

NATURAL HAZARDS POLICIES

The County will:

GOALS AND OBJECTIVES

15.1 Minimizing Risks from Natural Hazards

Minimize the potential risks resulting from natural hazards, including but not limited to, loss of life, injury, damage to property, litigation, high service and maintenance costs, and other social and economic dislocations.

15.2 Public Information

Inform and educate the public of the areas of highest risk from man-made and natural hazards, the methods available for their abatement and prevention, and appropriate procedures to follow during emergencies.

15.3 Incorporate Information on Natural Hazards into Land Use and Development Decisions

Integrate data on natural hazards into review of land use and development proposals in order to identify hazardous areas, potential constraints to development and/or appropriate mitigation measures.

DEFINITIONS

15.4 Definition of Natural Hazards

Define natural hazards as conditions of potential danger or risk to life and/or property resulting from acts of nature, man-made alterations to the natural environment that create hazardous conditions, and/or hazardous conditions intrinsic to the natural environment. Natural hazards may include risks or vulnerabilities likely to be caused or exacerbated by climate change.

15.5 Definition of Geotechnical Hazards

Define geotechnical hazards as: (1) seismic events, including but not limited to earthquakes, earthquake-induced landslides, liquefaction, subsidence, and tidal flooding damage from earthquake-induced tsunamis and seiches; (2) non-seismic unstable conditions, including but not limited to landsliding, cliff retrenchment, erosion, subsidence, soil creep and shrink/swell conditions; and (3) debris flows and debris avalanches.

15.6 Definition of Fire Hazards

Define fire hazards as wildland or structural fires that occur in areas that are remote, have difficult access for fire vehicles, and/or contain potentially flammable vegetative communities.

15.7 Definition of Flooding Hazards

Define flooding hazards as general and temporary conditions of partial or complete inundation of normally dry land areas due to: (1) the overflow of inland or tidal waters; or (2) the unusual and rapid accumulation of runoff of surface waters resulting from storms, blockage of drainage channels or failures of dams, impoundments, and/or other public works facilities.

15.8 Definition of Critical Facilities and Structures

Define critical facilities and structures as facilities or infrastructure serving or housing many people, including but not limited to hospitals, fire, police and emergency service facilities, water, electricity, natural gas supply, sewage disposal, communications and transportation facilities.

DESIGNATIONS

15.9 Designation of Geotechnical Hazard Areas

Designate as Geotechnical Hazard Areas those areas that meet the definition of geotechnical hazards, including but not limited to:

- a. The areas illustrated on the Natural Hazards map as Alquist-Priolo Special Studies Zones, Tsunami and Seiche Flooding Areas, Coastal Cliff Stability Areas and Areas of High Landslide Susceptibility.
- b. Any additional area delineated by other investigations, mapped in greater detail, and/or considered to be hazardous by the County Department of Public Works, including but not limited to areas delineated on the Geotechnical Hazards Synthesis maps, maps prepared by U.S.G.S. and other appropriate sources.

15.10 Designation of Fire Hazard Areas

Designate as Fire Hazard Areas those areas which are defined by the California Department of Forestry/County Fire Department or other fire protection districts as hazardous, including but not limited to the area within the Hazardous Fire Areas boundaries illustrated on the Natural Hazards map.

15.11 Designation of Flooding Hazard Areas

Designate as Flooding Hazard Areas:

- a. The areas of special flood hazard and dam failure inundation zones as illustrated on the Natural Hazards map.
- b. Any additional area delineated in greater detail as an area of special flood hazard including but not limited to areas illustrated on special flood hazard the Flood Insurance Rate Maps (FIRM) or dam failure inundation zone maps on file with the County Office of Emergency Services.

REGULATION OF DEVELOPMENT

15.12 Locating New Development in Areas Which Contain Natural Hazards

- a. As precisely as possible, determine the areas of the County where development should be avoided or where additional precautions should be undertaken during review of development proposals due to the presence of natural hazards.
- b. Give preference to land uses that minimize the number of people exposed to hazards in these areas.
- c. Determine appropriate densities and development.
- d. Require detailed analysis of hazard risk and design of appropriate mitigation when development is proposed in these areas, including assessment of hazardous conditions expected to be exacerbated by climate change, such as increased risks of fire, flooding, and sea level rise.

15.13 Abatement of Natural Hazards

- a. Inventory and, where feasible, abate, repair, or rehabilitate natural hazard conditions which most directly threaten public health, safety, and property, giving priority to those hazards which directly threaten critical facilities, life and property.
- b. Where feasible, provide for adaptive reuse rather than demolition of existing facilities.

15.14 Disclosure of Natural Hazards

Make efforts to inform the public, including potential buyers of property, that a parcel is located in an area of possible natural hazards. Methods to be used

include but are not limited to provision of access to County data, pre-application conferences, environmental review, deed restrictions, requirements for site-specific investigations, educational programs, or other appropriate mechanisms.

15.15 Critical Facilities

- a. Where practical, avoid the location of new critical facilities in areas which contain significant natural hazards or are likely to contain significant natural hazards due to the impacts of climate change.
- b. Continue to work with public utilities, school districts, and other agencies supplying critical public services to ensure that they have incorporated structural safety and other measures to be adequately protected from natural hazards for both existing and proposed facilities and are prepared for potential disasters affecting these facilities.

PROGRAM RESPONSIBILITIES

ROLE OF THE COUNTY

15.16 Maintaining a Natural Hazards Information Base

- a. Maintain and periodically update clear and comprehensive maps and other information on natural hazards in San Mateo County.
- b. Incorporate new research being conducted by County departments, and State and Federal agencies, and other sources that is useful in the prediction and mitigation of natural hazards.

15.17 Support Research Programs, Efforts for Disaster Prediction and Emergency Preparedness

- a. Support appropriate and useful research programs being conducted by Federal, State and local agencies, and private consultants to improve knowledge of and define mitigation measures for natural hazards and to predict, prepare for, and respond to natural disasters.
- b. Apply, and periodically update the Local Hazard Mitigation Plan (LHMP) and Annex adopted by the Board of Supervisors and incorporated into the General Plan in 2005 and 2016.

GEOTECHNICAL HAZARD POLICIES

The County will:

GENERAL POLICIES

15.18 Determination of Existence of a Geotechnical Hazard

- a. When reviewing development proposals, use the Natural Hazards map to determine general areas where geotechnical hazards may be present.
- b. When the Natural Hazards map does not clearly illustrate the presence or extent of geotechnical hazards, use more detailed maps, including but not limited to the Geotechnical Hazards Synthesis Maps prepared by Leighton and Associates for San Mateo County, geotechnical information maps prepared by the United States Geological Survey, or any other geotechnical investigation or source of information considered to be valid by the County Department of Public Works.

15.19 Appropriate Land Uses and Densities in Geotechnical Hazard Areas

- a. In rural areas, consider lower density land uses that minimize the exposure of large numbers of people to significant geotechnical hazards.
- b. In urban areas, consider higher density land uses that are compatible with the surrounding pattern of development to be appropriate if adequate site specific review of geotechnical hazards has been undertaken and appropriate mitigation measures can feasibly be incorporated into development projects.

REGULATION OF DEVELOPMENT

15.20 Review Criteria for Locating Development in Geotechnical Hazard Areas

- a. Avoid the siting of structures in areas where they are jeopardized by geotechnical hazards, where their location could potentially increase the geotechnical hazard, or where they could increase the geotechnical hazard to neighboring properties.
- b. Wherever possible, avoid construction in steeply sloping areas (generally above 30%).
- c. Avoid unnecessary construction of roads, trails, and other means of public access into or through geotechnical hazard areas.

- d. In extraordinary circumstances when there are no alternative building sites available, allow development in geotechnically hazardous and/or steeply sloping areas when appropriate structural design measures to ensure safety and reduce hazardous conditions to an acceptable level are incorporated into the project.

15.21 Requirement for Detailed Geotechnical Investigations

- a. In order to more precisely define the scope of the geotechnical hazards, the appropriate locations for structures on a specific site and suitable mitigation measures, require an adequate geotechnical investigation for public or private development proposals located: (1) in an Alquist-Priolo Special Studies Zone, or (2) in any other area of the County where an investigation is deemed necessary by the County Department of Public Works.
- b. In order to minimize economic impacts on applicants for development and avoid duplication of information, use the existing information base when the Department of Public Works or appropriate County agency determines that it is adequate.

PROGRAM RESPONSIBILITIES

15.22 Reconstruction Planning

Work with the County Office of Emergency Services to prepare a contingency plan and policies to direct reconstruction efforts after a geotechnical disaster.

15.23 Disclosure of Hazards in Alquist-Priolo Special Studies Zones

Support the mandatory disclosure requirements for parcels located within Alquist-Priolo Special Studies Zones that is required by State law during property transactions.

15.24 Incorporate Geotechnical Concerns During Review of Proposals for New Development

Incorporate geotechnical concerns into the review of proposals for new development through measures including but not limited to: (1) regulation of land use and limitation of density; (2) siting and design of roads, grading, utilities, improvements and structures; (3) requiring site specific geotechnical investigations where appropriate and conformance to the recommendations of those investigations; (4) conformance to defined hazardous areas design criteria; and (5) conformance with established building code requirements.

15.25 Support Efforts to Identify and Abate Hazardous Structures

- a. Support efforts to inventory and abate structures that are particularly vulnerable to damage or failure during geotechnical disasters.
- b. Encourage repair, rehabilitation, or adaptive reuse of structures requiring abatement, rather than demolition.

FIRE HAZARD POLICIES

The County will:

GENERAL POLICIES

15.26 Determination of the Existence of a Fire Hazard

- a. When reviewing development proposals, use the Natural Hazards map to determine the general location of hazardous fire areas.
- b. When the Natural Hazards map does not clearly illustrate the presence or extent of fire hazards, use more detailed maps including but not limited to the Fire Hazard Severity Zones Map prepared by the California Department of Forestry (CDF), any other source of information considered to be valid by CDF or by fire protection districts.

15.27 Appropriate Land Uses and Densities in Fire Hazard Areas

- a. In rural areas, consider lower density land uses that minimize the exposure of significant numbers of people to fire hazards.
- b. Consider higher density land uses for fire hazard areas in the rural area if development is clustered near major roads, has adequate access for fire protection vehicles and can demonstrate adequate water supplies and fire flow.
- c. In urban areas, consider higher density land uses to be appropriate if development can be served by CDF/County Fire Department, a fire protection district or a city fire department, adequate access for fire protection vehicles is available and sufficient water supply and fire flow can be guaranteed.

REGULATION OF DEVELOPMENT

15.28 Review Criteria for Locating Development in Fire Hazard Areas

- a. Wherever possible, cluster new development near existing developed areas where there are adequate water supplies and good access for fire vehicles.
- b. When development is proposed in hazardous fire areas, require that it be reviewed by the County Fire Warden to ensure that building materials, access, vegetative clearance from structures, fire flows and water supplies are adequate for fire protection purposes and in conformance to the fire policies of the General Plan.

15.29 Review Criteria for Locating Development Outside of Fire Hazard Areas

Insure that fire safety is adequately addressed in the review of new development proposed in unincorporated areas located outside of fire hazard areas through measures including but not limited to referral of proposals for development to appropriate fire protection agencies for conditions of approval.

15.30 Standards for Water Supply and Fire Flow for New Development

- a. Require connection to a public water system or private water company or provision of an on-site water supply as a condition of approval for any new development proposal.
- b. Determine the quantity of on-site water supply, fire flow requirements and spacing and installation of hydrants in accordance with the standards of the agency responsible for fire protection for the site proposed for development.
- c. Consider the use of additional on-site fire protection devices including but not limited to the use of residential sprinkler systems and contracting the services of private alarm companies for development proposed in remote areas.

15.31 Standards for Road Access for Fire Protection Vehicles to Serve New Development

- a. Consider the adequacy of access for fire protection vehicles during review of any new development proposal.
- b. Determine the adequacy of access through evaluation of length of dead end roads, turning radius for fire vehicles, turnout requirements, road widths and shoulders and other road improvement considerations for

conformance with the standards of the agency responsible for fire protection for the site proposed for development.

- c. To the maximum extent possible, design access for fire protection vehicles in a manner which will not result in unacceptable impacts on visual, recreational and other valuable resources.

15.32 Street Signing

Support efforts to identify all roads, streets and major public buildings in a manner so that they are clearly visible to fire protection and other emergency vehicles.

15.33 Road Patterns

- a. Ensure road patterns that facilitate access for fire protection vehicles and provide secondary access and emergency evacuation routes when reviewing proposals for new subdivisions.
- b. Encourage the Department of Public Works to study existing road patterns that have access problems to determine the feasibility and costs of access improvements.
- c. Encourage fire protection agencies to identify emergency access and evacuation routes for existing developed areas and to provide this information to area residents.

15.34 Vegetative Clearance Around Structures

- a. Require clearance of flammable vegetation around structures as a condition of approval to new development in accordance with the requirements of the agency responsible for fire protection.
- b. Conduct periodic inspections to ensure maintenance of required clearances.

15.35 Fire Retardant Vegetation

Encourage the use of fire retardant vegetation when reviewing new development proposals.

PROGRAM RESPONSIBILITIES

ROLE OF FIRE PROTECTION AGENCIES

15.36 Encourage Pre-Fire Planning Efforts

Encourage fire protection agencies to map fire hazard severity zones and prepare pre-fire plans that identify hazardous subareas of the County, how fire response will be coordinated and how evacuation of residents will proceed.

15.37 Support Efforts to Reduce the Extent of the Fire Hazards

Support public and private efforts to reduce the potential of fire hazards through methods including but not limited to controlled burning programs reduction of fuel loading, construction and maintenance of fire breaks and other appropriate methods.

ROLE OF THE COUNTY

15.38 Encourage Coordination Between the County and Fire Protection Agencies

Encourage coordination and cooperation between the County, volunteer fire departments, fire protection districts, State and city fire departments in order to facilitate the most efficient delivery of fire protection services, reduce response times and assure a uniform data base and communication system.

15.39 Support Structural Requirements of the County Building Codes

Support the standards for fire resistant construction contained in the County Uniform Construction Administration Code, including but not limited to requirements for fire resistant roofing, ventilation, windows, chimneys, fire walls and other construction materials.

15.40 Support Efforts to Inventory and Abate Structures that are Fire Hazard Risks

- a. Support efforts to inventory and abate structures that do not meet existing fire codes and/or are vulnerable to damage from disastrous fire events.
- b. Encourage repair, rehabilitation, or adaptive reuse of structures requiring abatement, rather than demolition.

15.41 Incorporate Fire Hazard Concerns During Review of Proposals for New Development

Incorporate fire hazard concerns into the review of proposals for new development through measures, including but not limited to: (1) regulation of

land use and limitation of density, (2) review of access, water supply and hydrant location, (3) conformance to defined hazardous areas design criteria, and (4) conformance with established building code requirements.

15.42 Revision of County Fire Protection Ordinance

Work with the California Department of Forestry/County Fire Department to reorganize and revise the County Fire Protection Ordinance so that it can be more easily understood and implemented and incorporate the standards defined in this Ordinance into the general plan.

FLOODING HAZARD POLICIES

The County will:

GENERAL POLICIES

15.43 Determination of the Existence of a Flooding Hazard

- a. When reviewing development proposals, use the Natural Hazards map to determine the general location of flooding hazard areas.
- b. When the Natural Hazards map does not clearly illustrate the presence or extent of flooding hazards, use more detailed maps and information, including but not limited to, the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency (FEMA) for San Mateo County and the dam failure inundation maps prepared for the San Mateo County Office of Emergency Services.

15.44 Disclosure During Real Estate Transactions

Support measures for disclosure of the presence of flooding hazards during transactions of property located within areas of special flood hazard.

15.45 Abatement of Flooding Hazards

Support measures for the abatement of flooding hazards, including but not limited to: (1) removal or relocation of development from flood hazard areas; (2) construction of impoundments or channel diversions provided that adequate mitigation of environmental impacts can be demonstrated; and (3) debris clearance and silt removal programs conducted in a manner so as not to disrupt existing riparian communities.

REGULATION OF DEVELOPMENT

15.46 Appropriate Land Uses and Densities in Flooding Hazard Areas

- a. Consider rural land uses that do not expose significant numbers of people to flooding hazards, such as agriculture, timber production, public and private recreation, and general open space, to be the most appropriate for flooding hazard areas.
- b. Consider higher density land uses to be appropriate within flood hazard areas in developed urban areas and rural service centers when adequate mitigation of the flood hazard can be demonstrated.
- c. Discourage the location of new critical facilities in flood hazard areas.

15.47 Review Criteria for Locating Development in Areas of Special Flood Hazard

- a. Wherever possible, retain natural floodplains and guide development to areas outside of areas of special flood hazard.
- b. When development is proposed in areas of special flood hazards, require any structure to be safely elevated above the base flood elevation and not contribute to the flooding hazard to surrounding structures.
- c. Promote subdivision design to avoid areas of special flood hazard when possible, and identify these areas on the approved subdivision map.

15.48 Reconstruction Planning

Unless it is physically or economically impossible, direct reconstruction after a flooding disaster to areas outside of special flood hazard areas.

PROGRAM RESPONSIBILITIES

ROLE OF THE COUNTY

15.49 Incorporate Flooding Concerns During Review of Proposals for New Development

In order to minimize damage to life and property, minimize disruption of commerce and governmental services and avoid the unnecessary expenditure of public funds, incorporate measures which regulate the location, design and intensity of new development in flood hazard areas.

15.50 Watershed Management

Continue efforts to secure funding for a comprehensive study for a watershed management system for South Coast watersheds most seriously threatened by flood hazards.

ROLE OF OTHER AGENCIES

15.51 Coordination

- a. Work with federal, State, and local agencies to achieve cooperative solutions to flooding hazards that are multijurisdictional in nature.
- b. Consult with community groups affected by flooding hazards during preparation of studies for projects to mitigate the flooding hazards.