydrologic cycle.
- o. Build storm water pollution prevention requirements into other existing requirements (e.g., landscaping) to ensure that requirements do not themselves indirectly encourage practices that can cause pollution.
- p. Require proposed commercial and industrial projects/activities to be conditioned to comply with California's general storm water permits and with the Clean Water Act.
- q. Require erosion and sediment controls for developments to minimize erosion-related damages and sediment transport off of the sites.
- r. Consider to require proposed projects to be conditioned with reasonable limits on the clearing of vegetation from development sites and on the length of time during which soil may be exposed.
- s. Consider to require proposed projects to be conditioned with appropriate permanent controls to reduce storm water pollutant loads discharged from the development sites (including parking lots), to the maximum extent practicable.
- t. Consider to adopt new ordinances to better regulate hazardous materials, if appropriate.
- u. Consider to pursue State legislation that would enable a greater degree of local authority relative to environmental controls.
- v. Adopt waste minimization as the first priority in waste management strategies.
- w. To the greatest degree feasible, locate new or accommodate expanded/remodeled uses involved in the production, storage, transportation, and/or handling of hazardous materials a safe distance from other land uses that may be adversely affected by such activities.



PICTURE 15. TYPICAL INDUSTRIAL PROPERTY. CONSIDERING THE FACT THAT INDUSTRIAL FACILITIES CONSTITUTE MUCH OF THE SOURCE OF HAZARDOUS MATERIALS IN THE COMMUNITY, THE GENERAL PLAN PROPOSES TO MAINTAIN ALL FIRE/HAZARD-INHIBITING REQUIREMENTS AND STANDARDS FOR NEW CONSTRUCTION AND MAJOR ADDITIONS PLUS ONGOING FIRE/HAZARDOUS MATERIALS AND BUSINESS LICENSE INSPECTION AND BUSINESS MONITORING AS WELL AS CODE ENFORCEMENT ACTIVITIES.



PICTURE 16. TYPICAL SERVICE STATION. GENERAL PLAN POLICY FURTHER CALLS FOR THE CONTINUATION OF ALL FIRE/HAZARD-INHIBITING REQUIREMENTS AND STANDARDS AND BUSINESS INSPECTION-RELATED PROCEDURES FOR ACTIVITIES OF THIS TYPE.



PICTURE 17. REPRESENTATIVE BASIC COMMERCIAL BUSINESS. THE SAFETY ELEMENT RECOGNIZES THAT MANY SEEMINGLY INNOCUOUS BUSINESSES CONTAIN HAZARDOUS MATERIALS.



PICTURE 18. BASIC AUTOMOTIVE- AND HOUSEHOLD-RELATED PRODUCTS FOUND IN TYPICAL GARAGE. THE GENERAL PLAN CALLS FOR RESIDENTS TO DISPOSE OF THEIR COMMON THOUGH OFTEN POTENTIALLY HAZARDOUS PRODUCTS IN A SAFE, SUITABLE MANNER.

- x. Encourage relatively low intensity or low risk industrial uses (as listed in the Covina Zoning Ordinance) in the community for economic development, commercial image enhancement, and related reasons, subject to adherence to adequate development standards and mitigation measures.
- y. Prohibit high intensity or high risk industrial uses (as described in the Covina Zoning Ordinance) in the community.
- z. Support the Los Angeles County Department of Public Works in sponsoring regular household hazardous waste disposal programs to enable both City and County residents to bring backyard pesticides, cleaning fluids, waste oil, paint cans, and other common household toxics to a centralized collection facility for proper disposal.
- aa. Inform residents of the types of household wastes considered hazardous and the proper manner of disposal thereof.
- bb. Support efforts by Federal officials to replace household hazardous materials with innocuous substances, whenever possible.
- cc. Require that the transport of large quantities of hazardous materials in the City be restricted to the community's officially designated truck routes, to the greatest degree possible.
- dd. Support strong, continuous, and consistent enforcement of laws of all levels of government pertaining to hazardous materials transport on roads, on the San Bernardino Freeway, and on the Metrolink Rail Line in and adjacent to Covina.
- ee. Continue to identify, address, and resolve underground contamination through the City Planning Division Site Plan Review and Environmental Impact Review processes and the Building and Safety Division Building Permit Issuance activity.
- ff. Reserve the right to require an environmental audit for construction proposals, including, but not limited to, submittal of a site inspection report describing any contamination of land, soil, ground water, and/or structures and, if applicable, the steps to be taken to correct the problem prior to development.
- gg. Support Federal, State, and County efforts to identify, monitor, and make recommendations on remediating subsurface pollution created by underground storage or septic tank leakage.
- hh. Support the Los Angeles County Department of Public Works, Waste Management Division underground storage tank abatement program as a viable mechanism for remediating contaminated soils/properties.
- ii. Require soil testing and/or other investigative actions to detect the presence of any underground septic tanks, where appropriate.
- jj. Where septic tanks are found in conjunction with development activities, continue to require that the septic tanks be removed, correctly filled, or, if appropriate, reasonably tested for adequacy or circumvented by revision of the site plan.
- kk. Consider reviewing all septic tank systems in Covina to determine whether any are located in areas subject to potential major flooding or geologic or other hazards, and consider establishing a mandatory time limit for conversion of such systems in these areas to sewers.
- ll. Require all new development in Covina to be connected to public sewers.
- mm. Encourage citizens and businesses to report the unauthorized dumping of toxic or other hazardous substances, when observed.

- nn. Prosecute persons, companies, or entities involved in the unauthorized dumping of toxic or other hazardous substances into the ground, water, or storm drainage system, and consider to increase fines levied for illegal dumping.
- oo. Support efforts of the Southern California Gas Company and the United States Department of Transportation, Office of Pipeline Safety to inspect and maintain major, high-pressure natural gas distribution lines that underlie Covina.
- pp. Continue to best prevent hazards in relation to major, high-pressure natural gas distribution lines that underlie Covina by appropriately conducting various permit issuance processes, notably for public right-of-way work.
- qq. Support and encourage parties digging and excavating anywhere in Covina to utilize the State-sponsored regional notification center (DigAlert) as a mechanism for informing the City and others about such activity and for avoiding accidents.
- rr. If appropriate, consult with companies operating underground pipelines as well as the State Public Utilities Commission and Federal Office of Pipeline Safety to determine the likelihood of explosion or rupture in case of an accident or earthquake.
- ss. Ensure that all disaster response entities have access to route, depth, and shut-off information about each underground high-pressure gas distribution line in Covina.
- tt. Cooperate with all applicable laws and agencies concerning regional hazardous waste disposal efforts.
- uu. To the greatest extent possible, when requested, assist State and County regulatory agencies in handling hazardous waste management planning and related matters by supplying these agencies with salient, available information on local hazardous waste generators.
- vv. Thoroughly and appropriately analyze all issues associated with the potential siting of a hazardous waste management facility in Covina to further community health, safety, welfare, and integrity.
- ww. Utilize the siting criteria described in this Element to evaluate the suitability and compatibility of potential hazardous waste management facilities with surrounding land uses and the environment.
- xx. Ensure that any approved hazardous waste management facility conforms to all land use guidelines and locational provisions of the siting criteria of this Element.
- yy. In reviewing any waste management facility proposal, supplement the applicable siting criteria with appropriate project-specific engineering, site design, aesthetic, operational, and other conditions to ensure protection of community health, safety, welfare, and integrity and to bolster suitability and compatibility with surrounding activities, viable accessibility thereto, and harmony with the environment.
- zz. Ensure that any proposed hazardous waste management facility poses negligible threats to the health and safety of residents and sensitive populations of Covina by requiring a comprehensive risk assessment be performed prior to the establishment of any such facility located within 2,000 feet of property zoned for residential use or any public or private school (excluding trade school), child day care center, hospital, nursing home, and similar use, in addition to the meeting of the applicable siting criteria and all project conditions.
- aaa. Recognize and act on the fact that the community may establish more stringent siting criteria than those specified by the State or in the Los Angeles County Hazardous Waste Management Plan (HWMP), as permitted under law.

- bbb. Through regular updates of the Safety Element or other chapters of the General Plan, continue to identify those areas of Covina that might or might not meet the siting criteria.
- ccc. Monitor any changes in the Los Angeles County Hazardous Waste Management Plan (HWMP), particularly the siting criteria and related matters, to ascertain in what ways the changes could impact Covina, and respond, accordingly.
- ddd. Incorporate applicable portions of the Los Angeles County Hazardous Waste Management Plan (HWMP) into the Covina General Plan Safety Element, including sections on waste management facility definitions, public participation, emergency response, and waste minimization, and follow such portions on an as-needed basis to facilitate decisions involving proposed hazardous waste management facilities in Covina.
- eee. Provide the public with maximum information or education on general hazardous waste management planning and maximum opportunities to review and comment on any future hazardous waste facility proposals to further community health, safety, welfare, and integrity.
- fff. Support the efforts of all Federal, State, and Los Angeles County agencies involved in matters pertaining to the Los Angeles County Hazardous Waste Management Plan (HWMP) process.
- ggg. Assist Los Angeles County in promoting public hazardous waste education programs developed under the Los Angeles County Hazardous Waste Management Plan (HWMP), to the greatest extent feasible.
- hhh. Inform the Covina Chamber of Commerce, Downtown Merchants' Association, and other business organizations of applicable hazardous waste plans and salient issues and proper monitoring and disposal procedures and encourage them to share the plans/information with members, if appropriate.
- iii. Ensure that any proposed hazardous waste management facility is consistent with the Covina General Plan and Zoning Ordinance and all other, applicable plans and ordinances.
- jjj. Review the existing Zoning Ordinance and permitting procedures and make appropriate changes to address the development of a hazardous waste management facility.
- kkk. Maintain sufficient personnel, equipment, facilities, and resources in the Fire and Police Departments to respond to at least initial calls pertaining to above- and below-ground as well as transport-related hazardous materials accidents.
- lll. Maintain mutual aid agreements with surrounding jurisdictions to enable supplemental assistance for responding to small-scale hazardous materials incidents, when needed.
- mmm. Maintain and periodically review procedures for dealing with all potential major above- and below-ground as well as transport-related hazardous materials accidents in the Covina Emergency Plan.

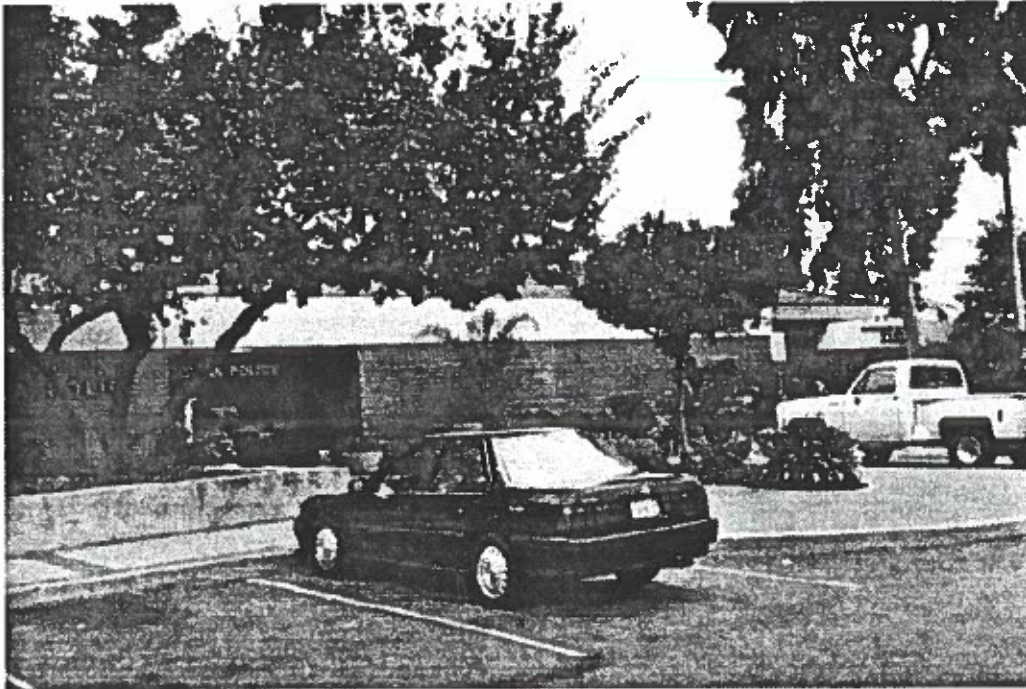
5. Policy Area 5

Emergency Preparedness and Related and General Matters

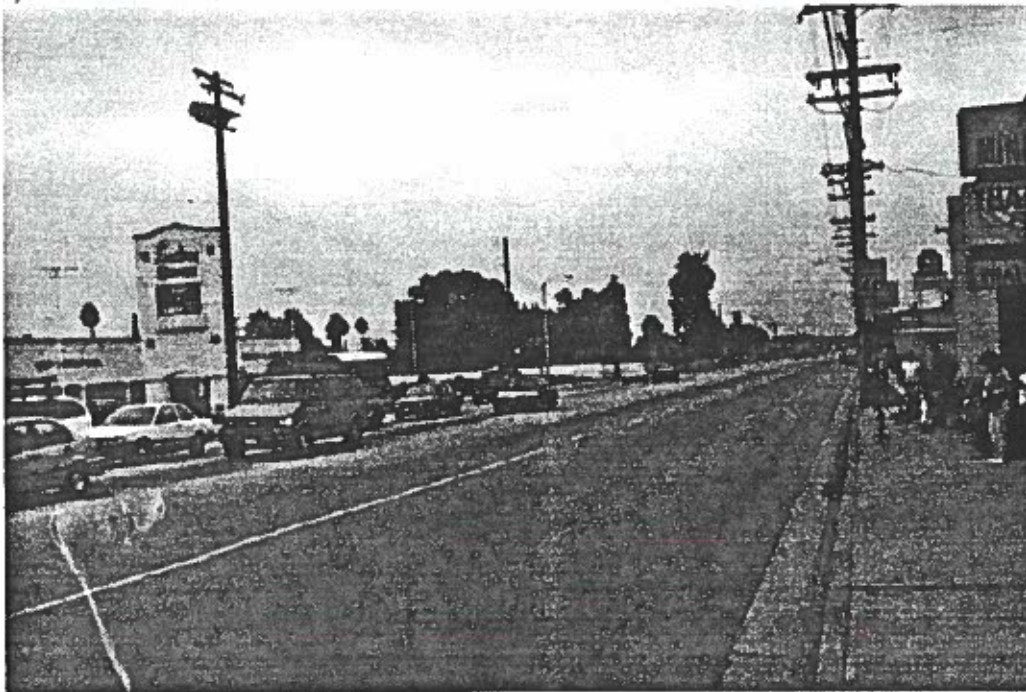
The City shall:

- a. Follow an emergency preparedness strategy/program that emphasizes hazard mitigation, disaster response, self-sufficiency, and, when needed, inter-agency coordination.

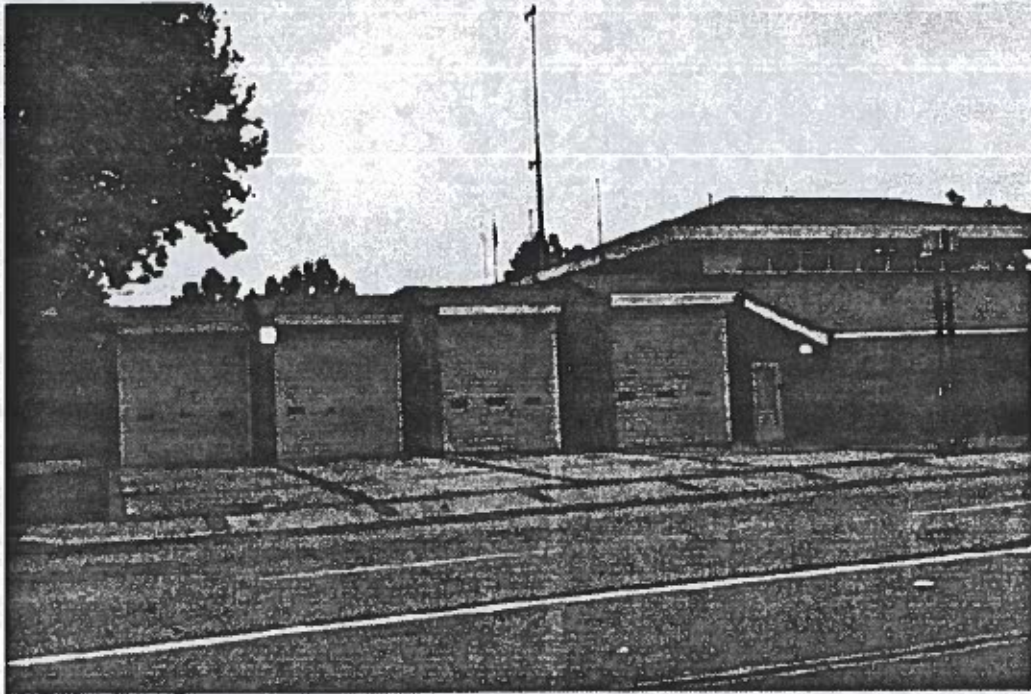
- b. Maintain and occasionally update the Covina Emergency (preparedness) Plan to allow the local government, residents, and businesses to handle a natural or man-made disaster in an efficient, hierarchical/organized, expedient, and safe manner and to restore normal conditions as quickly as possible.
- c. Continue to apprise all Covina City employees of key provisions of the Covina Emergency Plan to facilitate public as well as private response and to best meet essential needs in a serious emergency.
- d. Continue to support, follow, and train all Covina City employees in the Standardized Emergency Management System (SEMS), the chief inter-agency process/framework relating to emergency preparedness, management, and resolution, to best handle potential disasters, to most efficiently and effectively deal with other entities, and to be eligible for State financial assistance, if needed, following an emergency.
- e. Monitor and appropriately incorporate into Covina's programs and procedures any changes in State-related emergency preparedness, management, and/or resolution matters, including, but not limited to, the Standardized Emergency Management System (SEMS).
- f. Utilizing all appropriate City departments and appurtenant resources and personnel, conduct periodic emergency simulations or mock disaster drills to ensure the continuing effectiveness and practicality of the Covina Emergency Plan.
- g. Locate and maintain facilities that are necessary for post-disaster emergency services and functions in areas and in buildings of low hazard risk, to the greatest extent possible, to minimize response-related problems in a major incident.
- h. Establish the mitigation of earthquake hazards as a high priority for applicable City programs/strategies, both before and after an earthquake.
- i. Develop programs, options, procedures, and funding sources to promote the rapid and effective reconstruction and recovery of effected portions of the City following an earthquake or other major disaster, as opportunities allow.
- j. Sponsor and support community programs, such as Covinans Organized for Potential Emergencies (COPE), that train volunteers to assist City staff in disseminating information on emergency procedures and in performing effectively after an actual disaster.
- k. Promote continuing public awareness concerning emergency preparedness matters by developing and distributing information to Covina residents, businesses, business organizations, schools, community groups, and other entities regarding potential hazards affecting the City, measures to protect life and property before and during a disaster, emergency procedures to follow after an incident, and general City disaster response obligations and activities.
- l. In distributing information to Covina residents, businesses, schools, and other entities, encourage citizens and employers/facility operators to establish emergency disaster plans for their respective families or work sites/organizations.
- m. Encourage the managers of child day care centers, schools, nursing homes, group homes, hospitals, and other facilities with persons particularly susceptible to death or injury in a major disaster to develop public safety awareness/education programs, with specific emphases on earthquakes and fires.
- n. Provide training in first-aid and cardiopulmonary resuscitation (CPR) to citizens and workers in the community, and improve the level of first-aid and CPR skills for non-emergency employees.



PICTURE 19. COVINA PUBLIC SAFETY COMPLEX, AT CITRUS AVENUE AND SAN BERNARDINO ROAD. THE PUBLIC SAFETY COMPLEX CONTAINS COVINA'S FIRE AND POLICE HEADQUARTERS AND SERVES AS A KEY ACTIVITY CENTER FOR RESPONDING TO DISASTERS AND EVERYDAY EMERGENCY REQUESTS, CONDUCTING FIRE PREVENTION ACTIVITIES, AND MANAGING EMERGENCY PREPAREDNESS PLANNING.



PICTURE 20. VIEW OF ARROW HIGHWAY, LOOKING WEST OF CITRUS AVENUE. LARGER STREETS SUCH AS ARROW ARE DESIGNATED AS EVACUATION ROUTES IN RELATION TO MAJOR EMERGENCIES.



PICTURE 21. MAIN DOORS TO FIRE STATION AT COVINA PUBLIC SAFETY COMPLEX, AT CITRUS AVENUE AND SAN BERNARDINO ROAD. THE GENERAL PLAN PROCESS STRONGLY SUPPORTS THE COMMUNITY'S FIRE PREVENTION AND SUPPRESSION FUNCTIONS.



PICTURE 22. TYPICAL FIRE ACCESS LANE. AMONG ITS MANY DUTIES, FIRE PERSONNEL DESIGNATE AND ENFORCE FIRE LANES AND OTHER EMERGENCY ACCESS AREAS ON COMMERCIAL DEVELOPMENTS AND EACH AND EVERY USE TYPE.

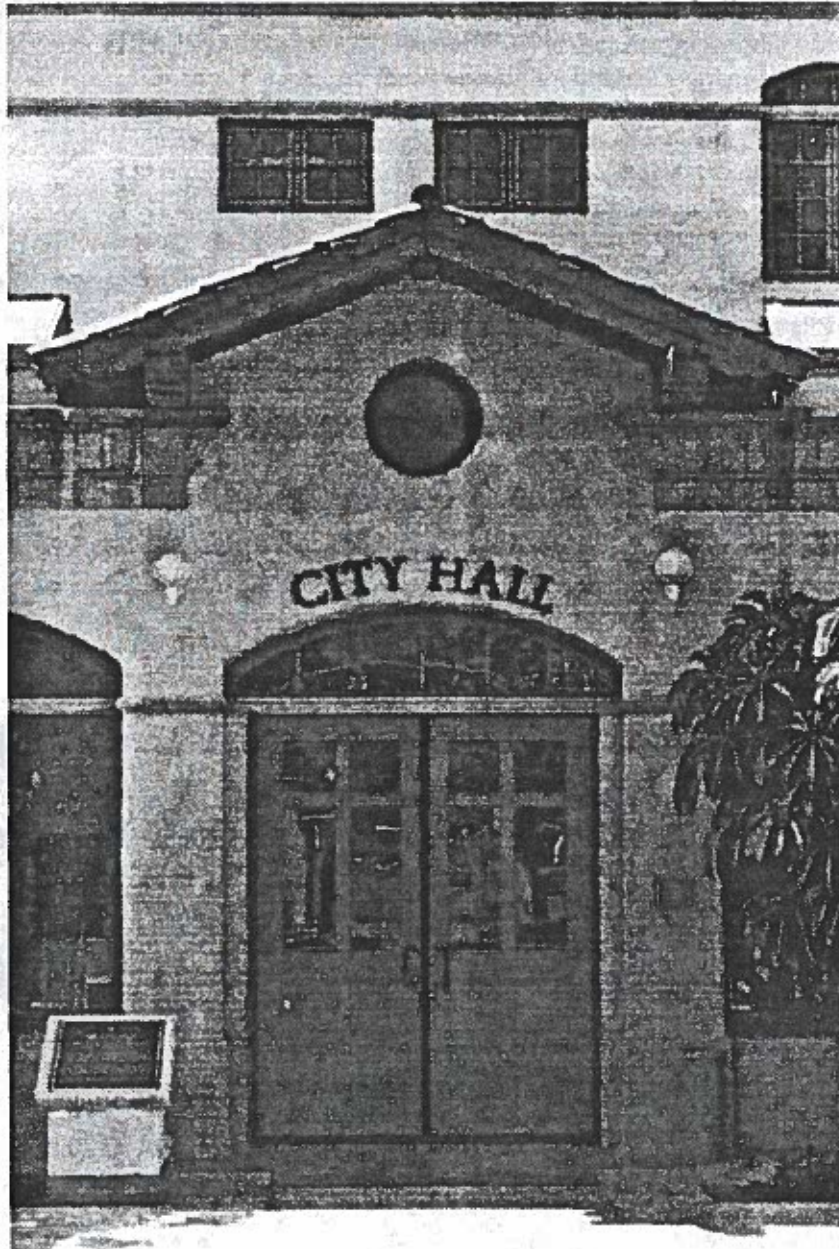
- o. Develop and follow through on an information release program upon adoption of the Safety Element to familiarize local residents, employers, institutional uses, service groups, and other entities with the Element.
- p. Designate and maintain the San Bernardino Freeway and the major roads or primary arterial, secondary arterial, and collector streets (as defined in the Circulation Element) as Covina's evacuation routes in relation to major emergencies.
- q. Continue to supply the Covina Fire Department with adequate personnel, equipment, resources, and facilities to perform its many duties, including responding to disasters, emergencies, and everyday public safety-related service requests, managing emergency preparedness planning, and conducting fire prevention activities, such that all Covina residents, workers, and others are afforded the highest quality, most efficient fire protection and paramedical service.
- r. Constantly monitor and evaluate operations and procedures relative to fire protection and paramedical service to identify where improvements can be made.
- s. Maintain a sufficient ratio of sworn fire personnel to each 1,000 population and keep adequate civilian employees to support sworn staff.
- t. Ensure continuing adequate fire and paramedical response times for all Covina properties.
- u. Continue to encourage and support City weed abatement and brush clearance programs, particularly in the Covina Hills area, to reduce the potential for fire hazards.
- v. Support efforts at the State and County levels to restore the integrity of the trauma care network.
- w. Continue to supply the Covina Police Department with adequate personnel, equipment, resources, and facilities to perform its many duties, including responding to disasters, emergencies, and everyday public safety-related service requests, managing the City's emergency communications systems, and conducting crime prevention programs, such that all Covina residents, workers, and others are afforded the highest quality, most efficient law enforcement.
- x. Constantly monitor and evaluate operations and procedures relative to law enforcement to identify where improvements can be made.
- y. Maintain a sufficient ratio of sworn police officers for each 1,000 population and keep adequate civilian employees to support sworn staff.
- z. Ensure continuing adequate police response times for all Covina properties.
- aa. Attempt to reduce crime to persons and property by alleviating the underlying causes of and opportunities for offenses through physical design, City programs, and community development and neighborhood preservation activities.
- bb. Maintain and, where feasible, expand viable crime prevention and control programs, including Neighborhood Watch, Citizens' Volunteers Patrol, and Drug Abuse Resistance Education (DARE).
- cc. Seek citizen involvement in the evaluation and expansion of existing and development of new crime prevention and control programs.
- dd. Where appropriate, apply standards for defensible space in reviewing new and expanded developments to best promote personal security. (Defensible space refers to planning and design techniques that can be

used to discourage crime. The concept was developed by Oscar Newman in his book "Defensible Space: Crime Prevention Through Urban Design.")

- ee. Ensure that the quality and scope of future fire, paramedical, and police protective resources and services keep pace with projected moderate growth and redevelopment and community revitalization activities.
- ff. Require that new, expanded, or altered potentially problematic or public safety-threatening developments, uses, and businesses mitigate any impacts on services that may result from the proposals through measures acceptable to the City.
- gg. Maintain fire-, paramedical-, and law enforcement-related mutual aid agreements with surrounding communities and with Los Angeles County to provide supplemental emergency service assistance, if necessary.
- hh. Continue to contract with surrounding communities and with Los Angeles County to provide day-to-day emergency service support in various areas, including the provision of large-scale fire vehicles, the arrangement of long-term booking facilities, responding to hazardous materials accidents and administering State-required programs thereof, and handling animal control matters.
- ii. Support law enforcement efforts of the California Highway Patrol (CHP) on Azusa Avenue (a State Highway).
- jj. Maintain adequate water pressure flow capacity at all times and in all areas of Covina as well as ample, strategically placed fire hydrants to allow for proper firefighting capabilities.
- kk. Monitor water pressures and flow capacities to ensure continuing adequacy and, if necessary, enhance the water distribution system.
- ll. Inspect all fire hydrants for operational readiness on at least an annual basis and, where necessary, perform repairs or replacements.
- mm. Maintain adequate minimum road width and other appropriate public and private street design standards, as described in the Circulation Element and Subdivision Ordinance, to ensure that hazardous incidents and emergencies can be quickly and safely accessed by emergency vehicles.
- nn. Maintain adequate site design standards for public and private driveways, parking aisles, vertical clearance, vehicular turn-around, driveway approaches, the number and locations of site access points, emergency parking and unloading, building setback, clearances around structures, and other elements, in accordance with the Zoning Ordinance, Uniform Building Code, and Uniform Fire Code, to ensure that hazardous incidents and emergencies can be quickly and safely accessed by emergency vehicles and personnel. The City will attempt to ensure that developments or uses of which the State has permitting authority over, including public schools, hospitals, and mobile home parks, meet these standards and provisions to the greatest extent possible.
- oo. Study and evaluate all public and private street and accessibility and clearance standards of the Circulation Element, Subdivision Ordinance, Zoning Ordinance, Uniform Building Code, and Uniform Fire Code to ensure that they continue to fulfill their emergency response and other functions and, where necessary, revise the provisions.
- pp. Continue to maintain a coordinated, cooperative, and inter-departmental approach in reviewing new or expanded/altered public and private developments and uses and temporary activities through administering the Covina Site Plan Review and Building Permit Issuance processes to facilitate implementation of all City public safety-related codes and standards or to ensure that City Fire, Police, Building and Safety, Planning, and other officials can best comment on all aspects of the proposals involving public safety, including, but not limited to, building and roofing materials; fire sprinklers (if required); alarms and related features; emergency vehicle accessibility/circulation with respect to streets, driveways, parking aisles, clearances around structures, and/or driveway approaches; emergency vehicle parking and unloading; response times; water pressure;

defensible space; traffic; lighting; impacts on surrounding areas; and overall structural adequacy as well as the impacts of the projects on existing services/resources. These reviews shall take place at the earliest possible point to permit changes in the proposal, if necessary.

- qq. Ensure that the Covina Fire Department continues to enforce all codes and standards concerning actual or potential obstruction of approaches needed for emergency vehicle accessibility.
- rr. Endeavor to monitor future hazard- and safety-related conditions, discoveries, and local policy changes and, when necessary, make appropriate General Plan amendments.
- ss. Balance the City's obligation to preserve, protect, and maintain public safety with Covina's need to accommodate moderate growth and to continue with ongoing communitywide economic development, commercial revitalization, public improvement enhancement, residential construction, neighborhood preservation, code enforcement, and housing activities/programs.
- tt. Best implement the Safety Element through the Zoning Ordinance and Design Guidelines, Capital Improvement Program, Subdivision Ordinance, Building and Safety and Fire provisions, Neighborhood Preservation Program, general Code Enforcement, Emergency Plan, and any related Covina Municipal Code sections. City policies, plans, or proposals or through other matters.
- uu. Observe the requirements imposed by the California Environmental Quality Act (CEQA) when reviewing any public or private proposals, including, but not limited to, infrastructure alterations or the development, redevelopment, modification, or expansion/remodeling of properties, to address all applicable potential general safety and public safety impacts.
- vv. Appropriately monitor and, under State law, annually report to the Planning Commission and City Council on progress in General Plan implementation to ensure the viability, effectiveness, and coordination of all adopted goals, objectives (if applicable), policies, and general safety, public safety, land use, circulation, and other plan components.
- ww. Maintain a coordinated, cooperative, and inter-departmental approach in handling various general safety- and public safety-related issues and problems.
- xx. Endeavor to promote the importance of the General Plan and its implementation to the public, businesses, developers, Covina employees, and other interested parties through appropriate channels.
- yy. Implement the Safety Element in a manner consistent with the desired implementation/administration of all other General Plan Elements, as presented in those chapters, and applicable City and Redevelopment Agency plans and community goals.
- zz. Maintain departments/divisions to carry out the Safety Element's various general safety- and public safety-related responsibilities and obligations.



PICTURE 23. REAR ENTRANCE TO COVINA CITY HALL IN DOWNTOWN AREA. THE CITY HALL IS LOCATED TWO SHORT BLOCKS FROM THE PUBLIC SAFETY COMPLEX AND WILL CONTINUE TO SERVE AS THE ADMINISTRATIVE FOUNDATION FOR MOST PUBLIC SAFETY-RELATED ACTIVITIES.

IX. PROGRAMS/IMPLEMENTATION MEASURES

Under State law, this Safety Element must contain programs/implementation measures. Programs supplement the goal and policies and serve as a key implementation mechanism. In other words, as stated in the Introduction, programs ensure that the Element's goal and policies will reach fruition. For clarification on the goal and policies and how they have shaped the development of this section, refer to Chapter VIII.

The Covina Safety Element programs/implementation measures are listed below. Some of the programs/measures are currently active, though many would commence upon Element adoption. Programs that are proposed are believed best suited and viable for the City.

For reasons of simplicity and clarity, the programs/measures are divided into six below-listed subject areas. The categorization generally follows that of the policies. Within each topical area, the programs are listed in no particular order. The six subject areas are:

- A. Potential Seismic and Geologic Hazards
- B. Potential Flooding Hazards
- C. Potential Fire Hazards
- D. Hazardous Materials
- E. Emergency Preparedness and Related Matters
- F. Inter-Topic General Matters

A. Potential Seismic and Geologic Hazards

1. Uniform Building and Other Official Codes

The City administers and enforces various construction and grading provisions, standards, and practices of the Uniform Building Code (UBC) and other official, City-adopted Codes to ensure the structural adequacy of buildings and the safety of persons against the adverse impacts of seismically induced ground shaking or ground failure, such as landslides. Duties pertaining to these provisions and standards constitute one of the most important functions of the community. Covina will continue to implement and review and, where necessary, modify these Codes to better protect the City. And for developments or uses of which the State has permitting authority over (e.g., public schools, hospitals, and mobile home parks), the City will strive to ensure that the applicable codes and standards are appropriately followed through.

2. Soils, Geologic, and/or Structural Studies/Evaluations

Project-specific soils, geologic, and/or structural studies/evaluations, when required, provide useful, supplemental information to City officials in verifying the structural adequacy of new and expanded or improved buildings. The City will continue to call for these studies/evaluations in project review.

3. Seismic Retrofitting Efforts/Activities

The City encourages seismic retrofitting of older, unreinforced masonry and similar buildings on a voluntary basis in conjunction with ongoing commercial revitalization and general building renovation. Most of these buildings pervade in the older downtown area. The community will continue with this activity, which abates potentially hazardous structures.

4. Seismic Retrofitting of Puddingstone Dam

As detailed in this Element, the unimproved section of Walnut Creek in Covina Hills experiences some seasonal flooding primarily because of Los Angeles County Flood Control District storm water management/release practices at the upstream Puddingstone Reservoir and Dam complex, which is within Bonelli Regional Park. One reason for the storm water release strategy is to comply with State restrictions regarding the seismic stability of the 1920s-era Dam. In light of the disturbances imposed on the community by this flooding and the catastrophic impacts that could result if Puddingstone Dam should fail, the City will request that the County Flood Control District commit and secure funding to seismically reinforce the Dam.

5. Monitoring of Dormant/Potentially Active Faults

There are two potentially active or dormant faults that pass through Covina, Indian Hill and Walnut Creek, which could theoretically pose threats for the community. The City will monitor the faults for movement and, if any activity is detected, will closely investigate the fault(s), following appropriate methodology, and adopt reasonable development policies and standards.

6. Investigations of General Seismic Conditions

Because Covina lies in a region that has experienced much earthquake activity, it is appropriate for the City to continually investigate, to the greatest extent possible, seismic conditions and matters in southern California. Any discoveries with public safety implications for Covina will be appropriately handled from a building construction standpoint.

7. Investigation of Local Geologic and Soil Conditions

Certain sections of the Covina Hills area have the potential for major landslides or mudslides. Therefore, the City will continue to follow various applicable construction and grading standards and practices to ensure structural integrity and ground stability and will investigate further the geology and soil conditions in Covina Hills. If there are significant detections that relate to public safety, then the City will conduct appropriate actions concerning development, such as revising policies, standards, and practices.

8. Monitoring for Potential Liquefaction, Settlement, or Subsidence

Liquefaction, settlement, and subsidence are different types of ground failure-related phenomena, they occurring as a result of particular soil materials either existing alone over time or interacting with ground shaking or ground water withdrawal. These problems have not been detected in Covina because of various factors, such as favorable soil and ground water conditions and adherence to appropriate development standards. However, City staff will monitor the community for any incidents of liquefaction, settlement, or subsidence and, if identified, will closely investigate the hazard and require special studies and measures to accommodate construction.

9. Replanting Efforts in Hillside Areas

Landslides, which could potentially occur in portions of Covina Hills, are sometimes brought on by the saturation of bare, post-fire hillsides during heavy rains. To prevent potential problems, following a major fire in this district, the City will continue with existing efforts to replant the hillsides in a reasonable fashion with appropriate materials.

10. Promotion of Earthquake Preparedness

Earthquake preparedness planning is an important process in seismically active regions, such as southern California, for saving human lives and protecting property during and after a ground shaking incident. The City will continue to promote this process through the Covina Emergency Plan and through active involvement with various quake awareness measures, including the distribution of brochure materials and working with local groups.

B. Potential Flooding Hazards

1. Maintenance of Flood Control Infrastructure

Covina is served by an extensive storm drainage system that is operated and maintained by the Los Angeles County Flood Control District. The City will continue to support County efforts to sustain this infrastructure. Covina's drainage needs constitute an important matter that cannot be overlooked.

2. Improvement of Flood Control Infrastructure

Despite the general overall adequacy of Covina's storm drainage network in areas other than around the unimproved section of Walnut Creek, minor flooding and ponding has occurred at a few older locations because of outmoded or insufficient infrastructure. The community will continue to work with Los Angeles County on public works projects that will resolve these deficiencies and that will accommodate future moderate growth.

3. Imposition of Flood Control System-Related Conditions

In the development review process for generally major applications, the City imposes flood control system-related conditions to prevent or ensure the mitigation of any flood hazards or problems. The City will therefore continue to require appropriate, applicable measures in conjunction with new and significantly expanded proposals.

4. Permanent Resolution of Walnut Creek Flooding and Erosion Problems

The unimproved section of Walnut Creek in the Covina Hills area experiences some flooding during the winter months primarily because of Los Angeles County Flood Control District storm water management/release practices at the upstream Puddingstone Reservoir and Dam complex. These practices have occurred as a result of both seismic instability of the Dam and County desires to expand recreational and commercial activities. The flooding has also caused erosion problems. The City of Covina believes that it is in the best interests of area residents and property owners and all levels of government to reach a permanent solution to Walnut Creek flooding and erosion by whatever means are deemed appropriate, including developing a program and funding mechanism to seismically reinforce Puddingstone Dam or by having the County lower the Puddingstone Reservoir water level during the winter months.

5. Addressing of Short-Term Effects of Walnut Creek Flooding and Erosion

Until there is a permanent solution to the Walnut Creek flooding and erosion problems, it is appropriate for the City to continually follow various reasonable short-term or day-to-day measures. Such measures encompass prohibiting habitable structures within or near the Creek, administering reasonable development standards and provisions for abutting properties, including those clarified under the Zoning Ordinance and Design Guidelines, communicating with Los Angeles County Flood Control District officials on water release matters to best respond to public questions and concerns, and conducting emergency preparedness activities.

6. Addressing of Long-Term Effects of Walnut Creek Flooding and Erosion

In addition to following various short-term items pertaining to flooding and erosion of Walnut Creek (as stated in No. 5 above), the City will study and monitor the long-term or cumulative effects thereof. This activity is needed to best prevent or minimize property damage, human danger, and soil erosion and concomitant threats to wildlife in and adjacent to the Creek.

7. Uniform Building Code Provisions

The City administers various construction, earth work, grading, and general drainage standards and practices/provisions of the Uniform Building Code (UBC) to ensure, among other things, the structural adequacy of buildings, the minimization of erosion along the banks of the unimproved section of Walnut Creek and elsewhere, and the control of storm water to off-site facilities. To best protect public health and safety, the City will continue to follow and, where necessary, modify applicable sections of the UBC. For developments or uses of which the State has permitting authority over (e.g., public schools, hospitals, and mobile home parks), the City will strive to ensure that applicable codes, standards, and/or provisions are appropriately followed through.

8. Zoning Ordinance and Design Guidelines Provisions

The Covina Zoning Ordinance and Design Guidelines constitute the primary General Plan implementation mechanisms of the City Planning Division. Concerning the area in question, the City will continue to implement the various standards and provisions of these documents pertaining to site planning, grading, erosion minimization, site runoff, and landscaping. Particular attention will be devoted to the unimproved section of Walnut Creek in Covina Hills and other sensitive areas. Where appropriate, changes to the Zoning Ordinance and Design Guidelines will be performed to better serve the community. For developments or uses of which the State has permitting authority over (e.g., public schools, hospitals, and mobile home parks), the City will strive to ensure that applicable codes, standards, and/or provisions are appropriately followed through.

C. Potential Fire Hazards

1. Uniform Building and Fire Codes

Fire prevention is of great importance to the City of Covina. Therefore, the Covina Building and Safety Division and Fire Department follow and enforce various requirements and standards from, respectively, the Uniform Building Code (UBC) and Uniform Fire Code (UFC) for new construction and for substantial additions to existing structures to ensure the safety of persons against the adverse impacts of both urban and wild land fire hazards. The City will further review and, where necessary, change these provisions, which include fire-resistant materials and fire sprinkler systems, to better protect Covina residents, property owners, workers, and others.

2. Zoning Ordinance and Design Guidelines Requirements

The City Planning Division maintains certain fire-inhibiting provisions for new and substantially modified development proposals that supplement the Uniform Building Code (UBC) and Uniform Fire Code (UFC). These requirements of the Zoning Ordinance and Design Guidelines consist of building use and design, landscaping, and related provisions. When appropriate or required by law, the community will revise the documents to better serve Covina.

3. Fire Department Inspection and Monitoring Programs

The Covina Fire Department inspects and monitors buildings of all uses and types to ensure adherence to various department codes and standards. The Department will carry on with these activities, particularly relating to establishments using and/or storing hazardous materials.

4. Weed Abatement Efforts

An abundance of overgrown, combustible weeds and plant materials can make Covina Hills and other areas susceptible to wild land fires. Therefore, the Covina Fire Department has managed a weed abatement program that involves trimming and clearing such materials from public and private properties. Covina will continue with this effort, which, along with general Fire inspection and monitoring activities, suppresses potential fire hazards.

5. Building and Safety Inspections

The Covina Building and Safety Division conducts various inspections in the course of its day-to-day activities, many of which directly or indirectly relate to fire suppression. These inspections are performed during general building construction or alteration, business license issuance, and general Code Enforcement activities, and the inspection process is often coordinated with the Fire Department. The City regards and will continue this program as an essential public safety measure.

6. Neighborhood Preservation Program

Building and Safety Division personnel manage and coordinate the Neighborhood Preservation Program (NPP), an in-depth code enforcement activity that focuses on particular deteriorating areas. In the NPP process, Building and Safety, functioning with other departments, such as Fire, works with property owners, residents, and merchants in these neighborhoods or target areas to abate violations and to prevent potential problems from arising. And fire prevention as well as ensuring structural stability constitute important aspects of this process. The City will continue to administer the NPP as a viable tool for maintaining public safety in certain areas.

7. Water Infrastructure and Availability

In the plan review process, various City departments/divisions review proposals to ensure the inclusion of water or firefighting infrastructure, such as hydrants, and the adequacy of water pressure. The City will continue checking for these items.

8. Fire Prevention/Education Activities

The Covina Fire Department as well as the Building and Safety Division utilize various fire prevention/education methods that bolster public awareness of the issue and that basically complement inspection, monitoring, code enforcement, and other areas. These activities are believed to be quite beneficial to the community and therefore are to be maintained.

D. Hazardous Materials

1. Fire Department Inspection and Monitoring Programs

As described in this Element, the City of Covina has several industrial and commercial businesses and institutional operations that use, generate, store, and must dispose of hazardous materials. The Covina Fire Department, among its many duties, inspects, monitors, and maintains records on these entities to reduce fire dangers, to best respond to emergencies, and to assist the Los Angeles County Fire Department, with which the City contracts concerning hazardous materials oversight. Because of the disastrous impacts that a hazardous

materials accident can have on the community, it is important for the City to continue with this activity.

2. Building and Safety Inspections

The Covina Building and Safety Division conducts various structural-, occupancy-, business license-, and code enforcement-related inspections. Many of these activities involve identifying the use and storage of hazardous materials, directing applicable handlers to the City or County Fire Department and other appropriate regulatory entities, and advising operators as to particular code requirements. Building and Safety, which works closely with Fire in this area, will carry on with all current efforts.

3. Contractual Agreement With Los Angeles County

The City contracts with the Los Angeles County Fire Department, Hazardous Materials Division to administer various State-required monitoring activities and permitting processes regarding the utilization, storage, and transportation of hazardous materials as well as to respond to major above- and below-ground and transport-related hazardous materials accidents. To best protect public health and safety, the City will maintain this agreement.

4. Business Assistance Efforts

Covina administration strives to work with and maintain a harmonious relationship with the business community and various institutional uses. One facet of this effort involves disseminating to businesses and institutional operators that handle and/or generate hazardous materials or wastes general information on applicable regulations and provisions and the need to comply therewith. This activity is particularly important with respect to the Los Angeles County Hazardous Waste Management Plan (see Programs 17 and 18 below). Furthermore, if determined to be necessary, the City will supplement these efforts by informing the Chamber of Commerce, Downtown Merchants' Association, and other business organizations in the City about the subject matters and encourage the organizations to share the information with members. Business assistance efforts, which are handled by various City departments/divisions, additionally help staff to augment and clarify code enforcement situations, if necessary, and therefore serve as an all-around important tool.

5. National Pollutant Discharge Elimination System (NPDES)

Under the Federal NPDES program, which aims to prohibit polluted substances and all non-storm water discharges into the public storm drainage system, the City, working with Los Angeles County, manages local storm water/urban runoff management activities. Covina will continue implementing its NPDES proposal to comply with the Clean Water Act and other applicable laws and to prevent unwanted storm water contamination through such discharges. As indicated in this Element, the NPDES program thus addresses hazardous or environmentally injurious materials as well as grading and construction activities, certain business operations, excessive erosion, sediment build-up, and insufficient impermeable surfaces or excessive water runoff.

6. Los Angeles County Department of Public Works Household Hazardous Waste Roundups

As mentioned in this Element, many common household items, such as cleaning solutions and used motor oil, are comprised of hazardous materials and therefore warrant proper disposal. Under the quarterly Los Angeles County Department of Public Works Household Hazardous Waste Roundup program, City and County residents may bring various waste materials to a large collection facility for proper disposal. The City will continue to back this viable program.

7. General Plan and Zoning Use Standards

A key function of a general plan and accompanying, implementing zoning ordinance is to designate the appropriate distribution of land uses around a community, which is particularly relevant when considering hazardous materials. Therefore, in carrying out its land use duties, the City will attempt to place new or accommodate expanded facilities involved in the production, storage, transportation, and/or handling of hazardous materials sufficiently away from residential and other sensitive activities, as described in the body of this Element and the related policies. And in terms of the types of "potentially hazardous" uses themselves to be permitted, the City will encourage relatively low intensity/low risk industrial and commercial uses, as opposed to high intensity/high risk activities, based on reasonable development standards.

8. Hazardous Materials Transport

Covina is susceptible to hazardous materials accidents from the transport of hazardous substances through and near the community. To prevent potential disasters from occurring, the City will attempt to ensure that vehicles carrying large quantities of dangerous materials travel on officially-designated truck routes and that applicable laws of all levels of government are enforced.

9. Los Angeles County Underground Storage Tank Abatement Program

The Los Angeles County Department of Public Works, Waste Management Division conducts an underground storage tank program that monitors tank safety and, where leakage has occurred, as is the case with several properties in Covina, calls for remediation. Covina will continue to work with and support the County in administering this program to best prevent or abate underground contamination. The City will also cooperate with other levels of government involved in this area as well as in handling generalized ground water pollution created by both storage and septic tank leakage.

10. Environmental Audits

At its discretion, the City often requires various types of environmental audits pertaining to possible contamination of underground resources and structures. The community will continue with this process, which includes, if applicable, corrective measures. Covina aims to resolve these issues prior to construction.

11. Septic Tank Management

Some older properties in Covina still have underground septic tanks and related facilities, which, if not monitored/maintained, are prone to rupture or leakage and concomitant soil or ground water contamination. Therefore, where appropriate, the City requires soil testing and/or other investigative actions in the development process to detect the presence of any such facilities. And to prevent potential problems, where active septic tanks are discovered, the City calls for their testing or circumvention by site plan revision. Dormant septic tanks must be removed or correctly filled. These practices are to continue.

12. Handling of Unauthorized Dumping

The illegal dumping of toxic or other hazardous substances into the ground, water, or storm drainage system can constitute a major cause for subsurface contamination. Therefore, the City will appropriately handle persons or entities involved in this activity and, through proper channels, encourage citizens and businesses to report such dumping.

13. DigAlert Program

There are several major, high-pressure natural gas distribution lines that underlie Covina. To prevent accidents associated with digging activities, the City and local utility companies participate in and continue to support DigAlert, a regional notification center pertaining to this topic. Under State law, persons or entities digging or excavating anywhere in Covina are required to call the DigAlert center in advance, which, in turn, informs the City and any utility company or other organization that owns/controls underground lines in the vicinity about the upcoming work.

14. Maintenance of Sewers and Other Infrastructure

Covina is served by an extensive sewage disposal system that is operated and maintained by the City, Los Angeles County, and, on a contract basis, other communities. To prevent accidents or underground hazards, the City and all other applicable entities will continue to inspect and sustain this infrastructure as well as the major, high-pressure natural gas distribution lines that underlie Covina. It is noted that the gas lines typically fall under the purview of the Southern California Gas Company and the U. S. Department of Transportation, Office of Pipeline Safety.

15. Improvement of Sewers and Other Infrastructure

The community has cooperated with and will continue to support or work with Los Angeles County and/or additional entities to improve the sewage disposal and other systems, where appropriate. Such actions would resolve existing, minor deficiencies and facilitate growth.

16. Imposition of Sewage Disposal System-Related Conditions

In the development review process for particular major applications, the City imposes conditions pertaining to sewage disposal, such as requiring projects to be connected to the public sewers and to conform to current public works standards, to prevent potential underground contamination that is often associated with septic tanks. The City will therefore continue to require appropriate, applicable measures in conjunction with new and significantly expanded proposals.

17. Obligations Regarding the Los Angeles County Hazardous Waste Management Plan

Under the Los Angeles County Hazardous Waste Management Plan, of which Covina has to incorporate applicable portions thereof into the General Plan Safety Element, local governments must participate in the regional hazardous waste management process by following various measures and procedures, particularly relating to siting waste-related facilities. The intent of this effort is to address countywide waste disposal problems. Through adoption and implementation of this Element, the City has committed to follow the applicable portions of the Plan, including sections on waste management facility definitions, public participation, emergency response, and waste minimization, on an as-needed basis. In addition, the City will continue to assist the County as well as the State and Federal governments in handling general hazardous waste management planning and related matters, such as by maintaining and furnishing salient, available information on local hazardous waste generators.

18. Hazardous Waste Management Facility Siting

A key component of the Los Angeles County Hazardous Waste Management Plan requires cities to accept various types of hazardous waste management facilities and, accordingly, to list and detail the general geographical areas particularly suitable for hazardous waste facilities and the siting criteria to be used to evaluate the suitability and compatibility of such facilities with surrounding land uses and the immediate environment. Therefore, the City of Covina will carry out the geographical guidelines and siting criteria

described in the body of this Element and the related policies, such as those calling for thorough analyses of all applicable issues associated with a proposal, supplementing the criteria with appropriate project-specific conditions, requiring comprehensive risk assessments, and providing for extensive public education and review and comment opportunities. In the aggregate, this effort is essential to further community health, safety, welfare, and integrity.

E. Emergency Preparedness and Related Matters

1. Covina Emergency (Preparedness) Plan

The Covina Emergency Plan serves as the City's chief guidebook for emergency preparedness planning and for comprehensively managing any type of major emergency, such as an earthquake, a flood, or a fire. The City will maintain and, as necessary or required by law, update the Plan to best serve the community, will continue to apprise and train City employees of key Plan provisions, and will promote public awareness of the document to best serve the community.

2. Standardized Emergency Management System (SEMS)

The Standardized Emergency Management System (SEMS) is the chief inter-agency process/framework relating to emergency preparedness, management, and resolution and thus augments the Covina Emergency Plan. The City of Covina places a high priority on supporting and training all municipal employees in the SEMS to best handle potential disasters and to most efficiently deal with other entities following an emergency. This emphasis will carry on.

3. Informational Community Programs

The City will continue to support and sponsor local programs, such as Covinan's Organized for Potential Emergencies (COPE), that train volunteers to assist City staff in disseminating information on emergency procedures, particularly relating to potential earthquakes, and in promoting public awareness of the Covina Emergency Plan. These efforts are essential to successfully manage emergency preparedness planning.

4. Reconstructive Measures

Because of the substantial upset to the community that an earthquake or other major disaster could cause, it is necessary for City officials to look beyond emergency preparedness planning. Specifically, the City should develop programs and procedures, inclusive of funding sources, to promote the reconstruction and recovery of effected portions of the City following a hazardous incident.

5. Evacuation Routes

The Safety Element must establish evacuation routes in relation to major emergencies, which constitute another component of emergency preparedness planning. Covina has designated the San Bernardino Freeway and the major roads or Circulation Element-defined primary arterial, secondary arterial, and collector streets for this purpose. The City will maintain these routes.

6. Fire Protection and Paramedical Services

Fire and paramedical services in Covina are provided by the Covina Fire Department, which also provides general regulation of and monitoring of the handlers of hazardous materials and performs related duties. The Department further manages Covina's Emergency Plan functions and conducts various fire prevention efforts, including weed abatement, brush clearance, and general Code Enforcement. Covina will strive to maintain sufficient Fire personnel, equipment, suppression resources, and facilities as well as mutual aid agreements with surrounding jurisdictions to best respond to disasters, emergencies, and everyday public safety-related service requests, to administer its various programs, and to fulfill its many various obligations.

7. Contractual Agreement With Los Angeles County

The City contracts with the Los Angeles County Fire Department, Hazardous Materials Division to administer various State-required monitoring activities and permitting processes regarding the utilization, storage, and transportation of hazardous materials as well as to respond to major above- and below-ground and transport-related hazardous materials accidents. To best protect public health and safety, the City will maintain and, if appropriate, modify this agreement.

8. Maintaining Water Pressure Flow

Adequate water pressure flow in a community is essential for ensuring sufficient firefighting capabilities. The community will maintain sufficient water pressure and flow capacities citywide, monitor conditions, and, where necessary, enhance the water distribution system.

9. Law Enforcement Service

The Covina Police Department provides law enforcement for the community, which ranges from responding to disasters and emergencies to everyday public safety-related service requests. In addition, the Department manages the City's emergency communications systems and conducts various viable crime prevention and control programs, such as Neighborhood Watch, Citizens' Volunteer Patrol, and Drug Abuse Resistance Education (DARE). The City will strive to maintain sufficient police-related personnel, equipment, resources, facilities, and mutual aid agreements with surrounding jurisdictions to fulfill its many, varied duties. Where necessary, operational and/or procedural improvements will be made.

10. Contractual Agreements with Los Angeles County

The City contracts with Los Angeles County's Sheriff's Department and Animal Care and Control Department to provide, respectively, long-term booking facilities and animal control administration. To best protect public health and safety, the City will maintain and, if appropriate, modify these agreements.

11. Building and Safety Division Service

In conducting its various structural-, occupancy-, business license-, and code enforcement-related inspections, Building and Safety Division staff frequently work with and assist Fire and Police personnel in exercising their duties. Furthermore, the Building and Safety Division plays a key role in carrying out the Covina Emergency Plan. Therefore, it is essential for the City to strive to maintain sufficient applicable personnel, equipment, and resources to fulfill the above tasks, and, where appropriate, perform operational and/or procedural improvements.

12. Public and Private Street Design Standards

Through implementation of the Covina Subdivision Ordinance, Zoning Ordinance, and Design Guidelines, the City applies various public and private street design standards to facilitate general circulation and to ensure that hazardous incidents and emergencies can be quickly and safely accessed by emergency vehicles. The City will maintain and enforce these provisions, the foundations of which are established in the Circulation Element, and, to ensure continued viability thereof, will revise the standards to best serve Covina.

13. Site Design Standards

Under the Zoning Ordinance, Design Guidelines, Uniform Building Code, Uniform Fire Code, and applicable portions of this General Plan, the City applies many essential site design standards for public and private driveways, parking aisles, vertical clearances, vehicular clearances, vehicular turnarounds, driveway approaches,

the number and locations of site access points, emergency parking and unloading, building setbacks, clearances around structures, and other elements. Covina will maintain and, through Fire, Building and Safety, Planning, and/or Police Department/Division efforts, enforce these provisions to ensure that they continue to fulfill their emergency response, public safety, and other functions. Where appropriate for health, safety, functionality, and/or aesthetic enhancement purposes, the site design standards will be amended. In addition, as indicated previously, the City will attempt to ensure that developments or uses of which the State has permitting authority over, including public schools, hospitals, and mobile home parks, meet these standards and provisions to the greatest extent possible.

F. Inter-Topic General Matters

1. Zoning Ordinance Revision to Achieve General Plan Consistency

As required by State planning law, the Zoning text and Map will be revised to conform to the new General Plan land use distribution, policy orientation, program framework, building intensity provisions and limits, and development standards to streamline and clarify key portions of the document and to incorporate applicable new State requirements, such as pertaining to hazardous waste management facilities.

2. Consistency Between General Plan and Other Plans/Documents

City departments and the Redevelopment Agency administer various plans and measures that directly or indirectly relate to safety issues. Where necessary, the Planning Division will ensure consistency between the revised Safety Element and these other germane plans/documents, which include, but are not limited to, the Redevelopment Project Area Plans, the Emergency Plan, the Park System Master Plan, the Subdivision Ordinance, and the Capital Improvement Program, to the greatest extent possible.

3. Site Plan Review Process

This part of the Zoning Ordinance constitutes the process by which private development applications and certain public proposals are reviewed and analyzed and, thus, by which General Plan, Zoning, Design Guidelines, and related provisions pertaining to site planning, land use impacts, grading, site runoff, erosion minimization, and landscaping are applied. Site Plan Review also serves as a mechanism for determining General Plan/Zoning consistency and for routing projects to other City departments/divisions for study and comment on such issues as structural adequacy, soils stability, infrastructure accommodation, fire suppression, and emergency service capabilities. When reviewing applications, the City Planning Division may impose reasonable conditions to ensure conformance with respect to the General Plan, Zoning Ordinance, Design Guidelines, and other documents. This process shall continue.

4. Environmental Impact Review Process

The California Environmental Quality Act (CEQA) requires, among other things, examination of environmental, biological, physical, land use, and safety impacts as well as service provision when reviewing generally major use or development applications, hazardous waste management facilities, general plan amendments, zone changes, and/or related matters. The analysis occurs during the Site Plan Review process. For applicable projects, typical areas of concern pertain to site geology and grading, proximity to any active earthquake fault(s), potential erosion, storm water runoff and/or flooding, underground contamination, public safety, species degradation, vehicular traffic, noise, and/or land use compatibility. The City will continue to follow all applicable CEQA provisions in its planning activities to ensure fruition of the safety-related goal and the furthering of applicable policies. Thus, in some cases, projects will have to be changed or mitigated.

5. Plan Check Process

Under this process, which is administered by the Building and Safety Division and the Fire Department and typically proceeds a Site Plan Review, various provisions and practices of the Uniform Building Code (UBC) and related Codes and the Uniform Fire Code (UFC) are applied to development proposals. These matters pertain to a range of areas, such as building construction; seismic adequacy and retrofitting; electrical, plumbing, and related systems; grading; soils/geologic stability; on-site drainage; erosion control; handicapped accessibility; septic tank management or abatement; underground contamination identification and resolution; emergency accessibility; and fire detection and suppression systems. Concerning many of the areas that fall within their purviews, Building and/or Fire often require supplemental project-specific studies/evaluations to verify particular conditions and/or to ensure code compliance. Covina will continue with all Plan Check activities.

6. Engineering Review Processes

During Site Plan Review, as the Planning Division addresses its many standards, guidelines, and policies, the Engineering Division of the Public Works Department checks projects with respect to impacts on public infrastructure, including streets; flood control systems; water distribution apparatuses; sewage disposal networks; street lights; and fire hydrants. Many of these provisions emanate from the Covina Subdivision Ordinance and related sections of the Covina Municipal Code. Where necessary, Engineering imposes and passes on to Planning reasonable conditions to ensure conformance with all applicable public works standards and to protect public health and safety. The Division also manages various permitting activities relating to actual infrastructure construction/improvement, both in conjunction with site-specific developments and major public-sponsored enhancement efforts. These public-involved activities are generally referred to as Capital Improvement Projects, are undertaken to resolve remaining minor deficiencies or identified problems, and are often done in conjunction with Los Angeles County. Furthermore, the Division requests permits for all infrastructure maintenance and right-of-way digging and excavating work, such as water or sewer line repair, to prevent hazards pertaining to the possible damage of high-pressure natural gas distribution lines that underlie Covina. The City will carry on with this area.

7. Inspection and Monitoring Activities

The Covina Building and Safety Division and the Fire Department further conduct various inspection and monitoring activities that relate to structural adequacy, occupancy, hazardous materials, and fire detection and suppression and that are thus essential in maintaining community health and safety. Therefore, these activities will continue. Building and Safety inspections take place during building construction or alteration, building system modification (e.g., upgrades to an electrical system), business license issuance, code enforcement, and other matters. The Fire Department, moreover, inspects properties of all types and uses to ensure adherence to various Department codes and standards, including emergency accessibility, fire detection and suppression, hazardous materials, and weed or brush growth. Regarding hazardous materials, the Department further monitors and maintains records on hazardous materials handlers to best respond to emergencies and to assist Los Angeles County, of which the City contracts with, to provide the primary support in this area. Many of the inspections between Building and Safety and Fire are thus closely coordinated.

8. Code Enforcement

In situations where Zoning-, Site Plan Review-, Building and Safety-, and/or Fire-related Code requirements are not met, particularly when there is a major threat to public health, safety, and welfare, the City attempts to abate or at least mitigate the violation(s). Code violations range from excessive weed growth to structural inadequacy to illegal discharges, which, if left unchecked, in the aggregate, not only could jeopardize individual health and safety but could diminish overall community image, appearance, character, social stability, and economic vitality, all of which directly or indirectly relate to subjects discussed in this Element. To ensure that the General Plan safety-related goal and policies are furthered, the City will continue with its existing,

and, where possible, expand Code Enforcement and related activities. In general, Covina will attempt to abate first the most serious violations or those nuisances that constitute the greatest threat to public health, safety, and welfare.

9. Reconciling Safety Matters

This Element is one chapter of a comprehensive General Plan that addresses various other topics, including land use, circulation, housing, and natural resources and open space. Under State law, all Elements must be consistent with one another in preparation and revision (see Chapter X), a requirement that the City has met and will continue to achieve. However, in the course of implementing a general plan, proposals that strongly fulfill plan goals and policies in one area may be inconsistent with another chapter. For example, the aggressive retrofitting of older, unreinforced masonry buildings in the downtown area and elsewhere could possibly interfere with important community goals, such as economic development, commercial, revitalization, and neighborhood preservation. Therefore, in implementing the Element, when conflicts arise, the City will endeavor to reconcile, to the greatest degree possible, the applicable safety and non-safety issues in an appropriate, acceptable manner.

10. Inter-government Coordination

To most fairly and best deal with safety-related development issues at or near Covina's border areas and with infrastructure matters, such as the construction, maintenance, and improvement of street, flood control, water distribution, fire detection and suppression, and sewage disposal systems, the City will continue routing various topical plans and documents to and reviewing development and public proposals from neighboring communities, Los Angeles County, and, if applicable, the State and Federal governments. When necessary, Covina will also be in contact with other governmental entities and/or relevant groups. This activity will, among other things, acknowledge City intentions, desires, and/or concerns over particular developments, proposals, and related actions in an atmosphere of respect and cooperation. Furthermore, Covina will continue to be in contact with all applicable governmental entities on additional important issues like emergency preparedness, emergency communication and coordination, water runoff and management, underground contamination and abatement, general hazardous materials disclosure laws administration, hazardous waste management planning, and evacuation route and/or circulation coordination.

11. Intra-government Coordination

In carrying out the policies, activities, and programs/measures of the Safety Element, the Planning Division will work with other City departments/divisions, particularly the Building and Safety Division, the Fire Department, and the Police Department, to best approach and handle or abate various issues and problems. These matters include, but are not limited to, the imposition of infrastructure-related conditions, based on appropriate design and site planning standards, as well as general safety-type requirements, in the development process; the overall construction, maintenance, and improvement of infrastructure; emergency preparedness planning and post-disaster reconstruction; evacuation routes; various types of inspections and code enforcement activities; water availability and pressure flow adequacy; and everyday public safety activities. In light of the important and interrelated nature of all safety-related matters, this holistic orientation is essential and will best implement General Plan goals, objectives (where applicable), and policies.

12. Public Involvement

In compliance with State planning law, the City will endeavor to promote the importance of the General Plan to the public, businesses, institutional uses, local service groups, developers, Covina employees, and additional interested parties and groups at the public counter, on the phone, at meetings, at City-sponsored events, and at other available opportunities through information handouts, brochures, press releases, and any other mediums deemed appropriate. In terms of safety-related matters warranting dissemination, the City will focus on earthquake awareness; Walnut Creek flooding management; fire prevention methods; crime prevention and

control measures; business and institutional use-related hazardous materials handling; potential hazardous waste management facility education and comment solicitation; household hazardous waste disposal; underground contamination prevention; digging and excavation preparation; emergency preparedness planning, particularly with respect to the Covina Emergency Plan; and any other areas determined to be important. When General Plan updates are done, persons, groups, and organizations shall be notified through State-defined public hearings and, if appropriate, by way of other means. Frequent public education is an important ingredient in successful general plan implementation.

13. General Plan Review and Revisions

State planning law requires the City to annually report to the Planning Commission and City Council on progress in General Plan implementation. The report must then be filed with the State Office of Planning and Research (OPR). The intent of this process is to ensure the viability, effectiveness, and coordination of adopted General Plan goals, objectives (where applicable), policies, and programs/implementation measures, which impact not only the community but, technically, the State as well. The City of Covina will continue with this activity and, when an amendment to the revised General Plan is made, will review the change in relation to the entire Plan to ensure inter-Element consistency. Moreover, appropriate, occasional monitoring of the General Plan components shall occur, particularly with respect to potential State or County changes in emergency preparedness planning and post-disaster communications or procedures; emergency service-related contractual agreements; hazardous materials handling; hazardous waste management facility planning/siting; Bonelli Park storm water management (which affects Walnut Creek, downstream); or possible seismic, geologic, or other underground or environmental discoveries. In addition, no later than five years following adoption of the last phase of the General Plan update, a detailed analysis of the entire Plan will be conducted. Finally, in recognition of the importance of safety planning, it is noted that State law also calls for each local government to consult with the California Department of Conservation, Division of Mines and Geology and the Office of Emergency Services prior to preparing or revising its safety element to include available element-related information. And at least forty-five days before the date of amendment of the element, a city is required to submit to the Department of Conservation a draft of the document for review and comment. (Remarks by the State are advisory, however.) The City of Covina has followed and will continue to pursue these procedures as well.

14. Safety Element Implementation

In accordance with the State planning law/Government Code criteria, the City will implement the Safety Element in a manner compatible to the implementation/administration of all other General Plan Elements, the Covina Emergency Plan, applicable City and Redevelopment Agency documents and proposals, and community goals and, in a fashion consistent with the intent of this chapter, monitor all facets of Element implementation, conduct necessary tasks so as to best prepare for future versions, annually report its findings to the Planning Commission and City Council, and, when legally required, necessary, and/or in the public interest, update the Element.

15. Maintenance of City Departments/Divisions Responsible for Safety Matters

In order to carry out its various safety responsibilities and obligations, the City will maintain departments/divisions to, among other things, appropriately administer the General Plan, Zoning Ordinance, Design Guidelines, Subdivision Ordinance, Uniform Building and related Codes, Uniform Fire Code, Los Angeles County Hazardous Waste Management Plan, Covina Emergency Plan, and other documents. In addition, Covina will maintain resources to administer and monitor various accompanying processes, programs, and activities, such as Site Plan Review, Environmental Impact Review, Plan Check, Building Permit Issuance, Engineering Review, Building and Safety or Fire Inspection, Code Enforcement, Neighborhood Preservation, Emergency Preparedness Planning, and incident-specific and everyday Public Safety Services, and to disseminate applicable information and provide assistance to the public.



PICTURE 24. PLAQUE AT COVINA PUBLIC SAFETY COMPLEX. THE COMPLEX HAS BEEN A VITAL ASSET TO THE COMMUNITY FOR MANY YEARS.

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X. RELATION TO AND CONSISTENCY WITH OTHER GENERAL PLAN ELEMENTS

This Safety chapter of the General Plan is most closely related to the Land Use Element, the central chapter that focuses on the long-term general distribution/location and development intensity of residential, commercial, industrial, open space, and other uses, as well as the Circulation and Housing Elements. There is a close tie to the Land Use chapter because, under State law, as implied above, the proposed land use development scenario or Land Use Map must reflect the community's identified potential hazards and corresponding mitigation or abatement measures. For example, to best handle and resolve possible landslides or mudslides and flooding in Covina Hills, most land uses in the area are designated "low density residential" and (pertaining to Walnut Creek) "park" or the equivalent. And regarding potential hazardous materials accidents on commercial, industrial, and institutional properties, the Land Use Map establishes appropriate use relationships and development standards to adequately protect/buffer residential districts. Concerning the Safety Element's connection to the Circulation chapter, which focuses on circulation and transportation systems, such as streets, and the movement of people and goods, the Safety Element must designate evacuation routes to be used in a major disaster. These evacuation routes are typically established based on the street hierarchy of the Circulation Element.

The Housing Element, which this chapter also bears a strong relationship to, among other things, serves as a tool for addressing housing needs and providing adequate sites for new housing and standards for the housing stock. There is a correlation to the Housing Element because the City places a high priority on maintaining the safety of all Covina dwelling units in terms of structural and mechanical adequacy, fire prevention, emergency accessibility, and other factors. And a key basis for implementing and enforcing the applicable policies, standards, and programs is this Safety Element. The Element is also most directly related to the Natural Resources and Open Space chapter.

It is also important for the Safety Element to be consistent with other chapters, and vice versa, in terms of everything from supporting data and information to policy orientation to implementation. This necessity for overall congruence is underscored by State law as well. Section 65300.5 of the California Government Code states that "the Legislature intends that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency."

The City of Covina has met this consistency requirement. Because the City has updated all General Plan Elements simultaneously, one common data and information base, with the same community input, has been used for the entire project. This means that the goals, objectives (if applicable), and policies for all Elements will have been (when all Elements are completed) prepared based on the same foundation and according to the same or similar methodology, thus ensuring consistency. Also, and perhaps most importantly, revising all General Plan Elements together guarantees inter-Element program conformity because, according to planning law, implementation measures or circulation/infrastructure, land use, and other plans must be developed upon the existing conditions/data and issues plus the stated goals, objectives (if applicable), and policies in question. In sum, the nature of the Covina General Plan update process has greatly facilitated consistency among all Elements. During Safety Element preparation, the topical goal and policies and programs/implementation measures have been cross-checked with those in other Elements, particularly Land Use, Circulation, and Housing, the other key General Plan chapters, to maintain and verify this necessary congruence.

The above-noted inter-Element consistency will also ensure that implementation of the Safety and each and every Element will realize the same results. Furthermore, if the Safety Element is amended in the future, the City will confirm that the change is consistent with other chapters and/or modify the accompanying Elements to maintain overall conformity. Moreover, as stated in Program "F13," the City will monitor all major aspects of Safety Element implementation through decision-making activities and other processes to verify this consistency. In other words, the City regards all Elements as having equal legal status and is therefore committed to appropriate Safety chapter implementation, particularly with respect to inter-Element unity and coherence.

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XI. CITIZEN PARTICIPATION IN SAFETY ELEMENT FORMATION

State planning law (Government Code Section 65351) requires local governments, during the amendment of a general plan, to "provide opportunities for the involvement of citizens, public agencies, public utility companies, and civic, education, and other community groups, through public hearings and any other means the city or county deems appropriate." In fulfilling its citizen participation obligations and in identifying issues for Safety as well as for all other Elements, the City has:

1. Prepared and distributed a "short" questionnaire to all Covina households.
2. Prepared and distributed a "long" questionnaire on a random basis to approximately 10% of all Covina area households.
3. Conducted "town hall meetings" and public forums.
4. Prepared a cable television commercial on the General Plan update and public forums and had a staff member appear on the local cable television station to discuss the General Plan update process and answer public questions.
5. Prepared and distributed several General Plan update flyers at City Hall and at various public functions. Also prepared press releases and articles in various newspapers and City publications on the update process and on the public forums.
6. Received numerous comments from the public (in this case regarding safety matters) on the phone, at the counter, and in the course of site-specific project reviews.
7. Organized, met with, and elicited the views of a subcommittee of Covina's General Plan Update Committee that addressed safety and related issues.
8. Met with and elicited the views of City of Covina employees who deal with safety-related matters.
9. Received numerous comments from representatives of other public or quasi-public agencies, such as school districts, transit agencies, utility companies, regional organizations, and adjacent municipalities as well as local civic organizations.
10. Reviewed and considered the Covina Emergency (preparedness) Plan, an important, applicable document that had been prepared based on extensive community outreach.

The public comments elicited from measures 1 through 10 have been carefully studied by the City and have been incorporated into the body of data and information that was used in formulating this Element's identification and discussion of potential hazards facing Covina and related local matters and, therefore, in developing the applicable goal, policies, and programs/implementation measures as well. All material and information and specific input received pertaining to these items are on file in the City Planning Division. Thus, Covina has made a reasonable effort to reach out to the important segments, views, and organizations in drafting the Safety Element.

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XII. MONITORING SAFETY ELEMENT IMPLEMENTATION

In order for the General Plan Safety Element's goal and policies and programs/implementation measures to be realized, or to ensure that the Element serves to prevent death, injuries, property damage, and other problems associated with a disaster, the Element must be implemented as proposed through effective decision-making and actions. Also, to ensure that implementation is achieved to the maximum degree possible, consistent Safety Element monitoring must also occur. This subject is addressed by Section 65400(b) of the Government Code, which states that following general plan adoption or revision, a city shall "provide an annual report to the legislative body on the status of the plan and progress in its implementation . . ." Because the Safety Element is an important chapter and is, as previously stated, closely tied to the central Land Use Element, monitoring is particularly relevant here.

The City of Covina will fulfill its obligation to monitor implementation by preparing the State-required report for the Planning Commission and for the City Council. This procedure, in fact, has been incorporated into the Safety Element implementation framework as Program "F13," which calls for the monitoring of all aspects of the implementation effort, including, as stated in Section X, assurances that inter-Element consistency is achieved. One such facet of the monitoring process is ensuring that any underutilized policies or programs are adequately handled. Also, any identified problems or deficiencies will be carefully studied and appropriately managed to ensure that desired Safety Element results are met. The City believes that many potential problems should be avoided by maintaining a commitment to appropriate Element implementation through the decision-making process. Besides, then, furthering the established safety-related goal, this approach will facilitate preparing General Plan amendments.

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