
CHAPTER 4

Required Elements of the General Plan

All statutory references are to the California Government Code unless otherwise noted.

A general plan is required to address the specified provisions of each of the seven mandated elements listed in §65302—land use, circulation, housing, conservation, open space, noise, and safety—to the extent that the provisions are locally relevant. The purpose of this chapter is to outline the content of each element as required by statute. These are statewide guidelines, so they offer a broad overview of what a general plan might contain. The order in which the elements are presented matches the order in which they are listed in §65302. This should not be misconstrued as the order of importance or the order in which a jurisdiction should prepare elements. All elements have equal weight under the law and can be prepared in any order or even combined, as is discussed further in Chapter 5.

The discussion of each element includes the following sections: an overview, court and attorney general interpretations, relevant issues, ideas for data and analysis, and ideas for development policies. The “Relevant Issues” section discusses the required contents of each element and may include recommendations on topics related to those issues. The housing element guidelines expand on this basic format due to the complex statutory requirements of this particular element. For both the housing element and the open space element guidelines, there is a discussion of implementation measures. Despite the fact that statute requires a discussion of implementation only in these two elements, each planning agency has a duty to implement the entire general plan (§65103 and §65400). The discussion of each element concludes with a section on technical assistance.

RELATIONSHIPS AMONG ELEMENTS AND ISSUES

Each of the seven mandatory elements is presented separately in this chapter, however there is no requirement that a plan consist of seven separate elements. A jurisdiction proposing a comprehensive or multi-element revision of its general plan may choose to consolidate elements so long as all of the relevant statutory issues are addressed (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692). When

revising a single element, local agencies should examine and revise all of the other elements, including optional elements, as necessary to avoid internal inconsistencies or conflicts. This chapter provides cross-references between elements to help identify where statutory requirements overlap and consolidation may occur.

The statutory requirements for the elements overlap and intertwine. For example, conservation of open space and agricultural land are topics under the open space, conservation, and land use elements. Similarly, the noise element is directly related to both the land use and circulation elements. Most general plans mix and consolidate some or all of their elements. The important thing is that the elements and issues form an integrated, internally consistent plan of which all parts are equally weighed in their application (*Sierra Club v. Board of Supervisors of Kern County* (1981) 126 Cal.App.3d 698). A concise general plan avoids repetitive discussions of topics by consolidating the statutory requirements into a few functional elements. In general plans, conciseness is a virtue.

General plan elements and issues interrelate functionally. For example, consideration given in the conservation element to the vegetation that supports an endangered wildlife species also involves analyzing topography, weather, fire hazards, availability of water, and density of development in several other elements.

Key to Abbreviations in Chapter 4

The following abbreviations are used in this chapter to denote other elements that might also address a particular issue:

L: Land Use
Cl: Circulation
H: Housing
CO: Conservation
O: Open Space
N: Noise
S: Safety

MAP or **DIA** indicates information that can be shown on one or more maps or diagrams.

Thus, the preparation of a general plan must be approached on multiple levels and from an interdisciplinary point of view.

A general plan should be written as an integrated statement of policies. A basic understanding of the structural and functional interrelationships between issues and elements can help avoid the problems associated with treating issues in isolation, as well as focus planning efforts on the key issues. The table at right illustrates the relationships among the seven mandatory elements and the required topics of the general plan. Remember that not every general plan will address these issues to the same extent or in the same manner. Cities and counties should design their general plan formats to suit the topographic, geologic, climatologic, political, socioeconomic, cultural, and historical diversities that exist within their communities.

LAND USE ELEMENT

The land use element functions as a guide to planners, the general public, and decision-makers as to the ultimate pattern of development for the city or county at build-out. The land use element has perhaps the broadest scope of the seven mandatory elements. In theory, it plays a central role in correlating all land use issues into a set of coherent development policies. Its objectives, policies, and programs relate directly to the other elements. In practice, it is the most visible and often-used element in the local general plan. Although all general plan elements carry equal weight, the land use element is often perceived as being most representative of “the general plan.”

The land use element has a pivotal role in zoning, subdivision, and public works decisions. The element’s objectives and policies provide a long-range context for those short-term actions.

Court and Attorney General Interpretations

The following legal interpretations have addressed the land use element with regard to the land use diagram, population density, building intensity, the designation of solid waste disposal sites and its relationship to the circulation and noise elements.

GENERAL PLAN ISSUES AND ELEMENTS

	ELEMENT						
	Land Use	Circulation	Housing	Conservation	Open Space	Noise	Safety
Agriculture	X			Z	X		
Air Quality					X		
Airports	Z	Z			Z	X	
Density	X		X				
Education	X						
Fire					X		X
Fisheries				Z	X		
Flooding	X			X	X		X
Forests/Timber	X			X	X		
Housing	Z		X				
Industrial Uses	X					X	
Land Reclamation				X			
Land Use	X	X	Z	X	Z	X	Z
Minerals				X	X		
Noise Contours	Z					X	
Public Buildings	X						
Railways & Yards		Z				X	
Recreation	X				X		
Scenic Resources	X				X		
Seismic Hazards					X		X
Soil Conservation				X	X		
Soil Instability							X
Transportation Routes		X			X ₁	X	X
Transportation Terminals		X					
Utilities/Easements		X			X		
Waste Facilities	X		X ₂				
Water Quality				X	X		
Water Supply	Z		X ₂	X	X		X
Watersheds				X	X		
Waterways/Water Bodies				X	X		
Wildlife				X	X		

TOPIC/ISSUE AREA

- X** Indicates a topic identified in statute
- X₁** Trail systems
- X₂** Factors affecting adequate inventory of sites
- Z** Indicates a topic closely related to statutory requirements

The land use diagram

Attorney General Opinion No. 83-804, March 7, 1984 addresses the required level of specificity of the land use diagram. In answer to the question of whether a parcel specific map is required for the land use element of a general plan, the Attorney General reasoned that the detail necessary for a parcel specific map may be developed at a later stage in the land use process (through specific plans, zoning ordinances and subdivision maps); therefore, a parcel specific map is not required, only a diagram of general locations illustrating the policies of the plan.

The California Supreme Court, in *United Outdoor Advertising Co. v. Business, Transportation and Housing Agency* (1988) 44 Cal.3d 242, briefly discussed the degree of precision which can be expected of a general plan. The high court held that when San Bernardino County used a circle to distinguish the community of Baker as a “Desert Special Service Center” the county did not delineate a well-defined geographic area. According to the opinion of the court, “the circle on the general plan no more represents the precise boundaries of a present or future commercial area than the dot or square on a map of California represents the exact size and shape of Baker or any other community.”

The concept of the diagram as a general guide to land use distribution rather than a parcel specific map also figured in the case of *Las Virgenes Homeowners Association v. Los Angeles County* (1986) 177 Cal.App.3d 310. There, the court of appeal upheld the adequacy of a county plan which contained a generalized land use map and which delegated specific land use interpretations to community plans. See Chapter 1 for a discussion of consistency between the diagrams and the plan text.

Population density

Camp v. County of Mendocino (1981) 123 Cal.App.3d 334 established that a general plan must contain standards for population density. It did not, however, define such standards. The court in *Twain Harte Homeowners Association v. Tuolumne County* (1982) 138 Cal.App.3d 664 defined population density as the “numbers of people in a given area and not the dwelling units per acre, unless the basis for correlation between the measure of dwelling units per acre and numbers of people is set forth explicitly in the plan.” Quantifiable standards of population density must be provided for each of the land use categories contained in the plan.

Population density standards need not be restricted solely to land use designations with residential devel-

opment potential. As the court stated in *Twain Harte*: “it would not be unreasonable to interpret the term “population density” as relating not only to residential density, but also to uses of nonresidential land categories and as requiring an analysis of use patterns for all categories . . . it appears sensible to allow local governments to determine whether the statement of population standards is to be tied to residency or, more ambitiously, to the daily usage [sic] estimates for each land classification.”

Although applied differently from one jurisdiction to another, population density can best be expressed as the relationship between two factors: the number of dwellings per acre and the number of residents per dwelling. Current estimates of the average number of persons per household are available from the Department of Finance’s Demographic Research and Census Data Center (www.dof.ca.gov).

Building intensity

The *Camp* decision also held that an adequate general plan must contain standards for building intensity. Again, the *Twain Harte* court has provided the most complete interpretation of building intensity available to date. These are its major points: intensity should be defined for each of the various land use categories in the plan; general use captions such as “neighborhood commercial” and “service industrial” are insufficient measures of intensity by themselves; and, building intensity is not synonymous with population density. Intensity will be dependent upon the local plan’s context and may be based upon a combination of variables such as maximum dwelling units per acre, height and size limitations, and use restrictions. Unfortunately, the court stopped short of defining what are proper measures of building intensity.

Local general plans must contain quantifiable standards of building intensity for each land use designation. These standards should define the most intensive use that will be allowed under each designation. While the land use designation identifies the type of allowable uses, the building intensity standard will define the concentration of use. Intensity standards can include provisions for flexibility such as density bonuses, cluster zoning, planned unit developments, and the like.

OPR recommends that each intensity standard include these variables: (1) permitted lands uses or building types; and (2) concentration of use. Permitted uses and building types is a qualitative measure of the uses that will be allowable in each land use designation. The concentration of use can be defined by one or more quantitative measures that relate directly to the amount

of physical development that will be allowed. Maximum dwelling units per acre is a good residential standard. Floor area ratio (the ratio of building floor area to the total site area) is a useful measure of commercial and industrial intensity. The dual standard of maximum lot coverage and maximum building height is suitable for agricultural, open-space, and recreational designations where development is being limited. On the other hand, lot size, which has been widely used for agricultural and open-space designations, is an inadequate standard of building intensity because although it regulates lot area, it does not quantify the allowable concentration of development on each lot.

Solid waste sites

Concerned Citizens of Calaveras County v. Board of Supervisors (1985) 166 Cal.App.3d 90, held that the general plan is not required to identify existing solid waste disposal sites. However, because the purpose of the land use element is to designate “the proposed general distribution and general location and extent” of land uses, the element must identify future sites.

The identification of future solid waste disposal sites is particularly important when preparing or implementing Integrated Waste Management Plans (IWMPs). Public Resources Code §41720 now requires that the IWMP’s countywide siting element, including any areas identified for the location of a new or expanded solid waste transformation or disposal facility, be consistent with the applicable general plan.

Circulation

The *Twain Harte* and *Concerned Citizens* decisions also discussed the close relationship between the land use and circulation elements. Pursuant to the decisions of the *Concerned Citizens*, *Twain Harte*, and *Camp v. Mendocino* courts, the general plan must reflect both the anticipated level of land development (represented in the land use el-

ement) and the road system necessary to serve that level (represented in the circulation element). The road system proposed in the circulation element must be “closely, systematically, and reciprocally related to the land use element of the plan” (*Concerned Citizens, supra, at p.100*).

Noise

According to §65302(f), the noise element is to be used as “a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.” When the noise element is inadequate, the land use element may be invalid, as in the *Camp* case.

Relevant Issues

This discussion offers a general guide to the contents of the land use element. Note that while the focus is on the minimum requirements for an adequate land use element, an effective general plan will focus on those issues of greatest relevance to the community.

The purpose of the land use element is to designate “the proposed general distribution and general location and extent of uses of the land.” The land use element should focus on the future growth and physical development of the community and planning area.

A land use element should contain a sufficient number of land use categories to conveniently classify the various land uses identified by the plan. Land use categories should be descriptive enough to distinguish between levels of intensity and allowable uses. The element should include categories reflecting existing land uses as well as projected development.

There need not be an equal number of land use designations and zoning classifications. In many cases, there may be more than one zone that would be consistent with each land use designation.

The land use element should, consistent with §65302(a), address each of the following issues to the extent that it is relevant:

- ◆ Distribution of housing, business, and industry
- ◆ Distribution of open space, including agricultural land
- ◆ Distribution of mineral resources and provisions for their continued availability
- ◆ Distribution of recreation facilities and opportunities
- ◆ Location of educational facilities
- ◆ Location of public buildings and grounds
- ◆ Location of future solid and liquid waste facilities
- ◆ Identification of areas subject to flooding
- ◆ Identification of existing Timberland Preserve Zone lands
- ◆ Other categories of public and private uses of land.

Ideas for Data and Analysis

The following is a list of topics that should be considered during the preparation of the general plan and, if relevant, included in the land use element. These subjects are based upon a close reading of the statutes and case law. When the information collected for the land use element overlaps that needed for other elements, the related element has been noted in parenthesis.

Housing, business, and industry

- ◆ Examine current and future population data. (H)
 - Identify demographic trends (age, income, persons per household, etc.).
 - Identify concentrations of low-income and minority populations.
- ◆ Inventory existing residential, commercial, and industrial land use in the planning area. (DIA) (CI)
- ◆ Assess local housing needs based upon projected community and regional growth trends, including the regional housing need allocation plan. (H)
- ◆ Project needs for specific land uses, including residential, commercial, and industrial development, based upon projections of future population and economic conditions. (H)
- ◆ Assess the capacity and availability of infrastructure necessary to support proposed land uses. (H)
- ◆ Assess the general efficiency of movement of people, goods, and services. (CI)
- ◆ Inventory potential transit-oriented development sites located near transit routes (within 1/4 to 1/2 mile). (L, H)
 - Assess appropriate density for the transit station community.
 - Assess appropriate residential/commercial mix.

Open space

- ◆ Inventory open-space lands, including open space for conservation and agricultural, forest, grazing, and recreational lands. (DIA) (CO, O)
- ◆ Assess local open-space needs based upon community goals and objectives, the existing open-space/population ratio, and the anticipated population growth. (O)
- ◆ Delineate the boundaries of watersheds, aquifer recharge areas, and floodplains and the depth of groundwater basins. (DIA) (CO, O, S)

- ◆ Delineate the boundaries and descriptions of unique water resources (e.g., saltwater and freshwater marshes, wetlands, riparian corridors, lakes, wild rivers and streams, etc.). (CO)
- ◆ Describe the species, distribution, and population of wildlife and fish, including rare and endangered species. Normally, this will coincide with a habitat inventory that includes the location and type of bodies of water; the type, location, and extent of plants, identified according to the Department of Fish and Game's classification system; and identification of key wildlife habitats, including winter range and migration routes for deer, wintering and nesting grounds for waterfowl and other birds, salmon spawning areas, and habitats of rare or endangered species. (DIA) (CO, O)
- ◆ Describe species of rare, threatened, and endangered plants, their distribution, and rate of occurrence. (DIA) (CO, O)

Agricultural resources, including grazing land

- ◆ Identify the location, amount, and ownership patterns of land in agricultural production and suitable for agricultural production. (DIA) (O)
- ◆ Include location, acreage, and extent of classification of soils (including identification of prime and other farmland classifications) in the planning area by Land Capability Classification. (DIA) (CO)
- ◆ Generally describe agricultural production in the planning area by crop type. (O)
- ◆ Identify land within the boundaries of Agricultural Preserves and land subject to Williamson Act contracts and Farmland Security Zone contracts or in other land conservation programs. (DIA) (CO)

Mineral resources

- ◆ Identify the type, location, quality, and extent of mineral resources, including oil and gas. (DIA) (CO, O)
- ◆ Inventory the location of significant mineral resource areas classified and designated by the State Mining and Geology Board pursuant to the Surface Mining and Reclamation Act (California Code of Regulations §2762(a)). (DIA) (CO, O)

Other natural resources

- ◆ Inventory areas available for the management or utilization of natural resources, such as wind energy generation, hydroelectric power, geothermal power, and large-scale solar power.

Assessment of the demand for public and private parks and recreational facilities and inventory of areas suitable for parks and recreational purposes

- ◆ Describe the type, location, and size of existing public and private parks and recreational facilities. (DIA)
- ◆ Assess present and future demands for parks and recreational facilities, including trails, river and lake access, and per capita supply of parks (acres per thousand inhabitants).
 - Identify underserved areas.
- ◆ Identify future park and recreational sites. (DIA)
- ◆ Review federal, state, and local plans for the acquisition and improvement of public parks. (DIA)
- ◆ Inventory areas of outstanding scenic beauty and scenic vistas. (DIA) (O)
- ◆ Identify programs for protecting, conserving, and acquiring open-space lands. (O, CO)

Enjoyment of scenic beauty

- ◆ Inventory scenic viewsheds and points of interest. (O)
- ◆ Define community scenic values.
- ◆ Identify programs for protecting and promoting community aesthetics. (O)
- ◆ Identify scenic highways and byways. (O)

Education

- ◆ Inventory existing schools and school facilities. (DIA)
- ◆ Assess the adequacy of school facilities and the need, if any, for additional facilities based upon existing and projected numbers of school-age children. The projections should correlate with projected residential development.
- ◆ Identify suitable locations for new school facilities based upon population projections and land use compatibility.

Public buildings and grounds

- ◆ Inventory public buildings and grounds. (DIA)
 - Assess distribution of public facilities and identify underserved areas.
- ◆ Assess the need for additional facilities based upon existing need for additional services and projected increases in land use intensity and population.
- ◆ Inventory public and private historical landmarks pursuant to Public Resources Code §5020, et seq.
- ◆ Inventory existing public surplus land and disposition pursuant to §54220, et seq. and §25539.4.

Solid and liquid waste facilities

- ◆ Inventory existing solid and liquid waste disposal facilities, correlated with the County Integrated Waste Management Plan and the County Hazardous Waste Management Plan. (DIA) (CI)
- ◆ Assess the need for additional facilities based upon the projected levels of land use and population and correlated with the County Integrated Waste Management Plan.
- ◆ Inventory proposed solid and liquid waste disposal and transformation sites. (DIA)
- ◆ Identify land uses near existing solid and liquid waste facilities, waste-to-energy plants, and sites reserved for future such facilities. (O)
 - Identify overconcentrated waste facilities near residential uses and schools.

Assessment of the potential for flooding

- ◆ Collect historical data on flooding. (CO, O, S)
- ◆ Identify areas subject to inundation by a 100-year flood. (DIA) (CO, O, S)
- ◆ Identify floodways and flood channels. (DIA) (CO, O, S)
- ◆ Identify areas subject to inundation as a result of dam failure. (S)
- ◆ Identify areas subject to flooding as a result of tidal action occurring in conjunction with river and stream runoff. (S)
- ◆ Identify areas subject to flooding due to tsunami, seiche, or flash flood.

Timber production

- ◆ Describe the location, type, amount, and ownership of land and timber resources subject to timberland production zoning. (DIA)

Other public and private uses of land

- ◆ Identify redevelopment projects areas.
- ◆ Identify areas covered under a Local Coastal Land Use Plan.
- ◆ Inventory lands subject to regulation by other agencies (e.g., state land, federal land, etc.).
- ◆ Inventory lands designated under Habitat Conservation Plans (HCPs) and Natural Community Conservation Planning (NCCP) programs for the protection or restoration of threatened or endangered species and their habitat. (O, CO)

Ideas for Development Policies

Policies contribute to a framework of plan proposals and implementation programs and in some instances provide the basis for requiring exactions and development fees of new projects (for example, parks and recreational facilities under the Quimby Act (§66477)). The distribution of land use categories which is reflected in the plan diagram must conform to the plans policies. Existing development may not adhere to all of the development policies set forth by the plan, however, new and future development must be in uniform compliance.

The following subjects should be addressed through development policies in the land use element to the extent that they are relevant.

- ◆ Type, intensity, general distribution, and general location of each class of land use proposed by the plan. (DIA) (CI, CO, H, N, O, S)
- ◆ Categories and standards for establishing the allowable levels of residential, commercial, and industrial land use intensity. (CI)
- ◆ Population density standards for each land use category with residential potential. (CI, H)
- ◆ Density and intensity standards for areas to be served by transit. (CI, H)
- ◆ Standards for transit-oriented development
 - Appropriate mix of uses near transit stations.
 - Increased density and intensity standards near transit stations.
 - Limitations on the amount and location of parking.
- ◆ The location of new development allowed by the plan, including requirements for the consideration of impacts to the environment, surrounding land uses, and infrastructure. (CI, O, CO, H, S, N)
- ◆ The spatial relationships between types of land use (e.g., housing, business, industry, open space, etc.). (H, O)
 - Community design principles.
 - Buffer zones between residential/school uses and industrial uses that pose a hazard to human health and safety.
- ◆ The location of town/community/village centers.
 - Encourage locating public facilities that benefit the community in town centers.
- ◆ General standards for mixed-use development.
- ◆ The type, location, and intensity of development (if any) to be allowed within flood hazard areas, including standards for allowable uses. (CO, S)
- ◆ Development regulations for open-space areas. (O)
- ◆ The type and intensity of allowable development in areas with severe slopes.
- ◆ The evaluation and regulation of timberland production zones, including standards for inclusion in the zones. (CO)
- ◆ The location of existing oil, gas, and geothermal resources as identified by the Department of Conservation’s Division of Oil, Gas, and Geothermal Resources.
- ◆ The location, acquisition, development, and management of public and private parks and recreational areas, including access to lakeshores, beaches, rivers, and streams. (O)
 - The equitable distribution of parks and recreational facilities.
- ◆ The evaluation and regulation of important wildlife habitats (such as HCP or NCCP lands, critical habitat, or deer wintering areas), including allowable uses and/or density of development.
- ◆ The preservation and protection of rare, threatened, or endangered species within the planning area, including candidate species and species of special concern.
- ◆ The promotion and protection of agricultural land, including policies regulating development.
 - Allowable uses, intensity, and density at agricultural-urban interface
- ◆ The promotion and protection of areas of scenic beauty, including policies regulating development.
- ◆ The relationship between the land use element and the local zoning, subdivision, and building ordinances.
- ◆ The location, type, and height of development in areas surrounding airports, correlated to the local Airport Land Use Plan.
- ◆ The location of schools and the future use of surplus school facilities, coordinated with the plans of local school districts.
 - Restrictions on proposed school locations near industrial facilities that pose a hazard to human health and safety.
- ◆ The development, maintenance, and siting of existing and projected public facilities, including buildings and infrastructure.
 - The equitable distribution of beneficial public facilities.

- ◆ The analysis, approval, and regulation of future liquid and solid waste facilities. (CI)
- ◆ The compatibility of nearby land uses with existing solid waste and liquid waste facilities and with sites reserved for future facilities. (O)
- ◆ The relationship between the distribution of land uses and the local capital improvements program and guidelines for the timing and siting of capital improvements.
- ◆ The protection and future productivity of mineral resource lands, including significant mineral deposits classified or designated by the California Geological Survey.
- ◆ General plan designations to allow local governments to comply with §65583 regarding the provision of low and moderate income housing. (H)

Technical Assistance

The following state agencies may provide information or assistance for the preparation of the land use element:

- ◆ Coastal Commission
- ◆ Coastal Conservancy
- ◆ Department of Conservation
- ◆ Department of Forestry and Fire Protection
- ◆ Department of Health Services, Division of Drinking Water
- ◆ Department of Housing and Community Development
- ◆ Department of Transportation (Caltrans), including district offices
- ◆ Department of Water Resources
- ◆ Energy Commission
- ◆ Environmental Protection Agency
- ◆ Integrated Waste Management Board
- ◆ Public Utilities Commission
- ◆ Office of Emergency Services
- ◆ Office of Planning and Research
- ◆ Technology, Trade and Commerce Agency

CIRCULATION ELEMENT

The circulation element is not simply a transportation plan. It is an infrastructure plan addressing the circulation of people, goods, energy, water, sewage, storm drainage, and communications. By statute, the circulation element must correlate directly with the land use

element. The circulation element also has direct relationships with the housing, open-space, noise and safety elements.

The provisions of a circulation element affect a community's physical, social, and economic environment as follows:

- ◆ **Physical**—The circulation system is one of the chief generators of physical settlement patterns and its location, design, and constituent modes have major impacts on air quality, plant and animal habitats, environmental noise, energy use, community appearance, and other environmental components.
- ◆ **Social**—The circulation system is a primary determinant of the pattern of human settlement. It has a major impact on the areas and activities it serves, on community cohesion, and on the quality of human life. The circulation system should be accessible to all segments of the population, including the disadvantaged, the young, the poor, the elderly, and the disabled.
- ◆ **Economic**—Economic activities normally require circulation for materials, products, ideas, and employees, thus the viability of the community's economy is directly affected by the circulation element. The efficiency of a community's circulation system can either contribute to or adversely affect its economy.

No city or county can ignore its regional setting. The local planning agency should coordinate its circulation element provisions with applicable state and regional transportation plans (see §65103(f) and §65080, et seq.). Likewise, the state must coordinate its plans with those of local governments (§65080(a)). The federal government is under a similar obligation (Title 23 USC §134).

Caltrans is particularly interested in the transportation planning roles of local general plans and suggests that the following areas be emphasized:

- ◆ Coordination of planning efforts between local agencies and Caltrans districts.
- ◆ Preservation of transportation corridors for future system improvements.
- ◆ Development of coordinated transportation system management plans that achieve the maximum use of present and proposed infrastructure.

These areas of emphasis are addressed through Caltrans' Intergovernmental Review (IGR), Regional Planning, and System Planning programs. One of the

program’s major purposes is to resolve transportation problems early enough in the local land use development process to avoid costly delays to development. Coordinating state and local transportation planning is a key to the success of a circulation element. For more information on coordination, contact your Caltrans District Office’s IGR coordinator.

Court Interpretations

Three California appellate cases have addressed the subject of correlation between the circulation and land use elements: *Concerned Citizens of Calaveras County v. Board of Supervisors* (1985) 166 Cal.App.3d 90, *Twain Harte Homeowners Association v. Tuolumne County* (1982) 138 Cal.App.3d 664, and *Camp v. County of Mendocino* (1981) 123 Cal.App.3d 334.

The *Concerned Citizens* court defined the term “correlated” as follows:

“‘Correlated’ means ‘closely, systematically, or reciprocally related . . .’ [Webster’s Third New International Dictionary (1981) p. 511].” Section 65302 therefore requires that the circulation element of a general plan, including its major thoroughfares, be closely, systematically, and reciprocally related to the land use element of the plan.

“In its more concrete and practical application, the correlation requirement in subdivision (b) of [Government Code] §65302 is designed to insure that the circulation element will describe, discuss and set forth ‘standards’ and ‘proposals’ respecting any change in demands on the various roadways or transportation facilities as a result of changes in uses of land contemplated by the plan. (See *Twain Harte Homeowners Assn. v. Tuolumne County* (1982) 138 Cal.App.3d at p. 701 and *Camp v. County of Mendocino* (1981) 123 Cal.App.3d at p. 363.) The statutory correlation requirement is evidently designed in part to prohibit a general plan from calling for unlimited population growth in its land use element, without providing in its circulation element, ‘proposals’ for how the transportation needs of the increased population will be met.”

After defining “correlated,” the *Concerned Citizens* court described a situation where correlation does not exist:

“We conclude the [Calaveras County] general plan cannot identify substantial problems that will emerge with its state highway system, further report that no known funding sources are available for improvements necessary to remedy the problems, and achieve statutorily mandated correlation with its land use element (which provides for substantial population increases)

simply by stating that the county will solve its problems by asking other agencies of government for money. To sanction such a device would be to provide counties with an abracadabra by which all substance in §65302’s correlation requirement would be made to disappear.”

The *Concerned Citizens* decision appears to have limited its search for evidence of correlation to Calaveras County’s circulation element. By contrast, the *Twain Harte* case (which originated in a different appellate district) indicates that the courts may look beyond the circulation element to supporting documents (e.g., other sections of the general plan) when such evidence is not readily apparent (*Twain Harte, supra*, at p. 701). To be on the safe side, local governments should provide explicit evidence of correlation in both their circulation and land use elements.

The *Twain Harte* case indicates that the courts will not automatically presume the existence of correlation simply because a local government has adopted both its circulation and land use elements. Although general plans, as legislative enactments of the police power, will be presumed valid by the courts (if they are reasonably related to promoting or protecting the health, safety, or welfare, and are not arbitrary and capricious), such plans must nevertheless be in substantial compliance with state law. (See *Camp* at p. 348 and *Buena Vista Gardens Apartments Association v. City of San Diego Planning Department* (1985) 175 Cal.App.3d 289, 298.) In other words, the courts will review a plan for its actual compliance with the requirements of the state’s general plan statutes. In this case, the court used the *General Plan Guidelines* to help determine compliance.

Rohn v. City of Visalia (1989) 214 Cal.App.3d 1463 discusses the limits on road exactions relating to the circulation element. In *Rohn*, the court overturned a street dedication requirement on the basis of inadequate nexus evidence, based on the U.S. Supreme Court’s *Nollan* decision on regulatory “takings” (*Nollan v. California Coastal Commission* (1987) 107 S.Ct. 3141). Since the dedication requirement was supported in part by the city’s general plan but not by empirical evidence of a need for the required dedication, this case shows that the general plan by itself is not armor against a takings claim.

If the circulation element is to be an effective basis for exactions, it must be based upon traffic studies that are sufficiently detailed to link land uses and related demand to future dedications. Additionally, ad hoc road exactions must be roughly proportional to the project’s specific impacts on the road system (*Erhlich v. City of Culver City* (1996) 12 C4th 854 and *Dolan v. City*

of *Tigard (1994) 114 S.Ct. 2309*). The circulation element alone may be an insufficient basis for exactions otherwise. This issue is discussed in greater detail in Chapter 9.

Relevant Issues

Mandatory circulation element issues as defined in statute are:

- ◆ Major thoroughfares
- ◆ Transportation routes
- ◆ Terminals
- ◆ Other local public utilities and facilities

In addressing the above mandatory issues, cities and counties may wish to consider the following topics. The list below was derived from the mandatory issues and also includes possible local optional issues. It is not meant to be all-inclusive.

- ◆ Streets and highways
- ◆ Public transit routes, stops, and terminals (e.g., for buses, light rail systems, rapid transit systems, commuter railroads, ferryboats, etc.)
- ◆ Transit-oriented development
- ◆ Private bus routes and terminals
- ◆ Bicycle and pedestrian routes and facilities
- ◆ Truck routes
- ◆ Railroads and railroad depots
- ◆ Paratransit plan proposals (e.g., for jitneys, car pooling, van pooling, taxi service, and dial-a-ride)
- ◆ Navigable waterways, harbors (deep-draft and small-boat), and terminals
- ◆ Airports (commercial, general and military)
- ◆ Parking facilities
- ◆ Transportation system management
- ◆ Air pollution from motor vehicles
- ◆ Emergency routes

Ideas for Data and Analysis

The following suggestions are meant to stimulate thinking rather than encompass all of the research areas that may go into preparing or amending a circulation element. Not all of these suggestions will be relevant in every jurisdiction.

Major thoroughfares and transportation routes

- ◆ Assess the adequacy of the existing street and high-

way systems and the need for expansion, improvements, and/or transportation system management as a result of traffic generated by planned land use changes. (L)

- ◆ Analyze existing street and highway traffic conditions. (N)
- ◆ Determine current street and highway capacities.
- ◆ Determine existing traffic volumes (using peak-rate flows).
- ◆ Determine the levels of service of existing streets and highways.
- ◆ Determine the abilities of streets and highways to accommodate local bus transit services. (N)
- ◆ Analyze projected street and highway traffic conditions. (N)
- ◆ Estimate the number of trips generated by proposed land uses.
- ◆ Make assumptions about the routes of such trips.
- ◆ Make assumptions about the modal split (i.e., estimate the percentages of trips by transit, passenger car, van pools, etc.).
- ◆ Project future traffic volumes on existing streets and highways (using peak-rate flows) by adding together current traffic volumes and the estimated marginal increase in volumes resulting from planned land use changes.
- ◆ Determine the effects of projected traffic volumes on existing street and highway capacities.
- ◆ Determine the future levels of service of existing streets and highways.
- ◆ Review traffic projects pertinent to local planning that are proposed within neighboring jurisdictions.
- ◆ Review pertinent regional transportation plan and project funding priorities under the regional transportation improvement program.
- ◆ Compare projected with desired levels of service.
- ◆ Analyze the potential effects of alternative plan proposals and implementation measures (related to transportation and/or land use) on desired projected levels of service.
- ◆ Analyze the potential effects of alternative plan proposals and implementation measures (related to transportation) on residential land uses.
- ◆ Analyze the adequacy of emergency access and evacuation routes. (S)
- ◆ Analyze historical data and trends with regard to

Useful Definitions: Circulation Element

Arterial: A major street carrying the traffic of local and collector streets to and from freeways and other major streets, with controlled intersections and generally providing direct access to properties.

Collector: A street for traffic moving between arterial and local streets, generally providing direct access to properties.

Expressway: A highway with full or partial control of access with some intersections at grade.

Freeway: A highway serving high-speed traffic with no crossings interrupting the flow of traffic (i.e., no crossings at grade). Streets and Highways Code §23.5, in part, states that “Freeway means a highway in respect to which the owners of abutting lands have no right or easement of access to or from their abutting lands or in respect to which such owners have only limited or restricted right or easement of access.”

Local Scenic Highway: A segment of a state or local highway or street that a city or county has designated as “scenic.”

Local Street: A street providing direct access to properties and designed to discourage through-traffic.

Level-of-Service: According to the Transportation Research Board’s 1985 Highway Capacity Manual Special Report 209, level-of-service is a qualitative measure describing the efficiency of a traffic stream. It also describes the way such conditions are perceived by persons traveling in a traffic stream. Level-of-service measurements describe variables such as speed and travel time, freedom to maneuver, traffic interruptions, traveler comfort and convenience, and safety. Measurements are graduated, ranging from level-of-service A (representing free

flow and excellent comfort for the motorist, passenger, or pedestrian) to level-of-service F (reflecting highly congested traffic conditions where traffic volumes exceed the capacities of streets, sidewalks, etc.). Levels-of-service can be determined for freeways, multi-lane highways, two-lane highways, signalized intersections, intersections that are not signalized, arterials, and transit and pedestrian facilities.

National Scenic Byway: A segment or a state or Interstate highway route that the United States Forest Service has designated as a scenic byway or which another federal agency has designated as a national scenic and recreational highway.

Official County Scenic Highway: A segment of a county highway the Director of Caltrans has designated as “scenic.”

Official State Scenic Highway: A segment of a state highway identified in the Master Plan of State Highways Eligible for Official Scenic Highway Designation and designated by the Director of Caltrans.

Paratransit: Transportation systems such as jitneys, car pooling, van pooling, taxi service, and dial-a-ride arrangements.

Recreational Trails: Public areas that include pedestrian trails, bikeways, equestrian trails, boating routes, trails, and areas suitable for use by physically handicapped people, trails and areas for off-highway recreational vehicles, and cross-country skiing trails.

Scenic Highway Corridor: The visible area outside the highway’s right-of-way, generally described as “the view from the road.”

Transit: Urban and suburban rail, bus systems, and fer-boats.

automobile accidents.

Terminals

- ◆ Evaluate the use of existing transportation terminals. (L)
- ◆ Evaluate the need for new or relocated transportation terminals. (L)

Local public utilities and facilities

- ◆ Assess the adequacy and availability of existing community water, sewer, and drainage facilities and

the need for expansion and improvements. (L)

- ◆ Assess existing and projected capacity of treatment plants and trunk lines.
- ◆ Examine trends in peak and average daily flows.
- ◆ Determine the number and location of existing and proposed power plants, oil and gas pipelines, and major electric transmission lines and corridors. (L)
- ◆ Assess potential future development of power plants. Consider such factors as the demand for transmission facilities, the transport and storage of hazardous materials, and local transportation im-

pects of current and future power plant developments. (L, S)

Transit

- ◆ Examine trends in transit use and estimates of future demand.
- ◆ Determine existing and projected levels-of-service for transit.
- ◆ Assess the needs of people who depend on public transit.
- ◆ Assess the number and distribution of households without an automobile.
- ◆ Assess the transportation needs of special groups within the population and the extent to which such needs are being met (e.g., the disabled and the elderly).
- ◆ Assess the adequacy of existing transit routes, services and facilities and the need for expansion and improvements.
- ◆ Review the regional transportation improvement program.

Private buses

- ◆ Evaluate private bus company services.
- ◆ Identify the private bus routes within the local jurisdiction.
- ◆ Evaluate the transportation needs that are or are not being met by private bus companies.
- ◆ Examine private bus company plans to provide bus service in the future.

Bicycles and pedestrians

- ◆ Assess the adequacy of existing bicycle routes and facilities and the need for new ones.
- ◆ Examine trends in bicycle usage.
- ◆ Assess adequacy of pedestrian routes and the need for new ones.
- ◆ Assess historical data and trends with regard to bicycle and pedestrian accidents.

Truck routes

- ◆ Identify existing truck routes. (N)
- ◆ Determine needed changes in truck routes.

Railroads

- ◆ Inventory rail lines and facilities and assess plans for expansion and improvements. (L, N)

- ◆ Determine transportation needs that are or are not being met by railroads.
- ◆ Identify abandoned railroad rights of way which could be preserved for future transportation corridor use. (L)

Paratransit

- ◆ Inventory existing paratransit services, uses, and routes.
- ◆ Identify the needs served by paratransit.
- ◆ Determine future paratransit needs.

Navigable waterways, ports, and harbors

- ◆ Assess the adequacy of navigable waterways and port and harbor facilities, including the need for expansion and improvements. (L, O)
- ◆ Examine historical data on the use of facilities and vessel registrations.
- ◆ Project future demand based on new or expanded economic activities and recreational trends.
- ◆ Project future needs for navigable waterways and port and harbor facilities.
- ◆ Review plans for improvements by harbor and port districts.

Airports

- ◆ Assess the adequacy of and safety hazards associated with existing aviation facilities (general, commercial, and military) and the need for expansion and improvements.
- ◆ Inventory potential safety hazards posed by airport activities to surrounding land uses. (N)
- ◆ Inventory potential safety hazards to aircraft passengers posed by existing or proposed land uses near airports.
- ◆ Assess the provisions of any airport land use plan prepared pursuant to Public Utilities Code §21675. (N)
- ◆ Describe existing facilities.
- ◆ Assess the adequacy of ground access to airports, based on existing and projected passenger and cargo load.

Parking facilities

- ◆ Assess the adequacy of existing on- and off-street parking, particularly in urban and commercial areas. (L)

- ◆ Assess the effects of parking policies (i.e., off-street parking standards, on-street parking restrictions, graduated parking fees, etc.) on congestion, energy use, air quality, and public transit ridership.
- ◆ Assess the need for bicycle parking.

Transportation system management

- ◆ Analyze existing and projected transportation system levels of service. (L)
- ◆ Identify existing and proposed modes of transportation.
- ◆ Analyze the projected effects on the transportation system of construction improvements versus the projected effects of transportation system management.
- ◆ Compare the costs of construction improvements versus the costs of transportation system management.
- ◆ Analyze high-occupancy vehicle (HOV) lane usage and vehicle occupancy counts.

Air pollution from motor vehicles

- ◆ Estimate air quality impacts. (CO, L)
- ◆ Analyze air quality trends.
- ◆ Assess existing air quality, pursuant to air quality district plans
- ◆ Estimate air quality impacts of motor vehicle trips generated by land use changes and new thoroughfares, based on regional air quality and transportation plans.
- ◆ Identify and evaluate measures that will reduce the air quality impacts of motor vehicle trips, consistent with regional air quality and transportation plans. (CO, L)

Ideas for Development Policies

The circulation element should contain objectives, policies, principles, plan proposals, and/or standards for planning the infrastructure that supports the circulation of people, goods, energy, water, sewage, storm drainage, and communications. These development policies should be consistent with regional air quality and transportation plans. With this and the above ideas for data and analysis in mind, cities and counties may wish to consider development policies for the following:

- ◆ The development and improvement of major thoroughfares, including future acquisitions and dedications, based on proposed land use patterns and projected demand. This may include a street and

highway classification system. (L)

- ◆ The location and design of major thoroughfares in new developments. (N)
 - Consideration of street pattern (curvilinear, grid, modified grid, etc.).
- ◆ The design of local streets (including, but not limited to, width, block size, and accommodation of parking and bicycle and pedestrian traffic).
- ◆ Level-of-service standards for transportation routes, intersections, and transit.
 - Separate level-of-service standards for bicycle and pedestrian traffic or integrated level-of-service standards that consider multiple modes.
- ◆ Enhanced circulation between housing and workplaces. (L)
- ◆ The scheduling and financing of circulation system maintenance projects.
- ◆ The location and characteristics of transportation terminals. (L)
- ◆ The development, improvement, timing, and location of community sewer, water, and drainage lines and facilities. (L, CO)
- ◆ The current and future locations of:
 - Oil and natural gas pipelines.
 - Power plants.
 - Major electric transmission lines and corridors. (DIA) (L)
- ◆ The acquisition of necessary public utility rights-of-way. (L)
- ◆ Preferences for financing measures to expand and improve public utilities.
- ◆ Standards for transportation and utility-related exactions.
- ◆ Assistance to those who cannot afford public utility services.
- ◆ The mix of transportation modes proposed to meet community needs.
- ◆ The development and improvement of transit and paratransit services.
- ◆ Transit and paratransit assistance.
- ◆ The roles of railroads and private bus companies in the transportation system. (N)
- ◆ The development and improvement of rail and private bus facilities and services.
- ◆ The encouragement of railroad and private bus company services.

- ◆ Transit-oriented development strategies. (L)
 - Identify transportation nodes suitable for future transit-oriented development.
 - Adjust traffic level-of-service requirements (traffic congestion standards) around transit-oriented developments to promote transit ridership.
- ◆ The preservation of abandoned railroad rights of way for future transportation corridor use. (L)
- ◆ The development and improvement of bicycle routes and walkways.
- ◆ Proposed truck routes. (N)
- ◆ Policies supporting truck route regulations. (N)
- ◆ The safety of the traveling public, including pedestrians and bicyclists.
- ◆ The development and improvement of port, harbor, and waterway facilities. (L, CO)
- ◆ The development and improvement of aviation facilities. (L)
- ◆ The mitigation of aviation-related hazards (including hazards to aircraft and hazards posed by aircraft). (L, N)
- ◆ The consistency of the general plan with the provisions of any airport land use plan (§65302.3). (L, N)
- ◆ Strategies for the management of parking supply such as increased parking fees, graduated parking fees, metered on-street parking, and staggered work schedules.
- ◆ Strategies for the control of parking demand such as improved transit service, amenities for bicyclists, and subsidized rideshare vehicles.
- ◆ Transportation system management policies.
- ◆ The respective roles of the private sector and various public agencies in developing, improving and maintaining circulation infrastructure.
- ◆ The identification, development and maintenance of evacuation and emergency access routes. (S)
- ◆ Measures that reduce motor vehicle air pollution, consistent with the regional air quality and transportation plan policies. (L, CO)

Technical Assistance

The following agencies may provide information or assistance in the preparation of the circulation element:

- ◆ California Department of Transportation (Caltrans), including district offices, the Division of Aeronautics, and the Division of Transportation Planning

- ◆ California Public Utilities Commission
- ◆ Regional Transportation Planning Agency (RTPA) or Metropolitan Planning Organization (MPO)

For assistance regarding software to estimate transportation-related air quality impacts, contact the California Air Resources Board's Technical Support Division or the California Energy Commission's PLACE'S Program.

HOUSING ELEMENT

Unlike the other mandatory elements, the housing element is subject to detailed statutory requirements regarding its content and must be updated every five years. The housing element is also subject to mandatory review by a state agency. This reflects the statutory recognition that the availability of housing is a matter of statewide importance and that cooperation between government and the private sector is critical to attainment of the state's housing goals.

Housing element law requires local governments to adequately plan to meet their existing and projected housing needs including their share of the regional housing need. Housing element law is the state's primary market-based strategy to increase housing supply. The law recognizes the most critical decisions regarding housing development occur at the local level within the context of the general plan. In order for the private sector to adequately address housing needs and demand, local governments must adopt land-use plans and regulatory schemes that provide opportunities for, and do not unduly constrain, housing development for all income groups.

Statutory Requirements

The housing element requirements listed below are derived from Article 10.6 of the Government Code, §65583 through §65590. The housing element must be comprehensively revised at least every five years to reflect the results of the required periodic review. Section 65588 establishes the timetable for these revisions. Local governments may address these requirements in any format they deem most meaningful to meet the community's needs. A housing element, regardless of its format, must clearly identify and address, at a minimum, each of the statutory requirements, as follows:

- ◆ Quantifying projected housing needs. This is accomplished through the regional housing needs allocation (RHNA) process pursuant to §65584. The city or county's share of the RHNA, as determined

- by their Council of Governments (COG) and HCD, is the projected housing need for the planning period of the housing element. To accommodate the RHNA, the element must demonstrate site development capacity equivalent to, or exceeding, the projected housing need, to facilitate development of a variety of types of housing for all income groups.
- ◆ Review and revise of the housing element. Unlike the other elements of the general plan, state law explicitly requires that the housing element be reviewed and updated as frequently as appropriate, but not less than once every five years (§65588). The “review and revise” evaluation is a three-step process:
 1. Section 65588(a)(2): “Effectiveness of the element”—Review the results of the previous element’s goals, objectives, policies, and programs. The results should be quantified where possible (e.g., the number of units rehabilitated), but may be qualitative where necessary (e.g., mitigation of governmental constraints).
 2. Section 65588(a)(3): “Progress in implementation”—Compare what was projected or planned in the previous element to what was actually achieved. Analyze the significant differences between them. Determine where the previous housing element met, exceeded, or fell short of what was anticipated.
 3. Section 65588(a)(1): “Appropriateness of goals, objectives and policies”—Based on the above analysis, describe how the goals, objectives, policies and programs in the updated element have been changed to incorporate what has been learned from the results of the previous element.
 - ◆ Describe how the jurisdiction made a diligent effort to achieve public participation from all economic segments of the community in the development of the housing element.
 - ◆ Assess housing needs and analyze an inventory of resources and constraints (§§65583(a)(1-8)), including an analysis of population and household characteristics and needs, an inventory of land, analysis of governmental and non-governmental constraints, analysis of special housing needs, analysis of energy conservation opportunities and an analysis of assisted housing development at-risk of converting to market rate uses.
 - ◆ Estimate the amount of funds expected to accrue to the Redevelopment Agency Low- and Moderate-Income Housing Fund (LMIHF) over the planning period of the element and describe the planned uses for those funds §65583(c).
 - ◆ Establish a housing program that sets forth a five-year schedule of actions to achieve the goals and objectives of the element. Programs are to be implemented through the administration of land use and development control; provision of regulatory concessions and incentives; and the utilization of appropriate federal and state financing and subsidy programs; and when available, use of funds in a low and moderate income housing fund of a redevelopment agency (§65583(c)). The housing program must:
 - Identify adequate sites with appropriate zoning, development standards and public facilities that encourage and facilitate a variety of housing types to accommodate all income levels of the local share of regional housing needs, including multifamily rental, factory-built housing, mobile homes, farmworker housing, emergency shelters and transitional housing (§65583(c)(1)).
 - Assist in development of housing to meet the needs of low- and moderate-income households (§65583(c)(2)).
 - Address and, where possible, remove governmental constraints on the development, maintenance and improvement of housing. The program shall also remove constraints or provide reasonable accommodation for housing for persons with disabilities (§65583(c)(3)).
 - Conserve and improve the condition of the existing affordable housing stock (§65583(c)(4)).
 - Promote equal housing opportunities for all persons (§65583(c)(5)).
 - Preserve for lower income households the multifamily assisted housing developments at-risk of conversion to market rate uses (§65583(c)(6)).
 - ◆ Quantify objectives by income level for the construction, rehabilitation, and conservation of housing (§65583(b)).
 - ◆ Demonstrate the means by which consistency will be achieved with the other general plan elements and community goals (§65583(c)).

- Analyze housing in the Coastal Zone (§65588(c)(d) and §65590(h)(2)).
- ◆ Distribute a copy of the adopted housing element to area water and sewer providers. The purpose of this section of the law is to ensure that public and/or private water and wastewater providers provide a priority to proposed housing development projects for lower income households in their current and future resource or service allocations (§65589.7).

Regional Housing Needs Allocation Process

Housing element law (§65583) requires quantification of each jurisdiction’s existing and projected housing needs for all income levels. The housing element’s requirements to accommodate projected housing needs are a critical factor influencing the housing supply and availability statewide and within regional housing markets. The local regulation of the housing supply through planning and zoning powers affects the State’s ability to achieve the State housing goal of “decent housing and a suitable living environment for every California family,” and is an important influence on housing costs. The regional housing needs allocation process addresses this statewide concern, and reflects shared responsibility among local governments for accommodating the housing needs of all economic levels.

Shares of the regional housing need are determined for constituent cities and counties of the affected region(s) of the housing element update cycle. This involves an iterative process conducted among state, regional, and local levels of government which is driven by projected population growth. The Department of Finance’s (DOF) Demographic Research Unit periodically prepares population projections by county, and also prepares current population, household, and housing unit estimates by city and county. DOF’s population projections are prepared using the demographic methodology of cohort survival and net migration. Household projections are prepared using headship rates (historical rates of household formation relative to age and ethnic composition of population), along with adjustments of existing stock conditions, e.g., demographic and income factors from the most recent U.S. Census, DOF’s annual E-5 report, etc. The projected housing need is allocated by income category pursuant to the state income limits. In consultation with the affected council of government (COG) and DOF, HCD submits to each COG projected housing needs. HCD also fulfills the functions of a COG in those counties for which there is no COG. While HCD forwards projections for the region, the distribution of the need within the region is

subject to determination by the COG.

The COGs develop the distribution in draft regional housing need allocation plans based on regional population and economic models, and also incorporate consideration of factors such as market demand, commuting patterns, site and public facility availability, and type and tenure of housing need, needs of farmworkers, or the conversion of assisted units. Attorney General Opinion 87-206 interpreted that the availability of suitable housing sites is to also consider the potential for increased residential development under alternative zoning ordinances and land use restrictions. During a 90-day period, each city and county has an opportunity to request revision of their need allocation by the COG. The COG may revise the initial allocations, subject to acceptance of the revised allocation plan by HCD. HCD is authorized to revise the COG’s determination, if necessary, to be consistent with statewide housing needs. The needs allocations from an accepted COG RHNA plan are then incorporated into the city’s/county’s housing element as a basis for planning for adequate residential development sites and housing assistance programs.

Court Interpretations

The following judicial decisions have addressed the housing element with regard to statutory compliance, growth control measures, voter initiatives and remedies which the courts may impose after invalidating a general plan.

Compliance with statutory requirements

Buena Vista Gardens Apartments Association v. City of San Diego Planning Department (1985) 175 Cal.App.3d 289, provides the most thorough judicial discussion of housing element law. It is the first appellate level decision to interpret Article 10.6 of the Government Code. The plaintiff and appellant in the case were tenants occupying a large apartment complex for which the city had approved a long-term plan to demolish the existing units and develop condominiums on the site. The tenants challenged the plan’s final approval, alleging that the city’s housing element failed to meet statutory requirements in seven respects.

The appellate court found that in six of the seven respects the element substantially complied with state law. The court did find, however, that the element lacked any programs encouraging the conservation of mobilehome parks or existing affordable apartment rental units. The fact that the city had no basis upon which to deny the developer a demolition permit demonstrated the city’s lack of a program to conserve af-

HOUSING ELEMENT CONTENTS

Review of Previous Element

- ◆ Results
- ◆ Comparison of results vs. planned objectives
- ◆ Implications for new element

Housing Needs Assessment

<u>Existing Needs</u>	<u>Projected Needs</u>
<ul style="list-style-type: none">◆ Overpayment◆ Overcrowding◆ Special housing needs◆ Units at risk of converting to non-low income uses◆ Substandard conditions	<ul style="list-style-type: none">◆ Regional housing needs allocation

Resource Inventory

<u>Land Inventory</u>	<u>Financial Resources</u>
<ul style="list-style-type: none">◆ Accomodate regional share by income group◆ Public facilities and services◆ Suitability of lands	<ul style="list-style-type: none">◆ RDA & other funds available over the next 5 years◆ Funds available for preservation

Constraints on Housing

<u>Governmental Constraints</u>	<u>Non-governmental Constraints</u>
<ul style="list-style-type: none">◆ Land use controls◆ Codes & enforcement◆ On/off-site improvements◆ Fees & exactions◆ Permit procedures◆ Other	<ul style="list-style-type: none">◆ Financing◆ Land costs◆ Construction costs◆ Other

Programs

- ◆ Identify adequate sites
- ◆ Assist development of low- & moderate-income housing
- ◆ Remove or mitigate constraints
- ◆ Conserve & improve existing affordable housing
- ◆ Promote equal housing opportunity
- ◆ Preserve units at risk of conversion from low-income use

Quantified Objectives by Income Group

- ◆ New construction
- ◆ Rehabilitation
- ◆ Conservation of existing affordable units, including preservation of at-risk units

fordable rental housing. As a result, the court prohibited the permit's issuance until the city amended its housing element with conservation programs substantially conforming to statutory requirements.

Buena Vista Gardens is consistent with a number of cases that support the general plan's integrity and require "substantial" (i.e., actual) compliance with its statutorily stated content. For example, a project may be halted when the general plan either lacks a relevant element or the relevant element is inadequate, as many cases have demonstrated.

A number of subsequent cases have reiterated the substantial compliance test, with its application a matter of law subject to independent appellate review. A court will not usually disturb legislative action such as a housing element revision unless the action is arbitrary, capricious or entirely lacking in evidentiary support. However, the housing element will be judged as to its actual compliance with respect to the substance essential to every reasonable objective of the statute. See *Black Property Owners v. City of Berkeley* (1994) 22 Cal. App. 4th 974, where the court upheld the city's housing element update against a claim that it failed to adequately address the governmental constraint of a city-imposed rent control ordinance.

Despite agreement as to the formulation of the substantial compliance test, courts have diverged widely in their application of the test to particular circumstances. In *Hernandez v. City of Encinitas* (1994) 28 Cal. App. 4th 1048, the court rejected a wide-ranging challenge to virtually every aspect of the city's housing element. The decision revealed a "check list" approach to determining substantial compliance with the detailed statutory requirements: the mere mention or discussion of an issue was found sufficient. The court at times even recited topical headings in the housing element to demonstrate compliance.

In sharp contrast is the approach taken in *Hoffmaster v. City of San Diego* (1997) 55 Cal. App. 4th 1098, where the court upheld a narrow challenge to the city's housing element for its failure to provide adequate sites for emergency shelters and transitional housing, despite considerable treatment of the issue in the element and amendments adopted under order of the trial court. The *Hoffmaster* court was willing to look at the circumstances behind the city's conclusions in order to give effect to the purpose and intent of the statute. In addition, the court adopted HCD's definition of adequate sites for homeless shelters as a logical extension of the legal requirement and, despite the lack of a specific statutory provision, held the city to this standard.

Growth control measures

The ruling in *Building Industry Association v. City of Oceanside* (1994) 27 Cal. App. 4th 744, demonstrates the effect that housing element requirements may have on growth control measures. In that case, at the culmination of lengthy litigation, the court overturned the city's growth control initiative, in part because it conflicted with broad, general language in the housing element to "protect, encourage and, where feasible provide, low and moderate income housing opportunities."

Effect of voter initiatives

In *DeVita v. County of Napa* (1995) 9 Cal. 4th 763, the issue was whether an initiative ordinance which prohibited the rezoning of agricultural land without a vote of the electorate conflicted with the county's ability to update its land use element in accordance with the law. The court upheld the initiative. It expressly noted, however, that the status of an initiative that either amends or conflicts with the housing element has not been determined, and that the ordinance might be reconsidered if it poses an obstacle to the adequacy of future revisions. The court emphasized that an initiative amendment must conform to all statutory specifications and may not cause the general plan to be internally inconsistent.

Remedies for invalidated general plan

Another case, *Committee for Responsible Planning v. City of Indian Wells* (1989) 209 Cal. App. 3d 1005, exemplifies the type of action a court may take after it invalidates a general plan. After holding Indian Well's general plan invalid for failure to achieve internal consistency and failure to address various statutorily required issues in the housing element, the trial court ordered the city to bring its general plan into compliance with state law and imposed a moratorium. The court order prevented the city from granting building permits and discretionary land use approvals such as subdivision maps, rezoning, and variances until it updated its general plan.

In the meantime, a developer sought approval to record a final tract map. Pursuant to §65755(b), the subdivider requested that the court waive the moratorium's restrictions. The court may do so when it finds that the project would "not significantly impair" the city's ability to adopt all or part of the new plan in compliance with statutory requirements. Recognizing the Legislature's statutory guidance reflecting the housing element's "preeminent importance," the court disagreed with the developer's arguments that

the tract map would not affect the city’s ability to adopt an adequate housing element. The court refused to allow approval of the map until the general plan was adopted.

Ideas for Data and Analysis

The following descriptions and suggestions for data are meant as a tool to guide analysis of the many unique needs in each locality. For further guidance, consult HCD’s publication *Questions and Answers* and contact HCD for additional resources, assistance, and examples.

Analysis of existing housing needs (§§65583(a)(1) and (2))

Existing needs include current basic demographic and housing stock information such as the number and tenure of households, vacancies, affordability data such as sales prices and rental rates and household characteristic information such as the extent of lower-income households overpaying for housing and the number of households that are overcrowded. A community profile typically includes the following quantitative and qualitative data and descriptive household information, most of which is available from the most recent Census or the American Community Survey:

General information

- ◆ Total population and demographic data (e.g., age, sex, race/ethnicity, etc.). Many jurisdictions also discuss population changes over time.
- ◆ Total number of households in the community. DOF prepares annual estimates, including population, households, and dwelling units. The E-5 report is available annually in May.
- ◆ Tenure characteristics. The number and proportion of renter and owner households in the community.
- ◆ Total number of housing units. Where possible, the element should describe the distribution and recent activity of housing units by type (single-family, multifamily, mobilehomes). An analysis should also include information on current vacancies for owner and rental units.
- ◆ Housing affordability. A discussion of current sales and rental prices compared to local household incomes.

Specific existing needs to be analyzed

- ◆ Households overpaying. In comparing level of payment with ability to pay, the element should quan-

tify and analyze the number of lower- income owner and renter households (those at or below 80 percent of the area median income) who are overpaying (more than 30 percent of gross income) for housing.

- ◆ The incidence of overcrowding. The Census defines overcrowded when occupancy exceeds more than one person per room (excluding bathrooms and kitchens). Households are considered severely overcrowded when more than 1.5 persons per room occupy the unit. Localities should include a qualitative and quantitative analysis of overcrowded and severely overcrowded households by tenure.

Analysis of special housing needs (§65583(a)(6))

The statute specifically requires an analysis of persons with special housing needs, including elderly, persons with disabilities, large families, farmworkers, families with female heads of households and families and persons in need of emergency shelters. An analysis should include:

- ◆ A quantification of the total number of persons or households.
- ◆ A quantification and qualitative description of the housing need.
- ◆ An identification of potential programs, policy options and resources to address the community’s special housing needs.

For example, an analysis of homeless needs should include an estimate or count of the number of persons lacking permanent shelter, an inventory of the number, approximate location, and type of existing shelter beds, hotels/motel accepting vouchers, and units of transitional housing available and an estimate, derived from the figures above, of the number of additional beds or shelters and transitional housing units needed.

An analysis of farmworkers should quantify and separately discuss the housing needs of permanent migrant and seasonal farmworkers. The analysis should discuss resources and programs addressing farmworker housing needs and shortfalls that exist in addressing those needs.

Land inventory (§65583(a)(3))

The purpose of the land inventory is to identify sites with appropriate zoning and development standards suitable for residential development, with adequate public facilities to accommodate the locality’s share of

the regional housing need within the planning period of the element. The land inventory must identify land by zoning district and could also include general plan designations. The inventory must demonstrate how zoning and development standards encourage and facilitate a variety of housing types, including factory built housing, mobilehomes, multifamily rentals, emergency shelters, transitional housing and housing for agricultural employees. An analysis of the land inventory should also determine whether current zoning and densities are appropriate to accommodate the new construction need in total and by income level. Sites identified that require rezoning may be included as an adequate site as long as a program for accomplishing any necessary rezoning is included in the element.

An analysis of the land inventory should describe the suitability of land for residential development in the current planning period and future planning periods within the general plan horizon. The inventory should include sufficient information about identified sites to determine if the sites are appropriate to accommodate the community's regional housing need. While some information in the inventory may be presented in the aggregate (i.e., 30 acres zoned R-3), it should also include more detailed site specific information about the suitability of the land. Land "suitable for residential development" has characteristics that make the sites appropriate for housing construction. These characteristics include:

- ◆ Physical features and general characteristics not impacted by flooding, seismic hazards, extreme wildfire hazards, slope instability or erosion, chemical contamination, or other environmental constraints. Suitability may also be impacted by proximity to hazardous industrial facilities and uses, consistency with airport land use plans, and other conditions or contracts, such as conservation easements or farmland security zones, disallowing development in the planning period.
- ◆ Location and proximity to transit, job centers, and public and community services, etc. A thorough analysis of the land inventory should include a map of the suitable lands to help illustrate the suitability of the land in the inventory.
- ◆ Parcel size. A general discussion of the number and characteristics of parcels, their appropriateness in the five year planning period given any development, infrastructure or other constraints. The discussion should also address the extent of lands, identified in the land inventory, that are not feasible for development due to small parcel sizes. This discussion could also demonstrate recent development

on small lots and include information on site specific tools, policies and regulations facilitating small lot development.

The element must also identify the zones and densities that can accommodate the locality's share of the regional housing need for low- and moderate-income households. Particularly, the element should analyze how specific zoning districts with their allowed density can facilitate development of housing for low- and moderate-income households. For example, a local government could demonstrate appropriate zoning for housing for low and moderate income households by gathering information from developers on what densities provide the potential to maximize financial resources and develop housing for lower and moderate income households. This analysis should also cover whether development standards inhibit the ability to achieve maximum densities and whether sufficient sites exist with zoning to accommodate lower-income needs identified in the city's share of the regional housing need. The analysis of appropriate zoning should also identify any standards, conditions or processing that impact the development capacity of the sites. For example, the element should identify mid-point requirements that limit densities within a zoning district unless certain amenities are provided or that require a conditional use permit for multifamily projects within a multifamily zone.

An analysis of the land inventory must also include a discussion of realistic capacity of lands by zoning district. Specifically, the element should demonstrate the ability to achieve the densities assumed in the land inventory either through a discussion of past development trends by zoning district or city regulations, policies or programs requiring the assumed densities. Also, assumed densities should not include density bonuses.

In communities with limited vacant land, the land inventory should identify and analyze sites with redevelopment potential for new and more intensive residential development. In such cases, the land inventory should describe the acreage, zoning and development standards existing uses and their ripeness for redevelopment, realistic development capacity, general character and size of sites judged suitable for residential development, market trends and conditions and any policies or incentives to facilitate their development. The inventory should estimate the realistic (not theoretical) development capacity based on an analysis of these factors. Such sites may be made available by implementing programs applicable to redevelopment, recycling, infill, and/or redesignating and rezoning non-residential sites to appropriate residential use.

The inventory must also discuss the availability of essential public facilities and services (e.g., sewer and water system trunklines and treatment facilities, roads, and storm drainage facilities) for sites identified for residential development. The analysis should describe and analyze existing capacity and the capacity that will be provided during the current planning period of the element.

Any phasing of plans relevant to a specific plan, development agreement or capital facilities financing plan should be described. Upon completing the infrastructure capacity analysis, the locality will be able to identify where facilities and services are lacking in order to establish program actions (capital improvement plans, financing through general obligation or special district bonds, etc.), that will permit the development of sufficient units to meet the new construction objectives within the planning period. In addition, in the case that the element has identified lands within specific plans, the element should discuss how the phasing mechanisms within the specific plans affect the suitability of the lands to accommodate housing needs over the housing element planning period.

An analysis of adequate sites should include a discussion of whether sufficient land is available to address a variety of housing types, including emergency shelters, transitional housing and farmworker housing. An analysis of these housing types should describe the zones where a variety of housing for farmworkers is allowed, how the zoning and development standards including permit process encourages and facilitates development, evaluate whether sufficient opportunities for housing for these housing needs exists, and describe any conditions on development. In the case of farmworker housing needs, the element should identify sufficient sites or zones for permanent, seasonal and migrant seasonal farmworkers.

In the case the land inventory does not identify adequate sites to accommodate the locality’s share of housing needs for all income groups, the locality will need to include programs to provide sufficient sites with zoning and development standards that permits owner occupied and rental multifamily residential uses, by-right, to accommodate the regional housing need within the planning period.

Analysis of governmental and non-governmental constraints (§§65583(a)(4) and (5))

Governmental

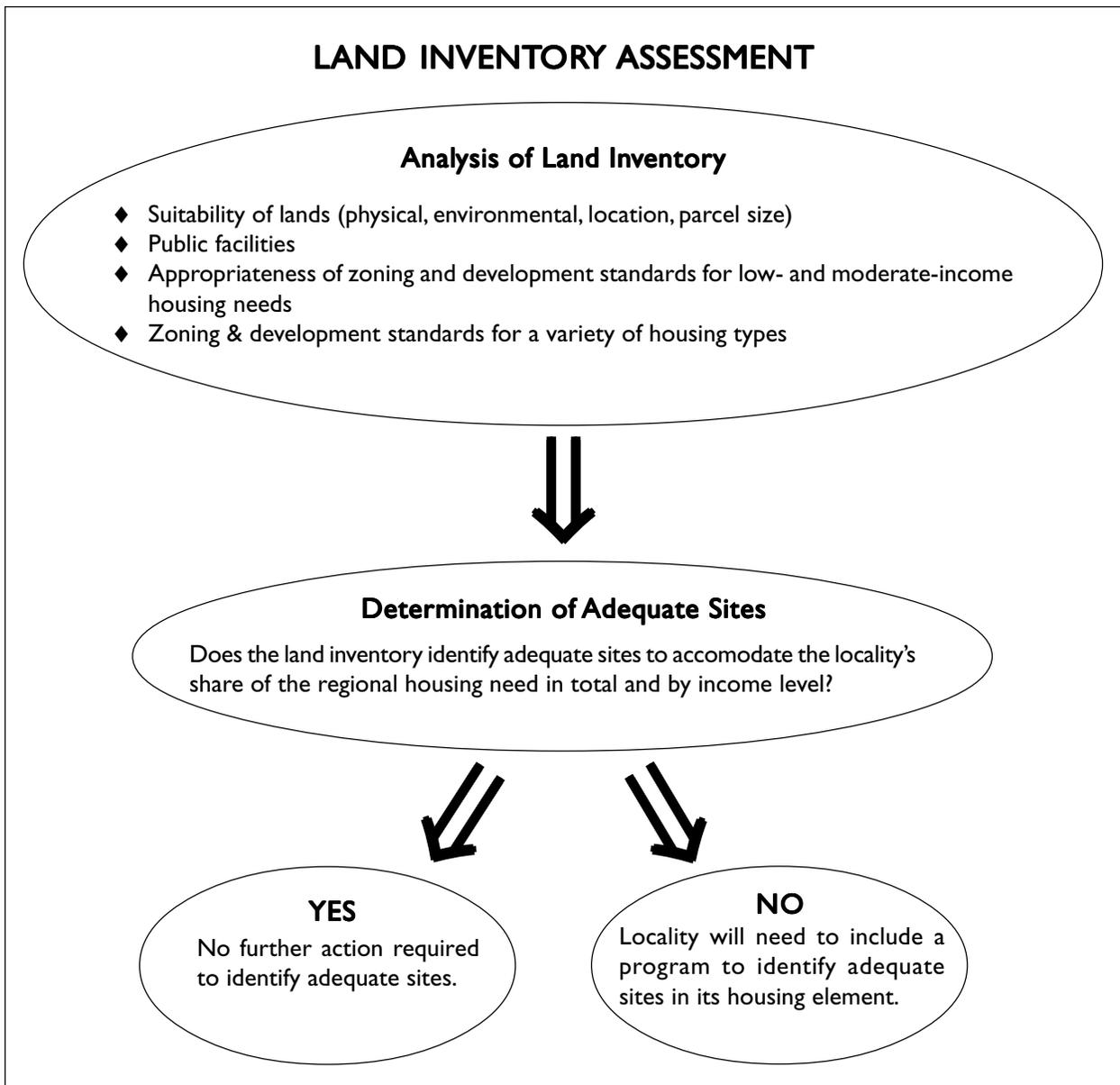
The element must describe and analyze each of the following areas for their impact on the cost and supply

of housing:

- ◆ Land Use Controls: Zoning and development standards including density, parking requirements, lot coverage, lot sizes, unit sizes, floor area ratios, setbacks, moratoria and prohibitions against multifamily housing developments, growth controls, urban growth boundaries and open space requirements, etc.
- ◆ Codes and Enforcement: Any local amendments to state housing law or the Uniform Building Code and the type and degree of enforcement.
- ◆ On- and off-site improvement requirements: Street widths, curb, gutter, and sidewalk requirements, water and sewer connections, and circulation improvement requirements.
- ◆ Fees and exactions: Permit, planning, development and impact fees (e.g., park, school, open space, parking district, general plan amendments, rezone, etc.), in-lieu fees, land dedication requirements (e.g., streets, public utility and other right-of-ways, easements, parks, open space, etc.) and other exactions imposed on developers. The analysis should estimate the total fees compared to typical development costs for multifamily and single family.
- ◆ Processing and permit procedures: Describe the types of permits, discretionary review and approval procedures, and processing time required for recent residential projects. The analysis should describe all permits applicable to residential development and additional mechanisms that place conditions and performance standards (i.e., Community Plan Implementation Zones, Hillside Overlay Zones, Environmentally Sensitive Areas, etc.) on development. Other applicable regulations and processes such as design review and planned districts should also be included. As part of this analysis, localities should describe and evaluate the permit and approvals process for a typical single-family subdivision and a typical multifamily project, as well as emergency shelters, transitional housing, group homes and farmworker housing.

The analysis should describe past or current efforts to remove any governmental constraints. Where the analysis identifies a constraints, the element must include program responses to address and mitigate the effects of the constraint.

Ordinances, policies, procedures, or measures imposed by the local government that specifically limit the amount or timing of residential development should be analyzed as a potential governmental constraints and mitigated, where necessary. The analysis will vary depending on the nature of the measure. In general, the



measure and its implementation procedures should specifically be described and analyzed as to the impact on the cost and supply of housing.

In accordance with recently enacted legislation (SB 520, Chapter 671, Statutes of 2001), the element must analyze the potential and actual governmental constraints on the development of housing for persons with disabilities and demonstrate the city's efforts to remove governmental constraints on housing for persons with disabilities, such as accommodating procedures for the approval of group homes, ADA retrofit efforts, an evaluation of the zoning code for ADA compliance or other measures that provide flexibility in the development of housing for persons with disabilities.

Non-governmental constraints

The housing element must include an analysis of non-governmental constraints, including

- ◆ **Land Prices:** In analyzing the price of land, estimate the average per unit cost of land, or the range of costs for developable parcels, in both single-family and multifamily zones.
- ◆ **Construction Costs:** The analysis of construction costs, for typical single-family and multifamily projects, should focus on the total cost to the developer, exclusive of profit, but including land, fees, material, labor, and financing.
- ◆ **Financing Availability:** An analysis of financing

should consider whether financing is generally available in the community or whether there are any mortgage deficient areas.

Analysis of energy conservation opportunities (§65583(a)(7))

The purpose of this analysis is to ensure the locality consider how energy conservation can be achieved in residential development and how energy conservation requirements may contribute to reducing overall development costs and therefore, the supply and affordability of units.

Analysis of assisted housing at risk of converting to market rate uses (§65583(a)(8))

The element must include a project inventory of multifamily rental housing that could convert to market rate rents because of expiration of affordability restrictions in mortgage and/or rental subsidy contracts. The at-risk analysis must:

- ◆ Prepare an inventory of all units at risk of conversion within the current planning period and the subsequent 5-year period (e.g., 2000-2010).
- ◆ Assess the conversion risk.
- ◆ Estimate and analyze the costs of replacement versus preservation for units at risk in the current five-year planning period.
- ◆ Identify entities qualified to preserve at-risk units.
- ◆ Specify financing and subsidy resources.

Quantified objectives (§65583(b))

Quantified objectives should establish the maximum number of housing units by income category that can be constructed, rehabilitated, and conserved over a five-year time period.

Policies and Implementation Programs

Local governments have the responsibility to adopt a program that implements the policies, goals and objectives of the housing element through their vested powers, particularly over land use and development controls, regulatory concessions and incentives and the utilization of financial resources.

Programs are the specific action steps the locality will take to implement its policies and achieve its goals and objectives. Programs must include a firm commitment to implementation, specific time frame for implementation and identify the agencies or officials responsible for implementation. Effective program descriptions also include:

- ◆ Immediate, short-term and long-term action steps.
- ◆ Proposed measurable outcomes.
- ◆ Specific funding sources, where appropriate.

All housing elements must include programs to address the following six areas:

Adequate sites program (§65583(c)(1))

The purpose of the adequate sites program is to provide sufficient sites that will be made available through appropriate zoning and development standards and with public services and facilities to encourage and facilitate a variety of housing types and address the community's share of the regional housing need. Where the land inventory does not identify adequate sites to accommodate the locality's share of housing needs for all income groups, the program shall provide for sufficient sites with zoning that permits owner-occupied and rental multifamily, by right, without a conditional use permit. The zoning must include density and development standards that accommodate and facilitate the feasibility of housing for very low- and lower-income households.

Providing sufficient sites may entail rezoning land to more appropriate densities or rezoning land from other uses to residential to facilitate development of housing for lower income households. When a community must provide sites in addition to those identified in the land inventory, the community should consider all lands such as residential, commercial and public institutional as a potential resource, while maintaining sound principles of land use compatibility. The community should also consider options that maximize the locality's land resources, such as a compact mix of uses.

A locality's ability to accommodate all units needed during the planning period is best served by designating appropriate zoning as early as possible. The most direct procedure is for the locality to undertake rezoning when the housing element is adopted. If a locality is unable to undertake rezoning concurrently with the housing element, the rezoning should occur early in the planning period in order to allow development to occur before the end of the housing element planning period.

Once a locality has designated the allowable residential density of lands in its sites inventory, there is a responsibility to maintain that density throughout the planning period. A city or county cannot reduce, through administrative, quasi-judicial or legislative action, the residential density of any parcel to a density lower than

that used by HCD in determining compliance with housing element law unless certain findings are made (§65583). These findings, which must be in writing and supported by substantial evidence, are as follows: (1) the reduction is consistent with the general plan, including the housing element; and (2) the remaining identified sites are adequate to accommodate the jurisdictions share of the regional housing need. If these findings cannot be made, the city or county must identify additional adequate sites to ensure no net loss of residential unit capacity.

As part of the adequate sites requirement, communities with limited vacant land should focus programs on underutilized land with the potential for recycling or rezoning and opportunities for mixed uses (combining residential and commercial uses, for example). Programs to encourage redevelopment and/or reuse should describe actions to initiate any necessary rezoning, establish appropriate regulatory and/or financial incentives, relax development standards (parking, building height, setback requirements, etc.), support more compact and higher density residential developments, and facilitate the new construction of multifamily rental and owner-occupied units.

The element must also identify sites or zones where emergency shelters, transitional housing and farmworker housing (when farmworker housing needs are identified for the region) are allowed by permitted or conditional use. When these housing types are permitted by conditional use, the element should demonstrate adequate sites are available that can be approved with conditional use permit and compatibility findings.

For emergency shelters and transitional housing, the element should specify:

- ◆ Location. The sites should be located within the boundaries of the jurisdiction, close to public services and facilities, including transportation, and easily accessible from areas where homeless persons congregate.
- ◆ Zoning. Any zoning district that explicitly allows the siting of a shelter and transitional housing project, and does not impede the development of the sites, or the conversion or use of an existing structure is appropriate. The element should demonstrate how the development standards and permit processing encourage and facilitate the development of shelters and transitional housing.

Where farmworker housing needs are identified, the element must describe how the permit processes, zon-

ing and development standards encourage and facilitate the development of a variety of farmworker housing for migrant and permanent farmworkers in addition to identifying land with zoning that can accommodate farmworker housing needs.

Programs to assist in the development of housing to meet the needs of low- and moderate-income households (§65583(c)(2))

Upon the completion of the assessment and identification housing needs of low- and moderate-income households, localities can develop programs to implement strategies to assist in developing adequate housing to meet identified needs.

Localities can offer direct support for the development of affordable housing through various financing mechanisms including the issuance of municipal and mortgage revenue bonds and use of redevelopment powers. Direct assistance can also be provided through the utilization of appropriate federal and state financing and subsidy programs to create rental and ownership opportunities. Localities can create first time homebuyer, equity sharing, or self-help housing programs to provide affordable homeownership opportunities. Local governments can also assist developers in making applications for other public or private housing funds or low-income housing tax credits to promote rental housing development.

Each city and county is required to adopt a bonus density ordinance. The ordinance shall provide for an increase in allowable residential density and at least one other incentive for certain affordable housing projects (§65915).

Local governments can indirectly facilitate the development of more affordable housing through effective administration of land use controls and by providing appropriate regulatory concessions and incentives. For example, communities can reduce development standards where appropriate to promote the development of housing for low and moderate income households.

Program to remove governmental constraints on housing (§65583(c)(3))

For each policy, requirement, or procedure identified as a governmental constraint, the element must include an appropriate program action to eliminate or modify the constraint or demonstrate how it will be offset by another policy or program. In accordance with recently enacted legislation (SB 520, Chapter 671, Statutes of 2001) the element must contain a program that removes constraints or provides reasonable accommodations for housing intended for persons with dis-

abilities.

The following are some strategies that communities have found appropriate to remove regulatory barriers:

Land use controls

- ◆ Modify and/or reduce growth controls to ensure accommodation of projected housing needs and exempt affordable housing projects from growth control ordinances.
- ◆ Identify areas appropriate for reduced standards. For example: lessen front yard set backs (20 feet or less), encourage small lot development (less than 5,000 square feet) and reduce parking requirements (less than two parking spaces).

Codes and enforcement procedures

- ◆ Allow use of alternative building design and construction materials and methods.
- ◆ Use state housing law codes without additional local requirement, except where local variations are necessary for reasons of climate, geology, or topography (Health and Safety Code §17958.5).

On- and off-site improvement requirements

- ◆ Provide opportunities for cluster development.
- ◆ Promote reduction of street widths (e.g., 36 feet or less) and right of ways (e.g., 56 feet or less).

Fees and exactions

- ◆ Reduce or waive fees, and exactions for particular types of development (e.g., rental or assisted housing, second units, mixed-use and infill projects, housing affordable to low- and moderate-income households) on a basis that is predictable and transparent for the developer.
- ◆ Allow payment of fees upon certificate of occupancy, rather than prior to building permit issuance to reduce developer construction financing costs and overall development costs.

Processing and permit procedures

- ◆ Expedite permit processing (allow one-stop, consolidated, and concurrent permit processing).
- ◆ Eliminate conditional use permit requirements for multifamily projects when land is zoned multifamily.
- ◆ Prepare and present explanatory materials, adopt standards for findings of denial and mitigate addi-

tional layers of review, such as design review.

Programs to conserve and improve the conditions of the existing affordable housing stock (§65583(c)(4))

The existing affordable housing stock is a valuable resource that should be conserved and improved while maintaining affordability. Strategies used to conserve and improve the condition of the affordable housing stock include:

Conservation

- ◆ Provide stable zoning to preserve affordable housing. For example, change the underlying zoning for a mobilehome park from commercial to mobilehome park.
- ◆ Maintain long-term affordability restrictions on assisted rental units.
- ◆ Implement a weatherization program for lower income homeowners through existing service providers.

Improvement

- ◆ Access state and federal owner and rental rehabilitation grant and loan programs including HCD rental housing programs, Community Development Block Grant programs, HOME, etc.
- ◆ Rehabilitate residential hotels and motels (SROs) for very low- and low-income households including the homeless and those at-risk of homelessness.

Programs to promote equal housing opportunities for all persons (§65583(c)(5))

A local equal housing opportunity program should provide a means for the resolution of local housing discrimination complaints and should be promoted throughout the community. The local program should involve the dissemination of information on fair housing laws, and provide for referrals to appropriate investigative or enforcement agencies. Sites for display of fair housing information include buses, in public libraries, community and senior centers, local social service offices, and other public locations including civic centers and county administrative offices. In addition, where appropriate, local governments should distribute fair housing information in languages other than English and consider distributing information in various media (radio, television).

Programs to preserve for lower-income households the assisted housing development at risk of conversion to market rate uses (§65583(c)(6))

The nature of conversion risk varies significantly among projects depending on the type of subsidy and related affordability controls. Individual program responses should be tailored to the results of the analyses and specific local situations. Examples could include:

- ◆ Establish an early warning system and monitor local, State and Federal at-risk units.
- ◆ Gauge owner’s intent to prepay a government assisted mortgage or opt out of a rental assistance program.
- ◆ Identify qualified entities interested in participating in the Offer of Opportunity to Purchase and Right of First Refusal programs (§65863.11).
- ◆ Respond to any federal and/or state notices.
- ◆ Facilitate refinancing or purchase by a qualified entity.
- ◆ Provide technical assistance to affected tenants.

Housing Element Law and Community Redevelopment Law

California Community Redevelopment Law (CRL) is contained in Health and Safety Code §33000, et seq. CRL specifies requirements that enable communities to form a redevelopment agency, adopt a blighted area as a project area, and address housing and economic development within a project area. Agencies redevelop project areas by incurring debt that is repaid from the future increases in project area property taxes allocated to redevelopment agencies.

Although the majority of agency activities, funds, and expenditures relate to economic development, agencies also have a responsibility to increase, improve, and preserve the community’s supply of low- and moderate-income housing. Agencies are required to deposit at least 20 percent of tax revenues into a separate Low- and Moderate-Income Housing Fund strictly for affordable housing. In recognition of agencies’ important role relevant to housing, the Legislature, over the years, revised and linked the following provisions of housing element and redevelopment law:

- ◆ The housing element must estimate the amount of funds expected to accrue to the Redevelopment Agency Low- and Moderate-Income Housing Fund (LMIHF) over the planning period of the element and describe the planned uses for those funds (§65583(c)).
- ◆ To use redevelopment powers, communities must have a housing element that substantially complies with state law before any area is designated for re-

development (Health and Safety Code §33300 and §33302).

- ◆ Redevelopment agencies are required to develop project area implementation plans that are consistent with the housing element. Implementation plans are required to be updated every five years either in conjunction with the housing element cycle or the plan implementation cycle (Health and Safety Code §33413(b)(4)).
- ◆ Before an applicable redevelopment project area plan can be amended to extend the time limit to pay debt and receive tax increment, the community must have a current adopted housing element that the department has determined to be in substantial compliance (Health and Safety Code §33333.10(h) (SB 211, Chapter 741, Statutes of 2001)).
- ◆ In order for a redevelopment agency to allocate less than the required set-aside amount to its Low- and Moderate-Income Housing Fund, the agency must determine that the current housing need is consistent with the current housing element that the department has determined to be in compliance (Health and Safety Code §33334.2(a)).
- ◆ Over the duration of a redevelopment plan, pursuant to Health and Safety Code §33334.4, the agency is required to spend housing funds on households that are at or below the moderate-income level. Assistance shall be provided to persons and to families with children. Persons shall be assisted in at least the same proportion as the community’s total number of housing units needed for each income group bears to the total number of units needed for persons of very low, low, and moderate income (as determined under §65584). Over the duration of the implementation plan, the agency shall assist persons regardless of age in at least the same proportion as the population under the age of 65 years bears to the total population of the community (as reported in the most recent census) (Health and Safety Code §33334.4) (AB 637, Chapter 738, Statutes 2001).

Relationship with Other Elements

Internal consistency

Section 65583(c) requires that the housing element describe “the means by which consistency will be achieved with other general plan elements and community goals.” This requirement exists to ensure that housing elements will maintain the mandated internal consistency of the plan. The housing element

Useful Definitions: Housing Element

Income Levels: Income categories are defined with respect to the area median income, and adjusted for household size. Area median income is determined for each county. For detailed definitions of these terms, the reader should consult Chapter 6.5 (commencing with §6910) of Title 25 of the California Code of Regulations. The income categories below are based on the following general parameters, but are adjusted for a number of factors, including household size, rent-income ratios, a statewide floor, and a national cap.

Very Low Income: No more than 50 percent of the area median income.

Other Lower Income: Between 50 and 80 percent of the area median income.

Lower Income: No more than 80 percent of the area median income (i.e., combination of very low income and other lower income).

Moderate Income: Between 80 and 120 percent of the area median income.

Above Moderate Income: Above 120 percent of the area median income.

Quantified Objective: The housing element must include quantified objectives that specify the maximum numbers of housing units that can be constructed, rehabilitated, and conserved by income level within a five-year time frame, based on the needs, resources, and constraints identified in the housing element (§65583(b)). The number of units that can be conserved should include a subtotal for the number of existing assisted units subject to conversion to non-low income uses that can be preserved for lower-income households. Whenever possible, objectives should be set for each particular housing program, establishing a numerical target for the effective period of the program.

Ideally, the sum of the quantified objectives will be equal to the identified housing needs. However, identified needs may exceed available resources. Where this is the case, the quantified objectives need not equal the identified housing needs, but should establish the maximum number of units that can be constructed, rehabilitated, and conserved (including existing subsidized units subject to conversion that can be preserved for lower-income use), given the constraints. See the definition of “objective” in Chapter 1.

program should evaluate any potential conflict between general plan elements and the housing element, and must describe the means by which consistency will be achieved and maintained.

Housing elements are updated according to a particular schedule (§65588) and the scheduled updates are usually on a five year planning horizon. The five year planning horizon is much less than the traditional general plan horizon of 15 to 20 years. Due to the difference in planning periods, inconsistencies can arise between the assumptions in the housing element and the rest of the general plan, if the other elements are not required or updated in consideration of the housing element update. As a result, the preparation of the housing element should accommodate the difference in planning periods.

In order to comply with statutory requirements, the land inventory in the housing element will need to identify land with a variety of zoning and development standards (i.e., low and high density) to meet the local government’s share of the regional housing need in the five year planning period. At the same time, the land

use element will be setting a variety of land use designations with acreages that drive goals, policies and programs in other elements on a 20-year planning period. In order to maintain consistency with the housing element, a local government should pay particular attention to incorporate and anticipate land needed to accommodate their share of the regional housing need in the five-year planning period and the longer general plan horizon.

Since, the housing element affects a locality’s policies for growth and residential land uses, the jurisdiction should review the entire general plan, especially land-use provisions, to ensure internal consistency is maintained upon any amendment to the housing element or other general plan elements.

Public participation

The housing element has a requirement for public participation that is in addition to public participation provisions in the preparation or update of the general plan (§65351). Specifically, housing element law requires the local government to describe and make dili-

gent efforts to achieve public participation of all economic segments of the community in the development of the housing element.

An effective public participation process should begin at the outset of the housing element update process. Members of the community should be involved in evaluating the accomplishments of the previous element, identifying current needs, resources and constraints, as well as assisting in the development of community goals, policies and actions. Most communities engage residents in the process prior to preparing the draft element. In addition to holding required public hearings at the planning commission and city council or board of supervisor level, an adequate and effective citizen participation process must include additional steps to ensure the public participation of all economic segments of the community (including low- and moderate-income households). The housing element should describe efforts by the locality to:

- ◆ Include all economic segments of the community in the public participation process.
- ◆ Circulate the housing element among housing advocates, organizations serving lower income households and individuals.
- ◆ Involve such groups and persons in the development of the element.

Also, see discussion of General Plan public participation in Chapter 8.

Technical Assistance

The California Department of Housing and Community Development has extensive materials available to assist in the preparation of local housing elements and appreciates the opportunity to facilitate the preparation and implementation of housing elements. Housing element technical assistance information is available on HCD's website at www.hcd.ca.gov. Refer to the Division of Housing Policy Development and the section pertaining to State Housing Planning. Among other items, the Housing Element section contains the department's publication *Housing Element Questions and Answers* and the Government Code sections addressing state housing element law.

In addition to a variety of demographic data, including Census data, HCD's website includes information about planning and community development laws, housing element update schedule and review status of housing elements. HCD also operates a computerized database, the Clearinghouse for Affordable Housing and Community and Economic Development Finance, to

provide up-to-date information about financial resources available to local governments, housing developers and sponsors.

CONSERVATION ELEMENT

The conservation element provides direction regarding the conservation, development, and utilization of natural resources. Its requirements overlap those of the open-space, land use, safety, and circulation elements. The conservation element is distinguished by being primarily oriented toward natural resources.

Population growth and development continually require the use of both renewable and nonrenewable resources. One role of the conservation element is to establish policies that reconcile conflicting demands on those resources. In recent years, some jurisdictions have adopted policies related to mitigation banking, conservation easement programs, and the state and federal Endangered Species acts in their conservation elements. Other local jurisdictions have incorporated policies related to Natural Community Conservation Planning (NCCP) programs. NCCP is a broad-based approach to the regional protection of plants and animals and their habitats while allowing for compatible and appropriate economic activity. This and other programs, such as those under the Williamson Act (§51230, et seq.) and the Timberland Productivity Act (§51100, et seq.), provide important implementation tools.

Court and Attorney General Interpretations

As of this writing, the conservation element has not been the specific subject of either court decisions or legal opinions of the California Attorney General.

Relevant Issues

To the extent that they are relevant, the following issues must be addressed with regard to the conservation, development, and utilization of natural resources:

- ◆ Water and its hydraulic force
- ◆ Forests
- ◆ Soils
- ◆ Rivers and other waters
- ◆ Harbors
- ◆ Fisheries
- ◆ Wildlife
- ◆ Minerals
- ◆ Other natural resources

The discussion of water in the conservation element

must be prepared in coordination with water suppliers and include any information on water supply and demand prepared pursuant to §65352.5. The conservation element may also cover the following optional issues:

- ◆ The reclamation of land and waters.
- ◆ The prevention and control of the pollution of streams and other waters.
- ◆ The regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- ◆ The prevention, control, and correction of the erosion of soils, beaches, and shores.
- ◆ The protection of watersheds.
- ◆ The location, quantity, and quality of rock, sand, and gravel resources and other minerals of state-wide or local significance.
- ◆ Flood control and floodplain management.
- ◆ Biologic diversity and its implications for the ecologic sustainability of plant and wildlife habitats.

Ideas for Data and Analysis

Evaluating and quantifying a city's or county's natural resources, including the condition and sustainability of natural resources systems, is necessary for the preparation of a comprehensive conservation element. Analyses should be based upon sound ecologic principles and should recognize the relationships among natural communities and the importance of the natural environment in land use planning. The following is a list of ideas for data and analysis that should be considered in the development of locally relevant policies for the conservation, development, and utilization of natural resources.

Water

- ◆ Inventory water resources, including rivers, lakes, streams, bays, estuaries, reservoirs, groundwater basins (aquifers), and watersheds. (MAP) (L, O)
- ◆ Identify the boundaries of watersheds, aquifer recharge areas, and groundwater basins (including depths). (MAP) (L, O)
 - Assess local and regional water supply and the related plans of special districts and other agencies.
 - Analyze the existing land use and zoning within said boundaries and the approximate intensity of water consumption.
- ◆ Map the boundaries and describe unique water re-

sources (e.g., saltwater and freshwater marshes and wild rivers). (L, O)

- ◆ Assess the current and future quality of various bodies of water, water courses, and groundwater. (L, O)
- ◆ Inventory existing and future water supply sources for residential, commercial, industrial, and agricultural uses. (L, O)
- ◆ In conjunction with water suppliers, assess existing and projected demands upon water supply sources, including agricultural, commercial, residential, industrial, and public demands. (L, O)
- ◆ In conjunction with water suppliers, assess the adequacy of existing and future water supply sources. (L, O)
- ◆ Map riparian vegetation. (L, O)
- ◆ Assess the use of water bodies for recreational purposes. (L, O)

Forests

- ◆ Inventory forest resources and perform a comprehensive analysis of conservation needs for forests and woodlands and of the interrelationships forests and woodlands have with watersheds. (MAP) (L, O)
 - Describe the type, location, amount, and ownership of forests with a value for commercial timber production, wildlife protection, recreation, watershed protection, aesthetics, and other purposes.
 - Project alternative land uses within resource areas, including density and intensity of development.
 - Describe the types, location, amount, and lot sizes of land and timber resources subject to timberland production zoning.
 - Identify areas of five acres or more containing oak woodlands made up of Blue, Engelman, Valley, or Coast Live oak species. (MAP)

Soils

- ◆ Inventory soil resources. (MAP) (L, O)
 - Describe the location, acreage, and extent of different soil types and farmland soils (including prime farmland) in the planning area using the Natural Resources Conservation Service's Land Capability Classification System or the Storie Index.
 - Identify areas subject to soil erosion and landslides.

- Map land within Agricultural Preserves and/or subject to Williamson Act contracts or Farmland Security Zone contracts.
- Identify additional areas potentially qualifying for inclusion in Agricultural Preserves or other agricultural preservation programs.

Harbors

- ◆ Assess the adequacy of port, harbor, and water-related transportation facilities and the need for expansion and improvements. (L, CI)
 - Gather historical data on the use of facilities.
 - Project future demand based on new or expanded economic activities and recreational trends.
 - Review harbor and port district plans for information on planned improvements.

Fisheries

- ◆ Identify water bodies and watersheds that must be protected or rehabilitated to promote continued recreational and commercial fishing, including key fish spawning areas.
- ◆ Evaluate water quality, temperature, and sources of contaminants.
- ◆ Identify physical barriers (man-caused or natural) to fish populations within the watershed.
- ◆ Identify water bodies used for subsistence fishing.

Wildlife

- ◆ Inventory natural vegetation, fish, wildlife, and their habitats, including rare, threatened, and endangered species. (MAP) (L, O)
 - Inventory plants, natural communities, and special animals using the Department of Fish and Game's Natural Diversity Database. The database covers all areas of the state and produces overlay printouts for use with USGS quadrangle maps.
 - Identify the types of animals that might be found in a particular habitat, the time of year they might be found there, and their activities (e.g., winter range, breeding, etc.) using information from the Department of Fish and Game's Wildlife Habitat Relationships Program. Contact the Wildlife Management Division of the Department of Fish and Game for more information.
 - Consult with the Department of Fish and Game and U.S. Fish and Wildlife Service

regarding listed species

- Analyze any adopted Habitat Conservation Plan or Natural Communities Conservation Plan for pertinent policies. (O)
- ◆ Assess the potential effects of development on the continuity of plant and wildlife habitats.
 - Analyze the potential for development patterns to fragment plant and wildlife habitat.
 - Analyze regional trends in development to determine their effects on natural resources.

Minerals, including rock, sand, and gravel resources

- ◆ Inventory mineral resources. (MAP) (L, O)
 - Identify the type, location, extent, and quality of mineral, oil, gas, and geothermal resources. (O)
 - Locate mineral resource areas classified or designated by the State Mining and Geology Board under the Surface Mining and Reclamation Act. (MAP) (L, O)
 - Identify existing mining areas and oil, gas and geothermal wells (and associated developments). (MAP) (L, O)

Reclamation of land

- ◆ Inventory lands adversely affected by mining, prolonged irrigation, landfill activities, the storage or disposal of hazardous materials, erosion, etc., for which reclamation may be feasible. (MAP) (L, O)
- ◆ Review existing mines for compliance with approved plans of operation. (L)
- ◆ Review previous reclamation projects for consistency with the approved standards of the reclamation plan.
 - Contact the Department of Conservation's Office of Mine Reclamation for information concerning mining activities, reclamation standards, and permitted mining sites.

Pollution of water bodies

- ◆ Examine the existing water quality in aquifers, streams, and other bodies of water.
- ◆ Identify existing and potential water pollution sources.
 - Inventory hazardous materials dumps, ponds, and storage sites using information plans developed pursuant to Health and Safety Code §25500, et seq.
 - Identify proposed, existing, and abandoned

- landfill sites. (MAP)
- Examine the results of groundwater tests conducted in the vicinity of landfills and hazardous materials dumps, ponds, tanks, and storage areas.
- Examine regulations regarding the use, storage, and disposal of hazardous materials.
- Inventory existing and proposed land uses that could contribute to the pollution of streams and other waters.
- ◆ Identify the need for community sewage collection and treatment.
- ◆ Assess the capacity of sewers and the treatment capacity of sewage treatment plants.
 - Contact any of the state’s nine Regional Water Quality Control boards for information concerning water quality, wastewater management, and other water-related topics.

Reclamation of water

- ◆ Identify polluted water sources for which reclamation is feasible.

Erosion

- ◆ Identify areas subject to erosion using soils data from the Natural Resources Conservation Service. (MAP)
- ◆ Assess historical data regarding beach and shore erosion.
- ◆ Identify areas subject to potential beach and shore erosion. (MAP)

Flood management

- ◆ Identify flood-prone areas using, among other things: (MAP) (L, S)
 - Reasonably foreseeable flood flows.
 - National Flood Insurance Program maps published by the Federal Emergency Management Agency.
 - Information available from the U.S. Army Corps of Engineers.
 - State Reclamation Board designated floodway maps.
 - Dam failure inundation maps prepared pursuant to §8589.5 (available from the Office of Emergency Services).
 - Historical data on flooding, including local knowledge.
- ◆ Identify present and possible flood control works,

their effects and effectiveness, and their costs, including: (MAP) (L, S)

- Dams
- Reservoirs
- Levees
- Flood walls
- Sea walls
- Channel alterations
- Diversion channels and weirs
- ◆ Describe federal, state, and local agencies involved in flood control, including information such as: (L, S)
 - Jurisdiction.
 - Regulatory powers.
 - Existing floodplain regulations, such as presidential or gubernatorial executive orders, interstate compacts, and statutes.
 - The Federal Emergency Management Agency’s National Flood Insurance Program.
 - Available funding and technical assistance.
- ◆ Identify existing and planned development in floodplains, including:
 - Structures, roads, and utilities.
 - Construction methods or designs to protect against flooding.
 - Compliance with existing regulations for flood control (see “Flood Management Element” in Chapter 6).

Other natural resources (examples)

- ◆ Inventory agricultural resources, including grazing land. (L, OS)
 - Identify location, amount, and ownership of land in agricultural production. (MAP)
 - Describe agricultural production in the planning area by crop type.
 - Identify farmlands in accordance with the Natural Resources Conservation Service’s land inventory and monitoring criteria, as shown on the “Important Farmland Maps” prepared by the Department of Conservation. (MAP)
 - Inventory irrigated versus non-irrigated agricultural land use
- ◆ Generally inventory wetlands.
- ◆ Assess air quality, consistent with regional air quality and transportation plans. (O, CI)
 - Analyze air quality trends.
 - Assess current air quality.
 - Analyze potential impacts on air quality of alternative plan proposals and implementa-

Useful Definitions: Conservation Element

Conservation: The management of natural resources to prevent waste, destruction, or neglect.

Erosion: The process by which soil and rock are detached and moved by running water, wind, ice, and gravity.

Habitat: The natural environment of a plant or animal.

Important Farmland Series Maps: Maps maintained by the California Department of Conservation's Farmland Mapping and Monitoring Program (www.conservation.ca.gov/dlrp/fmmp) to show farmland and urban areas in California. These maps are based in part on modern soil surveys published by the Natural Resources Conservation Service and cover much of the state. The maps and associated acreage data are for information only and do not constitute a state prescription for local land use. The maps use eight classifications: "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," "Farmland of Local Importance," "Grazing Land," "Urban and Built-up Land," "Other Land," and "Water." A separate overlay category of "Land Committed to Nonagricultural Use" is also maintained. The Department of Conservation has detailed definitions of these classifications. Generally they are defined as follows:

Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.

Farmland of Statewide Importance: Farmland similar to "Prime Farmland," but with minor shortcomings, such as greater slopes, or with less ability to hold and store moisture. The land must have been used for the production of irrigated crops at sometime during the two update cycles prior to the mapping date.

Unique Farmland: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. The land must have been cropped at some time during the two update cycles prior to the mapping date.

Farmland of Local Importance: Land, of importance to the local economy, as defined by each county's local advisory committee and adopted by its Board of Supervisors. Farmland of Local Importance is either currently producing, or has the capability of production, but does not meet the criteria of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. Authority to adopt or to recommend changes to the category of Farmland of Local Importance rests with the Board of Supervisors in each county.

Grazing Land: Land on which the existing vegetation is suited to the grazing of livestock. This category is used only in California and was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension Service, and other groups interested in knowing the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

Urban and Built-Up Land: Land occupied by structures with a building density of at least one unit to one and a half acres, or approximately six structures to a ten-acre parcel.

Land Committed to Nonagricultural Use: Land that is permanently committed by local elected officials to nonagricultural development by virtue of decisions which cannot be reversed simply by a majority vote of a city council or county board of supervisors. "Land Committed to Nonagricultural Use" must be designated in an adopted local general plan for future nonagricultural development. The resulting development must meet the requirements of "Urban and Built-up Land" or "Other Land." County boards of supervisors and city councils have the final authority to designate lands in this category.

Water: Water areas of at least 40 acres.

Land Capability Classification (U.S. Natural Resources Conservation Service): A grouping of soils into classes (I-VIII), subclasses, and units according to their suitability for agricultural use, based on soil characteristics and climatic conditions.

Minerals: Any naturally occurring chemical element or compound, or groups of elements and compounds, formed from inorganic processes and organic substances, including, but not limited to, coal,

Useful Definitions: Conservation Element (Continued)

peat, and bituminous rock, but excluding geothermal resources, natural gas, and petroleum (Public Resources Code §2005). Gold, sand, gravel, clay, crushed stone, limestone, diatomite, salt, borate, potash, etc., are examples of minerals. Despite the statutory definition of “mineral,” local governments may also want to consider geothermal, petroleum and natural gas resources along with their planning for minerals.

Non-Renewable Natural Resources: Inanimate resources that do not increase significantly with time and whose use diminishes the total stock (e.g., minerals, fossil fuels and fossil water).

Prime Agricultural Land: “Prime agricultural land” means the following:

- (1) All land which qualifies for rating as Class I or Class II in the Natural Resources Conservation Service land use capability classifications.
- (2) Land which qualifies for rating 80 through 100 in the Storie Index Rating.
- (3) Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture.
- (4) Land planted with fruit- or nut-bearing trees, vines, bushes, or crops that have a non-bearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars (\$200) per acre.
- (5) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than two hundred dollars

(\$200) per acre for three of the previous five years (§51201 (c)). (NOTE: This statutory definition may be somewhat dated.)

Renewable Natural Resources: Resources that can be replaced by natural ecological cycles or sound management practices (e.g., forests and plants).

Riparian Habitat: The land and plants bordering a watercourse or lake.

Storie Index: A numerical system (0-100) rating the degree to which a particular soil can grow plants or produce crops, based on four factors, including soil profile, surface texture, slope, and soil limitations.

Timber: “Trees of any species maintained for eventual harvest for forest products purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock” (§51104(e)).

Timberland Production Zone: An area which has been zoned pursuant to §51112 or §51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

Watershed: The total area above a given point on a watercourse that contributes water to the flow of the watercourse; the entire region drained by a watercourse.

Wetlands: Areas that are permanently wet or periodically covered with shallow water, such as saltwater and freshwater marshes, open or closed brackish marshes, swamps, mud flats, vernal pools, and fens. This also includes wetlands under the jurisdiction of the U.S. Army Corps of Engineers which encompasses vernal pools and other areas with hydrology, soils, and vegetation meeting federal regulatory standards.

tion measures.

- Identify air quality impacts from vehicle emissions.
 - Identify air quality impacts from all other sources.
- ◆ Inventory energy-producing resources and energy conservation opportunities.
- Inventory resources, including wind, solar, hydroelectric, and biomass (using forest, domestic, and agricultural wastes).
 - Inventory energy conservation opportunities, including transportation economies, urban

design (i.e., land use patterns), and residential, commercial, and industrial conservation programs.

Ideas for Development Policies

The conservation element should contain objectives, policies, principles, plan proposals, and standards for the conservation, development, and utilization of a jurisdiction’s natural resources. Policies should be specific enough to cover the individual resources yet broad and inclusive enough to include the natural systems from which they are produced. The following is a list

of subjects that should be considered during the preparation of the conservation element and included as development policies to the extent that they are locally relevant.

- ◆ The type and intensity of development in or adjacent to water bodies and courses. (L, O)
- ◆ The protection, use, and development of bodies of water and water courses (i.e., rivers, lakes, streams, bays, harbors, estuaries, marshes, and reservoirs). (O)
- ◆ The protection of and development in watersheds and aquifer recharge areas. (L, O)
- ◆ The enhancement and protection of the quality of surface water resources and the prevention of contamination.
- ◆ The protection or improvement of water quality. (O)
- ◆ The preservation of wetlands, including jurisdictional wetlands and saltwater and freshwater marshes consistent with federal and state requirements. (O)
- ◆ The protection of wild rivers and their watersheds. (O)
- ◆ The provision of domestic, industrial, and agricultural water. (O)
- ◆ The conservation of water supplies (ground and surface).
- ◆ The conservation of riparian vegetation. (O)
- ◆ The designation and utilization of hydroelectric power generating sites. (MAP) (L)
- ◆ The management and protection of forestry resources. (L, O)
- ◆ The conservation of forests for wildlife protection, recreation, aesthetic purposes, etc. (L, O)
- ◆ The conservation of oak woodlands. (O)
- ◆ The application of timberland production zoning. (L)
- ◆ The rezoning of land zoned for timberland production. (L)
- ◆ The minimization of conflict between agricultural and urban land uses through transitions in land use designations. (L)
- ◆ The management and use of agricultural soils. (L, O)
- ◆ The control and prevention of erosion. (O, S)
- ◆ The encouragement of the use of public advisory committees to develop landscape-level goals, standards, and measures for protecting plant and wildlife communities and sensitive watersheds. (O)
- ◆ The development and improvement of port, harbor, and waterway facilities. (CI)
- ◆ The protection of water bodies and watersheds that are important for the management of commercial and recreational fishing. (L, O)
 - Protection of water bodies that are important for subsistence fishing.
- ◆ The protection of fish and wildlife and their habitats. (O)
- ◆ The protection of plant species and their habitats. (O)
- ◆ The preservation and protection of rare, threatened, or endangered species within the planning area, including candidate species and species of special concern consistent with state and federal regulations and law. (O)
- ◆ The promotion of congruency and cooperation with the management plans and policies of other local, state, and federal agencies, non-profits, and other groups involved with the preservation of resources.
- ◆ The recognition and implementation of enacted Habitat Conservation Plans (including multispecies plans) and Natural Communities Conservation Programs. (O)
- ◆ The protection, use, and development of mineral deposits, including oil, gas, and geothermal resources. (This should include policies developed under the Surface Mining and Reclamation Act. See Chapter 9.) (O)
- ◆ Development adjacent to or near mineral deposits, mining sites, and oil, gas, and geothermal developments. (L, O)
- ◆ Land reclamation in areas where mining, prolonged irrigation, landfill activities, hazardous materials storage or disposal, erosion, etc., have occurred. (L)
- ◆ The establishment of resource conservation areas. (O)
- ◆ The elimination of existing water pollution sources.
- ◆ The development, improvement, and timing of major sewer, water, and storm drainage projects needed to maintain water quality. (L, CI)
- ◆ The siting of landfills in relation to water bodies (among other considerations).
- ◆ The siting of hazardous materials storage and disposal facilities with regard to nearby water bodies (among other considerations). (L)

- ◆ The control of hazardous materials in areas where water pollution is possible.
- ◆ The reclamation of polluted water bodies.
- ◆ Flood management.
 - Floodwater management. (O, S)
 - Floodplain management. (L, O, S)
- ◆ The conservation, development, and utilization of other natural resources, such as:
 - Farm and grazing lands. (L, O)
 - Air quality. (CI, L, O)
 - Energy resources. (H)
- ◆ The protection or improvement of air quality through coordinated efforts with other public agencies and jurisdictions. (L, CI, O)
- ◆ The enhancement and protection of archaeological, historical, and paleontological resources.

Technical Assistance

The following state agencies may provide information or assistance for the preparation of the land use element:

- ◆ Coastal Commission
- ◆ Coastal Conservancy
- ◆ Department of Boating and Waterways
- ◆ Department of Conservation, including the Division of Land Resource Protection and the Division of Mines and Geology
- ◆ Department of Fish and Game
- ◆ Department of Food and Agriculture
- ◆ Department of Forestry and Fire Protection
- ◆ Department of Water Resources
- ◆ Energy Commission
- ◆ Environmental Protection Agency
- ◆ Integrated Waste Management Board
- ◆ Wildlife Conservation Board

OPEN-SPACE ELEMENT

The open-space element guides the comprehensive and long-range preservation and conservation of “open-space land” (§65563). Open-space land is defined in statute as any parcel or area of land or water that is essentially unimproved and devoted to open-space use (§65560(b)).

Along with the housing element, the open-space element has the most detailed statutory intent (see §65561 and §65562) and, next to land use, is the broadest in

scope. Because of this breadth, open-space issues overlap those of several elements and the open-space element is commonly combined with other elements.

For example, the land use element’s issues around agriculture, natural resources, recreation, enjoyment of scenic beauty and, to a certain extent, public grounds are covered by open-space provisions. “Open space for the preservation of natural resources” and “open space used for the managed production of resources” encompass the concerns of the conservation element. “Open space for public health and safety” covers issues similar to those found in the safety element.

Court Interpretations

In *Save El Toro Association v. Days* (1977) 74 Cal.App.3d 64, the California Court of Appeal held that because the City of Morgan Hill had not adopted an open-space plan, the city could not acquire, regulate, or restrict open-space land or approve a subdivision map. Mere adoption, however, does not protect a local jurisdiction from the adverse consequences of a lawsuit challenging an open-space element. An open-space element must also meet the specifications of the Government Code.

Open-space elements have equal legal status with all other elements. In *Sierra Club v. Board of Supervisors of Kern County* (1981) 126 Cal.App.3d 698, the California Court of Appeal voided a precedence clause that gave a land use element priority over an open-space element on the grounds that it violated §65300.5 (which requires that elements of a general plan comprise an integrated, internally consistent, and compatible statement of policy).

No Oil, Inc. v. City of Los Angeles (1988) 196 Cal.App.3d 223 interprets the meaning of the term “open space for the managed production of resources.” A citizens’ group challenged the city’s approval of oil drilling zones in a coastal area designated as open space by the Brentwood-Pacific Palisades district plan. Absent specific contradictory language in the district plan, the court held that because oil recovery is the managed production of a natural resource, it was therefore consistent with the plan’s open-space designations. In light of this decision, OPR strongly suggests that local general plans specify the types of land use that are intended to comprise open space.

Relevant Issues

The following topics should be addressed in the open-space element to the extent that they are locally relevant:

- ◆ Open space for the preservation of natural resources including, but not limited to:

- Areas required for the preservation of plant and animal life including habitat for fish and wildlife.
- Areas required for ecologic and other scientific study; rivers, streams, bays and estuaries; and, coastal beaches, lake shores, banks of rivers and streams, and watersheds.
- ◆ Open space used for the managed production of resources including, but not limited to:
 - Forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber.
 - Areas required for recharge of ground water basins.
 - Bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries.
 - Areas containing major mineral deposits, including those in short supply.
- ◆ Open space for outdoor recreation including, but not limited to:
 - Areas of outstanding scenic, historical, and cultural value.
 - Areas particularly suited for park and recreational purposes, including access to lake shores, beaches, and rivers and streams.
 - Areas that serve as links between major recreational and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.
- ◆ Open space for public health and safety including, but not limited to:
 - Areas that require special management or regulation because of hazardous or special conditions, such as earthquake fault zones, unstable soil areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs, and areas required for the protection and enhancement of air quality.
 - Open-space areas designed for fuel break and fuel reduction zones, helispots, and fire access. Open-space fire safety standards and policies can be implemented by the adoption of open-space zoning regulations. Such regulations would help eliminate the owner-by-owner agreements and public agency financing now necessary for construction and maintenance.
 - Historical natural hazard boundaries, such as inundation areas, landslide paths, debris flows, sites of wildfires, and earthquake faults.
- ◆ Demands for trail-oriented recreational use (Public Resources Code §5076). (Cities and counties must consider such demands in developing specific open-space programs.)
- ◆ The retention of all publicly owned corridors for future use (e.g., abandoned rail lines, utility corridors, easements, etc.).
- ◆ The feasibility of integrating city and county trail routes with appropriate segments of the California Recreational Trails System (Public Resources Code §5076). (See the California Recreational Trails Act, commencing with Public Resources Code §5070.)

Ideas for Data and Analysis

The following are suggested topics for data collection and analysis for the development of open-space policies.

Open space for the preservation of natural resources

- ◆ Inventory of natural vegetation, fish and wildlife, and their habitats, including rare and endangered species. (MAP) (CO, L)
 - Inventory plants, natural communities, and special animals using the Department of Fish and Game's Natural Diversity Database. The database covers all areas of the state and produces overlay printouts for use with USGS quadrangle maps.
 - List the types of animals that might be found in a particular habitat, the time of year they might be found there, and their activities (e.g., breeding) using information from the Wildlife Habitat Relationships Program. Contact the Department of Fish and Game's Wildlife Management Division for information.
 - Inventory existing and proposed areas for ecologic and other scientific study.
 - Examine any adopted Habitat Conservation Plan (HCP) or Natural Communities Conservation Plan (NCCP).
 - Inventory oak woodlands. (CO)
 1. Identify existing oak woodlands where the density of trees is five or more oaks per acre and Blue, Engelman, Valley, or Coast Live oak species dominate. (MAP)
 2. Assess the effects of past land use decisions on oak woodlands and identify

factors causing any decline in oak woodlands.

- ◆ Consult with the Department of Fish and Game and the U.S. Fish and Wildlife Service regarding species on the threatened or endangered species lists.
- ◆ Inventory water resources, including rivers, lakes, streams, bays, estuaries, reservoirs, groundwater basins (aquifers), and watersheds. (MAP) (CO)
 - Map water bodies.
 - Identify the uses of waterways and other bodies of water (e.g., transportation, harbors, and domestic, industrial, agricultural, and recreational use).
 - Delineate the boundaries of watersheds and aquifer recharge areas and the depth of groundwater basins.
 - Analyze seasonal factors in water availability.
- ◆ Assess the quality of various bodies of water, water courses, and groundwater. (CO)
 - Generally delineate the boundaries of and describe unique water resources (e.g., saltwater and freshwater marshes, wild rivers, etc.).
 - Map beaches, lakeshores, and river and stream banks.
 - Review plans prepared by the state for designated wild and scenic rivers. (MAP)

Open space for resource management

- ◆ Inventory forest resources. (L, CO)
 - Describe the type, location, amount, and ownership of forests with value for commercial timber production, wildlife protection, recreation, watershed protection, aesthetics, and other purposes. (MAP)
 - Describe the type, location, amount, and ownership of land and timber resources subject to timberland production zoning. (MAP)
- ◆ Inventory agricultural resources, including rangeland. (CO, L)
 - Identify the location, amount, and ownership of land in agricultural production. (MAP)
 - Describe agricultural production in the planning area by crop type.
- ◆ Inventory soil resources. (MAP) (CO)
 - Describe the location, acreage, and extent of different soil types and farmland soils (including prime farmland) in the planning area using the Natural Resources Conservation Service’s Land Capability Classification System or the Storie Index (see “Useful Defini-

tions: Conservation Element” box earlier in this chapter).

- Identify areas subject to soil erosion.
- ◆ Inventory groundwater recharge areas. (MAP) (CO)
- ◆ Inventory water bodies that are important for the management of commercial fisheries. (MAP) (CO)
- ◆ Inventory mineral resources. (L, CO)
 - Identify the type, location, extent, and quality of mineral resources, including oil and gas. (MAP)
 - Describe the location and extent of geothermal resources. (MAP)
 - Describe the location of mineral resource areas classified and designated by the State Mining and Geology Board under the Surface Mining and Reclamation Act. (MAP)

Open space for outdoor recreation

- ◆ Inventory areas of outstanding scenic beauty. (MAP) (L)
- ◆ Inventory historical and cultural resources, including archaeological sites and historically and architecturally significant structures, sites, and districts. (Note: Because of the possibility that archaeological sites may be vandalized, the exact locations of the sites must not be publicized.) (MAP)
- ◆ Assess the demand for public and private parks and recreational facilities and inventory areas particularly suited to parks and recreational purposes. (L)
 - Describe the type, location, and size of existing public (federal, state, regional, and local) and private parks and recreational facilities. (MAP)
 - Review federal, state, regional, and local plans and proposals for the acquisition and improvement of public parks. (MAP)
 - Assess present and future demands for parks and recreational facilities.
 - Identify underserved areas of the community.
- ◆ Inventory points of public access to lakeshores, beaches, rivers, and streams. (MAP) (L)
- ◆ Inventory scenic highway corridors.
 - Identify state highways included in the Master Plan of State Highways Eligible for Official State Designation as Scenic Highways, local highways of scenic significance, and National Scenic Byways and All-American Roads as designated by the U.S. Forest Service. (MAP)
 - Assess identified scenic highway corridors

and their appropriate boundaries, scenic features, and relationship to surroundings; the incompatible, existing development within the corridor; the proposed realignments or improvements; and the potential for future public and private development within the corridor.

- ◆ Inventory recreational trails and areas and assess the demand for them. (MAP) (L)
- ◆ Inventory trails proposed by and developed under the California Recreational Trails Plan of 1978 (Department of Parks and Recreation. See Public Resources Code §5076 and §5070, et seq.).

Open space for public health and safety

- ◆ Review the general geology and seismic history of the region and the planning area. (S)
- ◆ Assess the potential for surface rupture. (S)
 - Perform a geologic evaluation of the potential for displacement along active and potentially active faults in the planning area. (MAP)
 - Map the location of earthquake fault zones designated by the State Geologist under the Alquist-Priolo Earthquake Fault Zoning Act (see Chapter 9). (MAP)
- ◆ Assess the potential for ground shaking. (S)
 - Identify active and potentially active faults in the region. (MAP)
 - Review historical data on seismic ground shaking within the planning area.
 - Perform a geologic evaluation of the potential for ground shaking based on a maximum credible earthquake. (MAP)
- ◆ Assess the potential for ground failure. (S)
 - Perform a geologic evaluation of the potential for seismically induced landslides, mudslides, liquefaction, and soil compaction. (MAP)
- ◆ Assess slope stability. (CO, S)
 - Review historical data on landslides and mudslides.
 - Perform a geologic evaluation of the potential for landslides and mudslides. (MAP)
- ◆ Assess the potential for cliff erosion. (S)
 - Review historical data on cliff erosion.
 - Perform a geologic evaluation of the potential for cliff erosion. (MAP)
- ◆ Assess the potential for land subsidence. (S)
 - Review historical data on land subsidence resulting from extraction of groundwater, gas, oil, and geothermal resources and from hydrocompaction and peat oxidation.
 - Perform a geologic evaluation of the potential for further subsidence. (MAP)
- ◆ Identify flood-prone areas using: (L, CO, S)
 - National Flood Insurance Program maps published by the Federal Emergency Management Agency.
 - Information from the U.S. Army Corps of Engineers.
 - State Reclamation Board designated floodway maps (for the Sacramento and San Joaquin valleys only).
 - Dam failure inundation maps prepared pursuant to §8589.5 (available from the Office of Emergency Services).
 - Locally prepared maps of flood-prone areas and repetitive flood damage sites.
 - Historical data on flooding, including information from conversations with long-time local residents.
- ◆ Identify watersheds and key areas for the protection of water quality and reservoirs. (MAP) (CO)
- ◆ Assess the risk of wildland fires. (S)
 - Identify areas of varying fire hazard severity based on fuel loading (vegetation), weather, slope, and historical data. (MAP)
 - Identify the developments, facilities, and people in and near hazardous areas.
 - Evaluate the adequacy of access to hazardous areas (e.g., types of roads, dead-end roads, etc.).
- ◆ Identify areas necessary for the protection and enhancement of air quality. (MAP)
- ◆ Identify areas with naturally occurring shallow gas deposits.

Ideas for Development Policies

The following are topics that might be covered by open-space element policies:

- ◆ The protection of fish and wildlife and their habitats, including rare and endangered species. (CO)
- ◆ The promotion of and consistency with adopted HCPs and NCCPs. (CO)
- ◆ The protection of rare and endangered plants. (CO)

- ◆ Development in or near existing and proposed areas of ecologic or other scientific study.
- ◆ The protection and preservation of oak woodlands and mandated replacement planting of native oaks where oak woodlands are proposed for alteration. (CO)
- ◆ The protection, use, and development of water bodies and water courses (e.g., rivers, lakes, streams, bays, harbors, estuaries, marshes, and reservoirs). (CO)
- ◆ The protection of beaches, lakeshores, and river and stream banks. (CO)
- ◆ The protection of water quality. (CO)
- ◆ The protection of watersheds and aquifer recharge areas. (L, CO)
 - Type and intensity of development.
 - Drainage runoff and performance standards.
- ◆ The protection of designated wild and scenic rivers. (CO)
- ◆ The protection of forestry resources, including specifications for compatible uses and minimum parcel sizes. (L, CO)
- ◆ The use of timberland production zoning. (L, CO)
- ◆ The protection, use, and development of agricultural lands (e.g., field crops, orchards, grazing, etc.), including specifications for compatible uses and minimum parcel sizes. (L)
- ◆ The encouragement of the use of public advisory committees to develop landscape-level goals, standards, and measures for protecting plant and wildlife communities and sensitive watersheds. (O)
- ◆ The prevention of soil erosion. (CO, S)
- ◆ The preservation of groundwater recharge areas.
- ◆ The protection of water bodies and watersheds that are important for the management of commercial fisheries. (CO)
- ◆ Land use relationships in areas containing major mineral deposits, including policies, plan proposals, and standards developed under the Surface Mining and Reclamation Act (see Chapter 9). (L, CO)
- ◆ The protection of areas of outstanding scenic beauty. (L)
- ◆ The protection of archaeological sites. (L)
- ◆ The preservation of historically or culturally significant sites. (L)
- ◆ The type, location, acquisition, development, and management of public and private parks and recreational areas. (L)
- ◆ A framework for park exactions under the Subdivision Map Act (§66477(d)). (L)
- ◆ The protection of and improved access to lakeshores, beaches, rivers and streams. (L)
- ◆ The protection of local scenic highway corridors.
- ◆ The protection, improvement, development, and maintenance of recreational trails and related facilities.
- ◆ The coordination of trails with access to waterways required under the Subdivision Map Act.
- ◆ The integration of local trails with state and federal trail systems (see Public Resources Code §5076).
- ◆ The type, location, and intensity of development in areas of seismic hazards. (L, S)
- ◆ The type, location, and intensity of land uses in areas with unstable soils. (L, CO, S)
- ◆ Non-structural floodplain management approaches. (L, CO)
- ◆ The type, location, and intensity of land uses within flood-prone areas. (L, CO, S)
- ◆ The type, location, and intensity of development in areas subject to inundation from dam failures. (L, S)
- ◆ The type, location, and intensity of land uses in fire-hazard areas. (S)

Ideas for Open-Space Action Programs

Every local open-space element is required to contain a specific action program (§65564). What follows are some ideas for action programs to preserve open space. While the first item on the list (open-space zoning) is a state requirement for counties and general law cities, the other ideas are only suggestions and are meant to stimulate thinking about action programs. More detailed suggestions can be found in OPR’s publication *Putting Action into the Open-Space Element*.

- ◆ Open-space zoning pursuant to §65910 (e.g., exclusive agriculture zones, large-lot zones, overlay zones for hazards areas, etc.).
- ◆ Public acquisition of open space (see Chapter 10).
- ◆ Private acquisition of open space (e.g., non-profit land trusts or conservancies).
- ◆ Preferential assessments (see Chapter 10).
- ◆ Application of the Quimby Act to subdivision approvals (see §66477).
- ◆ Provisions for open space in specific plans (see Chapter 10).
- ◆ Provisions for open space in development agree-

ments (see Chapter 10).

- ◆ Transfer of development rights.
- ◆ Open space in planned unit developments.
- ◆ Action programs for open space within urbanized areas:
 - Connect existing open spaces to the population with the greatest need for these open spaces. This can be facilitated by:
 1. Extending the hours of existing recreational facilities by lighting them at night.
 2. Creating a “vacant lot” task force to examine ways to allow publicly owned vacant parcels to convert to interim passive use parks and community gardens.
 3. Expanding parks and schools and assisting schools to convert asphalt to turf.
 4. Funding and expanding various types of parks and recreational programs.
 - Impose impact fees on new development where justified:
 1. Include open-space acquisition in capital improvement programs.
 2. Employ land use controls to impose reasonable and proportional impact fees to acquire open space.

Technical Assistance

The following state agencies may provide information or assistance for the preparation of the open space element:

- ◆ Air Resources Board
- ◆ Coastal Commission
- ◆ Coastal Conservancy
- ◆ Department of Boating and Waterways
- ◆ Department of Conservation
- ◆ Department of Fish and Game
- ◆ Department of Forestry and Fire Protection
- ◆ Department of Parks and Recreation
- ◆ Department of Water Resources
- ◆ Resources Agency, including the Legacy Project
- ◆ Seismic Safety Commission
- ◆ Wildlife Conservation Board

NOISE ELEMENT

The purpose of the noise element is to limit the exposure of the community to excessive noise levels. In 1976, the Department of Health Services issued the first

Noise Element Guidelines pursuant to Health and Safety Code §46050.1, followed shortly thereafter by a model noise ordinance. In 1984, revisions to the general plan statutes made extensive changes to the noise element requirements (Chapter 1009, Statutes of 1984). These revisions shortened the list of issues required by statute and gave flexibility to local governments in analyzing the issues and subjects pertinent to the local planning area.

Local governments must “analyze and quantify” noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that “minimizes the exposure of community residents to excessive noise.” Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions. The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the land use, circulation, and housing elements.

The noise element must be used to guide decisions concerning land use and the location of new roads and transit facilities since these are common sources of excessive noise levels. The noise levels from existing land uses, including mining, agricultural, and industrial activities, must be closely analyzed to ensure compatibility, especially where residential and other sensitive receptors have encroached into areas previously occupied by these uses.

Caltrans administers several freeway noise control programs. In general, these are applied to residential and school uses that preexisted the particular freeway. For instance, noise attenuating walls are installed along the freeway frontages of qualified residential development under the New Construction or Reconstruction and Community Noise Abatement programs. In addition, there are a number of schools adjacent to freeways that have qualified for School Noise Abatement Program funds for the acoustical attenuation of classrooms.

Local airports are subject to the noise requirements of the Federal Aviation Administration and noise standards under Title 21, §5000, et seq., of the California Code of Regulations. These standards are designed to cause the airport proprietor, aircraft operators, local governments, pilots, and Caltrans to work cooperatively to diminish noise problems. The Federal Aviation Act,

however, preempts local regulations controlling noise at airports themselves and limits arrival and departure times of jet aircraft flights. (See *City of Burbank v. Lockheed Air Terminal* (1973) 93 S.Ct 1854 and 53 Ops.Cal.Atty.Gen 75 (1970)).

The Caltrans Office of Transportation Laboratory publishes the *Caltrans Noise Manual* and numerous reports on mitigating transportation noise. The *California Airport Land Use Planning Handbook*, published by Caltrans' Division of Aeronautics, includes noise information relating to airports.

Court and Attorney General Interpretations

As of this writing, no noise element prepared since the statutes' 1984 revision has been the subject of an appellate court decision or Attorney General opinion. However, three past appellate court cases remain germane.

The content of the noise element was one of the central issues in *Camp v. County of Mendocino* (1981) 123 Cal.App.3d 334. Mendocino County's element did not quantify noise levels, did not include an inventory of current and expected noise exposure (noise contours), and was apparently not supported by monitoring data. As a result, the court found the element to be inadequate. The county's argument that the existing element was sufficient for a quiet rural county was not persuasive to the court, since the statute was neither subjective nor geographical. The *Camp* decision underscores the importance of comprehensive data collection and analysis.

The decision in *Neighborhood Action Group v. County of Calaveras* (1984) 156 Cal.App.3d 1176, highlights the importance of including the noise element in the land use decision-making process. In this instance, where a conditional use permit for a surface mining operation was at issue, the appeal court stated that "a quantitative inventory of existing transportation noise must be compared with that added by a particular project. The aggregate noise level must be measured against policy statements and standards required to be in the general plan." This decision makes clear that the noise element must be adequate to serve as the basis for analyzing projects that may potentially increase noise levels.

Pursuant to the decision in *Guardians of Turlock's Integrity v. City of Turlock* (1983) 149 Cal.App.3d 584, a general plan is invalid if it lacks a noise element. Furthermore, in the words of the court, "unless the general plan sets noise guidelines, an EIR addressing noise issues lacks meaning."

Relevant Issues

The noise element should cover those issues and sources of noise relevant to the local planning area. The element should utilize the most accurate and up-to-date information available to reflect the noise environment, stationary sources of noise, predicted levels of noise, and the impacts of noise on local residents. It should be as detailed as necessary to describe the local situation and offer solutions to local noise problems. Issues to be addressed by the noise element include the following:

- ◆ Major noise sources, both mobile and stationary.
- ◆ Existing and projected levels of noise and noise contours for major noise sources.
- ◆ Existing and projected land uses and locational relationship to existing and projected noise sources. (MAP) (L)
- ◆ Existing and proposed sensitive receptors, including:
 - Hospitals.
 - Convalescent homes.
 - Schools.
 - Churches.
 - Sensitive wildlife habitat, including the habitat of rare, threatened, or endangered species.
- ◆ The extent of "noise problems in the community."
 - Survey of community to determine location and extent.
- ◆ Methods of noise attenuation and the protection of residences and other sensitive receptors from excess noise.
- ◆ Implementation measures and possible solutions that address existing and foreseeable noise problems.

Ideas for Data and Analysis

The following are suggested topics for data collection and analysis:

Identification and appraisal of major noise sources

- ◆ Identify major noise sources, including:
 - Highways and freeways.
 - Primary arterials and major local streets.
 - Passenger and freight on-line railroad operations and ground rapid transit systems.
 - Commercial, general aviation, heliport, heli-stop, and military airport operations; aircraft overflights; jet engine test stands; and all other ground facilities and maintenance func-

- tions related to airport operation.
- Local industry, including, but not limited to, railroad classification yards.
- Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

Analysis and quantification of the local noise environment

- ◆ Select the method of noise measurement or modeling to be used in the noise element.
- ◆ Measure major sources of noise, including, but not limited to, highways and freeways, arterial and major streets, railroads, railroad yards, ground rapid transit, airports and aviation-related sources, industrial plants, and other stationary ground sources.
- ◆ Map noise level contours, expressed in CNEL or Ldn, for the area surrounding each of the identified noise sources.
- ◆ Project future noise sources, noise levels, and anticipated impacts upon existing and proposed land uses.
- ◆ Analyze the current and future impacts on community residents of noise emanating from the identified sources. (L)
- ◆ Analyze current and predicted levels of transportation noise consistent with the requirements of the Federal Intermodal Surface Transportation Efficiency Act. (CI)

Minimization of noise exposure

- ◆ Inventory existing and proposed sensitive uses, including residential areas, hospitals, convalescent homes, schools, churches, and sensitive wildlife habitat.
- ◆ Identify local noise problems and areas of conflict between noise sources and sensitive uses.
- ◆ Identify means of noise mitigation, such as soundproofing, landscaping and berms, building design and setbacks, buffer areas, operating hours of major sources, and other techniques.

Ideas for Development Policies

The following are the types of development policies that may be contained in a noise element, as locally relevant:

- ◆ The adoption of noise impact and attenuation standards, consistent with the Noise Element Guide-

lines and the Uniform Building Code.

- ◆ Guidance for zoning and development through the adoption of specified noise mitigation, including provisions for increased building setbacks, buffer areas, compatibility zoning, and other land use strategies. (L)
- ◆ The establishment of local standards and guidelines for noise evaluation, including baseline specifications.
- ◆ The evaluation of new residential and other sensitive uses for consistency with noise standards in areas adjacent to major sources of noise. (L)
- ◆ The review of all land use and development proposals for compliance with noise and land use compatibility standards.
- ◆ Guidance for the location and design of transportation facilities to maintain acceptable noise levels. (L, CI)
- ◆ The control of stationary noise at the source through the use of insulation, berms, building design/orientation, buffer areas, staggered operating hours, and other techniques. (L, O)
- ◆ The minimization of noise exposure around airports in correlation with the policies of the local Airport Land Use Plan and airport noise standards pursuant to Title 21, §5000, et seq., California Code of Regulations. (L)
- ◆ The correlation of noise element concerns with the objectives, policies, and plan proposals of the land use, circulation, and open-space elements in order to minimize community noise exposure.
- ◆ The achievement of noise compatibility between residential and other surrounding land uses, including commercial and industrial.

Technical Assistance

Various noise prediction models can be used to address transportation and aircraft noise in the noise element. For example, the Federal Highway Administration's Traffic Noise Model can calculate noise levels using acoustical algorithms and emission levels for five standard vehicle types: automobiles, medium trucks, heavy trucks, buses, and motorcycles. More information can be obtained from the Federal Highway Administration's Turner-Fairbank Highway Research Center at www.tfhrc.gov. Information regarding noise models can also be obtained from the Federal Aviation Administration's Office of Environment and Energy at www.aee.faa.gov.

SAFETY ELEMENT

The aim of the safety element is to reduce the potential risk of death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. Other locally relevant safety issues, such as airport land use, emergency response, hazardous materials spills, and crime reduction, may also be included. Some local jurisdictions have even chosen to incorporate their hazardous waste management plans into their safety elements.

The safety element overlaps topics also mandated in the land use, conservation, and open-space elements. When preparing a new general plan or undertaking a comprehensive revision of an existing general plan, OPR suggests addressing these common topics in a single place rather than scattering them among four separate elements. The key concern should be to integrate effectively these common issues into the decision-making process.

The safety element must identify hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permits. The element should contain general hazard and risk reduction strategies and policies supporting hazard mitigation measures. Policies should address the identification of hazards and emergency response, as well as mitigation through avoidance of hazards by new projects and reduction of risk in developed areas. Communities may use the safety element as a vehicle for defining “acceptable risk” and the basis for determining the level of necessary mitigation. Policies may address not only methods of minimizing risks, but also ways to minimize economic disruption and expedite recovery following disasters.

Seismic Hazards

The safety element must establish policies to minimize the loss of property and life as a result of earthquake. The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code §2621, et seq.), the Seismic Hazards Mapping Act (Public Resources Code §2690, et seq.), the Unreinforced Masonry Law (§8875, et seq.), and the associated maps and regulations of the State Board of Geologists and Geophysicists and the State Mining and Geology Board offer crucial information and a starting point for local policies.

The Department of Conservation’s California Geological Survey (CGS, also known as the Division of Mines and Geology), the Seismic Safety Commission (SSC), the Office of Emergency Services (OES), and the U. S. Geological Survey (USGS) offer a number of publications that are very useful in identifying, analyzing,

and addressing seismic hazards. The CGS has hazard maps and other information available online at www.conservation.ca.gov/cgs. The SSC’s *California Earthquake Loss Reduction Plan 1997-2001* is a strategic plan for state and local government actions to mitigate earthquake hazards. Technical information about earthquake hazards is available online from USGS at <http://quake.wr.usgs.gov> (maps and reports); the Northern California Earthquake Data Center at <http://quake.geo.berkeley.edu> (technical earthquake data); and the Southern California Earthquake Center at www.scec.org (earthquake modeling and probability). In the San Francisco Bay Area, the Association of Bay Area Governments (ABAG) offers a variety of earthquake hazard and mitigation information on its website at <http://quake.abag.ca.gov>.

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code §2621, et seq.) restricts development on the surface traces of known active faults. The State Geologist has produced maps that identify faults throughout the state and makes copies available to planning agencies. The Seismic Hazards Mapping Act (Public Resources Code §2690, et seq.) directs the State Geologist to map potential ground shaking, liquefaction, earthquake-triggered landslides, and other identifiable earthquake-related hazards in California. Current information and an index map of the over 70 quadrangles zoned under the Seismic Hazards Mapping Act in Orange, Los Angeles, Ventura, Contra Costa, Alameda, Santa Clara, and San Mateo counties can be found on the website of the California Geological Survey, www.conservation.ca.gov/cgs. Call (916) 445-5716 for more information.

The Unreinforced Masonry Law (Government Code §8875, et seq.) requires cities and counties within Seismic Zone 4 to identify hazardous unreinforced masonry buildings and consider local regulations to abate potentially dangerous buildings through retrofitting or demolition. The 1990 Loma Prieta quake graphically illustrated the advantages of abatement ordinances: although seismic retrofitting is primarily aimed at saving lives rather than protecting buildings, structural damage was substantially less in communities that had enacted abatement ordinances than in neighboring communities that had not. Information on the Unreinforced Masonry Law, including the status of compliance as of 2000 and a 1995 model seismic retrofit ordinance, is available online from the Seismic Safety Commission at www.seismic.ca.gov. Call (916) 263-5506 for more information.

Flood Hazard

The safety element must also identify flood hazard areas and establish policies to avoid unreasonable flood

risks. A comprehensive approach should include mapping floodplains; establishing general policies to keep intensive new development out of floodplains or to mitigate and protect against flood impacts if development is to be located in such areas; minimizing impacts on existing development where possible; establishing policies regarding capital improvements or acquisitions necessary to ensure flood protection; and establishing flood management policies which may include both structural and non-structural approaches to flood control using a multi-objective watershed approach.

Flooding is often a regional problem that crosses multiple jurisdictional boundaries. Policies should be developed cooperatively with local, state, and federal agencies, including special districts, to create feasible solutions.

The Department of Water Resources' Division of Flood Management can provide floodplain management and flood control information, including floodplain maps where available (www.dfm.water.ca.gov). The Federal Emergency Management Agency (FEMA) also has helpful information on mitigation. It offers a flood insurance program for communities that enact zoning regulations to limit development within flood zones and prepares Flood Insurance Rate Maps delineating those zones. Information on maps can be found at <http://web1.msc.fema.gov/MS>. The telephone number for the flood insurance program at FEMA's western regional office is (510) 627-7177. Another federal source of flood hazard information is the U.S. Army Corps of Engineers at (415) 977-8173. The Corps can develop or interpret data on flood depths or stages; the extent, duration, and frequency of flooding; and obstructions to flooding. The Corps also offers special studies on all aspects of floodplain management planning. The Natural Resources Conservation Service (NRCS), part of the U.S. Department of Agriculture, offers an Emergency Watershed Protection program and can provide advice on erosion control. NRCS's California office can be contacted at (530) 792-5600.

Fire Hazard

The safety element must identify urban fringe and rural-residential areas that are prone to wildland fire hazards. It must also analyze systems, such as adequate evacuation routes and peakload water supplies, that can reduce fire hazards. The policies of the safety element should form the basis for adopting fire safe ordinances and strategic fire defense system zoning.

The State Board of Forestry has adopted the *California Fire Plan*, which describes the environment at risk for fire and the state's activities to reduce that risk. It has also adopted fire safe regulations for counties with State Responsibility Areas (SRAs) as a means of

reducing pre-fire fuel loads (Title 14, §1270, et seq., California Code of Regulations). Although most of these regulations are too specific and regulatory in nature to include in a general plan, they offer useful ideas for local policies and can be adapted into local fire safe ordinances and regulations outside of SRAs. The state-wide fire safe regulations include:

- ◆ Road standards, including width, surface, and grade, for emergency access and evacuation.
- ◆ Standards for signs identifying streets, roads, and buildings.
- ◆ Minimum water supply reserves for emergency fire use.
- ◆ Fuel breaks (i.e., defensible space) around structures and greenbelts around new subdivisions.

With certain exceptions, after July 1, 1991, all new construction and subdivisions within SRAs must meet the Title 14 standards or equivalent local requirements that have been certified by the State Board of Forestry. In addition, any city or county within an SRA is required to submit a copy of its draft safety element or any amendments to that element to the State Board of Forestry and to every local agency that provides fire protection in its jurisdiction for review and comment at least 90 days prior to adopting or amending the element (Public Resources Code §4128.5). If the city or county decides not to follow the board's or a local agency's recommendations, it must advise the board in writing as to its reasons for not doing so.

For SRAs, the California Department of Forestry and Fire Protection (CDF) and counties that contract with CDF for SRA fire protection can identify areas of high risk/high asset value under the *California Fire Plan*. The objective is to reduce the costs and losses from catastrophic fire by fostering public/private partnerships for prevention, fuels management, and other activities. The *California Fire Plan* may be obtained from CDF or viewed at <http://www.fire.ca.gov>. Individual data layers for counties can be obtained from local Ranger Unit offices.

Fire hazard severity zoning information developed by CDF pursuant to Government Code §51175-§51179 is available from the State Fire Marshal (<http://osfm.fire.ca.gov>) for adoption by local agencies. The State Fire Marshal, pursuant to §51189.5, has also developed a model ordinance for space and structure defensibility linking hazard severity zoning or classification with building standards.

General information about fire safety, including vegetation (fuel load) maps and fire management maps, is available from CDF's Fire and Resource Assessment Program at <http://frap.cdf.ca.gov> or (916)

227-2651.

Health and Safety Code §13143.5 allows local fire officials to change or modify state fire safety codes when reasonable and necessary because of local climate or geologic or topographical conditions. Any changes cannot be less restrictive than the minimum state standard.

Landslides

The landslides generated by the El Nino storms of 1998 and 1992 illustrated the hazards to life and property posed by debris flows and landslides. Deep-seated landslides are caused by the infiltration of water from rain or other origin into unstable material. Fast-moving debris flows are triggered by intense rains that oversaturate pockets of soil on hillsides. Landslides are the result of both natural conditions and the works of man. The California Geological Survey and the U.S. Geological Survey have published landslide inventory and landslide and debris-flow susceptibility maps at a variety of scales for selected areas of California. Areas prone to rainfall-triggered landslides overlap areas where earthquake-induced landslides, mapped under the Seismic Hazard Mapping Act, are likely.

Other Hazards

The Office of Emergency Services administers the Standardized Emergency Management System (SEMS), which provides a framework for coordinating multi-agency emergency responses (§8607 and Title 19, §2400, et seq., California Code of Regulations). SEMS

incorporates mutual aid agreements, establishes lines of communication during emergencies, and standardizes incident command structures, among other things. Local agencies are not required to participate in SEMS but are not eligible for reimbursement of response costs under disaster assistance programs unless they do so. The safety element may include general policies for cooperation and assistance consistent with SEMS. For information about emergency response planning, contact the OES Planning and Technological Assistance Branch at (916) 464-3200.

The safety element may address any other subjects that, in the judgment of the local legislative body, relate to the physical development of the county or city (§65303). A number of local jurisdictions have chosen to include the subject of crime safe community planning. The safety element may be used to establish programs and policies that promote neighborhood, institutional, governmental, and business safety. This need not be limited to protection against criminal activity, but may also include policies designed to avoid accidents throughout the community. These policies are commonly implemented through the design review process and address issues such as:

- ◆ Adequate lighting and landscaping for improved natural surveillance.
- ◆ Park and open-space usership, safety, and accident avoidance.
- ◆ Homelessness issues and residential shelters.
- ◆ Safety and accident prevention through design.

Prior to preparing or revising its safety element, a city or county must consult with the Office of Emergency Services and submit one copy of its draft safety element to the California Geological Survey for review (§65302(g)). These agencies can provide safety element advice, particularly in the areas of emergency response, inundation resulting from dam failure, seismic hazards, and geologic hazards. Local governments must consider the findings of the California Geological Survey prior to final adoption of the safety element. In addition, the Department of Water Resources, pursuant to §65303.4, may develop site design and planning policies to assist local agencies that request help in implementing flood control objectives and other land management needs.

Court and Attorney General Interpretations

As of this writing, the provisions of a safety element have not been the subject of a decision by an appellate court or an interpretation by the California Attorney General.

Urban Design as Crime Prevention

Planners, architects, and law enforcement officials have become increasingly aware of the relationship between urban design and crime prevention. Terms for this concept include Safescape and Crime Prevention Through Environmental Design (CPTED). Planning and design strategies that deter crime include natural surveillance (eyes on the street), walkable environments (human/pedestrian scale), demarcated public and private space, and mixed-use development (high levels of activity).

Resources:

- ◆ International CPTED Association, www.cpted.net
- ◆ *Safescape*, by Art Zelinka and Dean Brennan (APA Planners Press, 2001)

Relevant Issues

The safety element must examine issues related to protecting the community from any unreasonable risks associated with:

- ◆ Seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure.
- ◆ Slope instability leading to mudslides and landslides.
- ◆ Subsidence, liquefaction, and other seismic hazards identified on seismic hazard maps.
- ◆ Other known geologic hazards.
- ◆ Flooding.
- ◆ Wildland and urban fires.

It must also address the following as they relate to known fire and geologic hazards:

- ◆ Evacuation routes and signage.
- ◆ Peakload water supply requirements.
- ◆ Minimum road widths and turnouts.
- ◆ Clearances around structures.

The safety element must also contain a map or maps of known seismic and other geologic hazards. The official maps of the Alquist-Priolo Earthquake Fault Zones and seismic hazard zones, available from the California Geological Survey, may be included or incorporated by reference.

Ideas for Data and Analysis

The following are suggested as topics for consideration during the data collection and analysis phase of preparing a safety element.

The general geology and seismic history of the region and the planning area

- ◆ Map known seismic and geologic hazards. (MAP) (O)

The potential for seismically induced surface rupture

- ◆ Determine the location of active fault zones designated by the State Geologist under the Alquist-Priolo Earthquake Fault Zoning Act. (MAP) (O)
- ◆ Perform a geologic evaluation of the potential for displacement along active and potentially active faults in the planning area. (MAP) (O)

The potential for seismically induced ground shaking

- ◆ Identify active and potentially active faults in the

region. (MAP) (O)

- ◆ Gather historical data on seismic ground shaking within the planning area.
- ◆ Perform a geotechnical evaluation of the potential for localized ground shaking based on the state probabilistic earthquake hazard map. (MAP)
- ◆ Identify hazardous or substandard structures that may be subject to collapse in the event of an earthquake, including, but not limited to, unreinforced masonry buildings (§8875, et seq.).

The potential for seismically induced ground failure

- ◆ Perform a geotechnical evaluation of the potential for earthquake-triggered landslide, mudslide, liquefaction, and soil compaction. (MAP) (O)
- ◆ Determine the location of zones of required investigation for liquefaction and earthquake-induced hazards on a seismic hazard zone map prepared by the State Geologist. (MAP) (O)

The potential for seismically induced dam failure

- ◆ Identify areas that would be inundated in the event of a dam failure. Dam inundation maps are available from the Office of Emergency Services. (MAP) (O)
- ◆ Identify the development, facilities, and people potentially at risk in areas subject to potential inundation. (O)

Slope instability and the associated risk of mudslides and landslides

- ◆ Gather historical data on landslides and mudslides. (O)
- ◆ Identify areas that are landslide-prone by using, among other sources, landslide features maps produced by USGS and the California Geological Survey's seismic hazard zone maps, landslide hazard identification maps, watershed maps, and geology for planning maps. (MAP) (O)
- ◆ Perform a geotechnical evaluation of the local potential for landslides and mudslides. (MAP) (O)

The potential for seismically induced seiches and tsunamis

- ◆ Gather historical data on the occurrence of tsunamis and seiches within the planning area. (O)
- ◆ Perform a geophysical evaluation of the potential "run-up" of tsunami and seiche waves. (MAP) (O)

Useful Definitions: **Safety Element**

Alquist-Priolo Earthquake Fault Zone: A regulatory zone, delineated by the State Geologist, within which site-specific geologic studies are required to identify and avoid fault rupture hazards prior to subdivision of land and/or construction of most structures for human occupancy.

Critical Facility: Facilities that either (1) provide emergency services or (2) house or serve many people who would be injured or killed in case of disaster damage to the facility. Examples include hospitals, fire stations, police and emergency services facilities, utility facilities, and communications facilities.

Fault: A fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side. A fault zone is a zone of related faults which commonly are braided, but which may be branching. A fault trace is the line formed by the intersection of a fault and the earth's surface.

Active Fault: A fault which has exhibited surface displacement within Holocene time (approximately the past 11,000 years).

Potentially Active Fault: A fault which shows evidence of surface displacement during Quaternary time (the last 2 million years).

Flooding: A rise in the level of a water body or the rapid accumulation of runoff, including related mudslides and land subsidence, that results in the temporary inundation of land that is usually dry. Riverine flooding, coastal flooding, mud flows, lake flooding, alluvial fan flooding, flash flooding, levee failures, tsunamis, and fluvial stream flooding are among the many forms that flooding takes.

Ground Failure: Mudslide, landslide, liquefaction or soil compaction.

Hazardous Building: A building that may be hazardous to life in the event of an earthquake because of partial or complete collapse. Hazardous buildings may include:

1. Those constructed prior to the adoption and enforcement of local codes requiring earthquake resistant building design.
2. Those constructed of unreinforced masonry.
3. Those which exhibit any of the following characteristics:
 - ◆ exterior parapets or ornamentation which may fall on passersby
 - ◆ exterior walls that are not anchored to the floors, roof or foundation

- ◆ sheeting on roofs or floors incapable of withstanding lateral loads
- ◆ large openings in walls that may cause damage from torsional forces
- ◆ lack of an effective system to resist lateral forces
- ◆ non-ductile concrete frame construction

Hazardous Material: An injurious substance, including pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals, and nuclear fuels.

Landslide: A general term for a falling, sliding, or flowing mass of soil, rocks, water, and debris. Includes mudslides, debris flows, and debris torrents.

Liquefaction: A process by which water-saturated granular soils transform from a solid to a liquid state during strong ground shaking.

Peakload Water Supply: The supply of water available to meet both domestic water and fire fighting needs during the particular season and time of day when domestic water demand on a water system is at its peak.

Seiche: An earthquake-induced wave in a lake, reservoir, or harbor.

Seismic Hazard Zone: A regulatory zone, delineated by the State Geologist, within which site-specific geologic, soils, and foundation engineering studies are required to identify and avoid earthquake-caused ground-failure hazards, or selected other earthquake hazards, prior to subdivision of land and for construction of most structures for human occupancy.

Subsidence: The gradual, local settling or sinking of the earth's surface with little or no horizontal motion (subsidence is usually the result of gas, oil, or water extraction, hydrocompaction, or peat oxidation, and not the result of a landslide or slope failure).

Seismically Induced Surface Rupture: A break in the ground's surface and associated deformation resulting from the movement of a fault.

Tsunami: A wave, commonly called a tidal wave, caused by an underwater seismic disturbance, such as sudden faulting, landslide, or volcanic activity.

Wildland Fire: A fire occurring in a suburban or rural area which contains uncultivated lands, timber, range, watershed, brush or grasslands. This includes areas where there is a mingling of developed and undeveloped lands.

The potential for land subsidence, liquefaction, and other seismic hazards

- ◆ Collect historical data on land subsidence resulting from extraction of groundwater, natural gas, oil, and geothermal resources and from hydrocompaction. (O)
- ◆ Identify areas of known risk from liquefaction, subsidence, or ground shaking. (MAP)
- ◆ Evaluate the potential risks associated with other known geologic hazards, such as volcanic activity, avalanche, or cliff erosion.
- ◆ Refer to information from the state seismic hazard maps, when available.

The risk of wildland fires

- ◆ Identify and classify areas of varying fire hazard severity based on degree of development, fuel loading (vegetation), weather and slope, accessibility to fire protection assistance (i.e., response time, availability of helispots, proximity of air tanker attack bases, etc.), historical data, and other pertinent information. (MAP) (O)
- ◆ Analyze the potential for fire to critically impact or eliminate habitat or open-space values. Identify the policy implications of fire safe or fuels reduction policies for both public and private conservation or open-space areas. (CO, O)
- ◆ Assess the need for greenbelts, fuel breaks, fuel reduction, and buffer zones around communities for different levels or zones of fire hazard to mitigate potential losses.

The potential for flooding

- ◆ Define the reasonably foreseeable floodplain (MAP) (CO, L, O)
 - Identify areas subject to inundation by a 100-year flood and a 500-year flood.
- ◆ Collect historical data on flooding, such as frequency and intensity. (CO, L, O)
- ◆ Identify areas vulnerable to post-wildfire flooding.

The risk of fires in urban areas

- ◆ Identify and classify areas of varying fire hazard severity based on age, condition, size, occupancy and use of structures and the spacing between them; access; fire flows; fire crew and equipment availability; response time; historical fire data; and other pertinent information. (MAP)

Emergency evacuation routes as they relate to known fire and geologic hazards

- ◆ Evaluate the adequacy of access routes to and from hazardous areas relative to the degree of development or use (e.g., road width, road type, length of dead-end roads, etc.). (CI, O)
- ◆ Identify potential improvements necessary to avoid unreasonable community risk.

Peakload water supply requirements necessary to avoid unreasonable risks from known fire and geologic hazards

- ◆ Evaluate the adequacy of the existing peakload water supply.
- ◆ Project future peakload water supply and demand and needed improvements, if any, to ensure the provision of adequate water supplies.

Minimum road widths and clearances around structures necessary to avoid unreasonable risks from known fire and geologic hazards

- ◆ Evaluate the adequacy of existing standards.
- ◆ Analyze the need for revised standards.
- ◆ Assess the potential for disruption to evacuation routes from landslide movement, fault ruptures, earthquake-triggered failures, and volcanic eruption.

Emergency response

- ◆ Determine the service areas of emergency services, including fire, police, ambulance, etc.
- ◆ Evaluate the adequacy of existing service and the demand for additional service.

Ideas for Development Policies

Here are some ideas for the general types of policies that may be incorporated into the safety element to the extent that they are locally relevant. Policies may take the following forms:

- ◆ Development standards and restrictions to limit risk to acceptable levels within Alquist-Priolo Earthquake Fault Zones, including limits on allowable development, development intensity, and setbacks from the fault trace. (L, O)
- ◆ A determination of what constitutes an “acceptable risk” in the community (e.g., life safety—the state-wide minimum or some higher standard).
- ◆ Requirements for a geologic evaluation of the po-

- tential for displacement prior to site development to limit risk to acceptable levels along identified active and potentially active faults. (O)
- ◆ Regular safety element revisions to incorporate new seismic hazard maps or other information as it becomes available.
 - ◆ The removal or rehabilitation of hazardous or substandard structures that may be expected to collapse in the event of an earthquake, including, but not limited to, unreinforced masonry buildings, bridges, and critical facilities.
 - ◆ Development standards and restrictions, such as limits on the types of allowable development, development intensity/density standards, and subdivision design policies, to limit risk to acceptable levels for sites subject to seismically induced landslide, mudslide, liquefaction, or subsidence. (L)
 - ◆ Requirements for geotechnical evaluation of the potential for earthquake-triggered landslide, mudslide, liquefaction, and subsidence prior to site development to limit risk to acceptable levels in areas where such hazards have been identified. (L, O)
 - ◆ Use of geologic hazard abatement districts to finance the prevention, mitigation, abatement, or control of geologic hazards. (Public Resources Code §26500, et seq.).
 - ◆ Development standards and restrictions to limit risk to acceptable levels within areas that would be inundated as a result of dam failure. (L, O)
 - ◆ Development standards and restrictions, such as subdivision design policies and building setbacks, to limit risk to acceptable levels within areas subject to inundation as a result of a tsunami or seiche. (L, O)
 - ◆ Development standards and restrictions, such as limits on development and restrictions on water wells, in areas subject to subsidence. (L)
 - ◆ Development policies, standards, and requirements, including setback requirements and subdivision design, to limit risk to acceptable levels within areas subject to other known geologic hazards (e.g., volcanic activity, avalanches, cliff erosion, etc.).
 - ◆ Contingency plans for immediate post-earthquake response and longer-term reconstruction activities in areas potentially subject to significant damage.
 - ◆ Requirements for evaluating the potential risks associated with other known geologic hazards, such as volcanic activity, avalanches, or cliff erosion, and for limiting risk to acceptable levels prior to development.
 - ◆ Requirements for geotechnical evaluation prior to site development of the potential for liquefaction and earthquake-triggered landslides in identified seismic hazard zone. (O)
 - ◆ Development standards and restrictions to limit the risk of loss to acceptable levels within identified floodplains or areas subject to potential inundation by a 100-year flood or by levee failure. These might include subdivision design, setback requirements, and development intensity/density standards. (CO, L, O)
 - ◆ Floodplain management policies, including both structural and non-structural approaches, and cooperative actions with other agencies. (CO, L, O)
 - ◆ Policies to support the enactment of floodplain zoning necessary to qualify for FEMA’s National Flood Insurance Program. (CO, L, O)
 - ◆ Development policies, standards, and restrictions to reduce the risk of urban and wildland fires to an acceptable level, including:
 - Peakload water supply requirements and performance standards for urban, suburban, and rural development.
 - Clearances around structures (i.e., defensible space).
 - Property line setbacks for structures in wildland fire hazard areas.
 - Fire equipment response time.
 - Land use intensity/density standards.
 - Subdivision design for fire safety, including defensible space.
 - Fire safe building materials.
 - Standards conforming to the fire safety standards established by the State Board of Forestry for SRAs (Title 14 §1270, et seq., California Code of Regulations).
 - Road standards for fire equipment access.
 - Standards for signs identifying streets, roads, and buildings.
 - Minimum private water supply reserves for emergency fire use.
 - Land use policies and safety standards that take into account the recurrent nature of wildland fires.
 - ◆ Strategies for both structural fire protection and for

preventing or mitigating wildland fire impacts that correspond to different fire hazard levels (e.g., high or very high fire severity in LRAs or high risk/high value areas in SRAs).

- ◆ Policies and standards addressing multihazard evacuation and emergency access, including:
 - Evacuation routes. (MAP)
 - Design, reservation, and requirements for emergency access in new development.
 - Minimum road widths. (CI)
- ◆ Future service facilities. (MAP)
- ◆ Emergency preparedness protocol and procedures, including SEMS.
- ◆ Crime safe community policies and programs to encourage community support and involvement in

crime and accident prevention through planning.

Technical Assistance

The following state agencies can provide information or assistance in the preparation of the safety element:

- ◆ Department of Conservation, including the California Geological Survey (also known as the Division of Mines and Geology) and the State Geologist
- ◆ Department of Forestry and Fire Protection
- ◆ Department of Transportation (Caltrans)
- ◆ Department of Water Resources
- ◆ Governor’s Office of Planning and Research.
- ◆ Office of Emergency Services
- ◆ Seismic Safety Commission