

# 9

## HEALTH AND SAFETY ELEMENT

### NOTES FOR ALL ELEMENTS

The General Plan will call out policies and actions that address specific topics of concern raised by the community. For the reader's ease, policies and actions related to these topics of concern are identified throughout the General Plan using the following icons. The policies and actions related to each topic will be compiled in an appendix to the General Plan.



Community Health



Environmental Justice



Economic Development



Sustainability

In addition, the draft policy guidance uses the term “Impacted Community” to identify what are called “disadvantaged communities” under Senate Bill (SB) 1000. SB 1000 defines these communities as low-income areas that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation.

## Goals, Policies, and Actions

### A. AIR QUALITY

#### A1. Countywide Air Quality

##### Goal HS-1

Air quality that supports community and environmental health. (8-AC, 8-AD)

### Policies

##### HS-P1.1



Coordinate air quality planning efforts with regional and state agencies, such as the California Air Resources Board (CARB), Bay Area Air Quality Management District (BAAQMD), and Metropolitan Transportation Commission (MTC). (8-112, 8-dt)



### HS-P1.2



Support and participate in emission and exposure reduction, public education, engagement, and outreach programs sponsored by BAAQMD and other agencies that promote air quality, focusing on Impacted Communities.

### HS-P1.3



Require new sources of air pollution that will generate significant new and unmitigable air quality impacts or expose sensitive receptors to substantial increases in harmful emissions of toxic air pollutants to prepare a Health Risk Assessment that identifies appropriate mitigation consistent with BAAQMD California Environmental Quality Act (CEQA) Air Quality Guidelines, based on the findings of the Health Risk Assessment. (8-111, 8-do)

### HS-P1.4



Require that any mitigation of air quality impacts occur on-site to the extent feasible. For any mitigation that relies on offsets, require that the offsets be obtained from sources as near to the project site as possible. If the project site is within or adjacent to an Impacted Community, obtain the offsets/mitigation within that community unless determined infeasible by the County. (7-120)

### HS-P1.5



Require construction activities to implement best management practices identified in BAAQMD's CEQA Guidelines to reduce air pollutant emissions, including time limits for construction equipment idling and implementation of a dust control plan.

### HS-P1.6



For projects that exceed the BAAQMD CEQA Air Quality Guidelines significance thresholds, require enhanced mitigation that goes beyond the BAAQMD's best management practices, such as use of low- or zero-emission construction equipment.

### HS-P1.7



Require new or expanded commercial and industrial projects exceeding 75,000 square feet of gross floor area, such as big-box stores, warehouses, distribution centers, and similar uses, to be near zero-emissions operations, including the facilities themselves and the associated fleets. Require all necessary measures, such as the following, to achieve near zero emissions:

- (a) Provide adequate on-site electric vehicle (EV)-capable parking for all anticipated truck traffic to prevent idling and off-site queuing.
- (b) Provide electrified loading docks with receptacles allowing plug-in of refrigerated trailers.
- (c) Use heavy-duty trucks that are model year 2014 or later and expedite a transition to zero-emission

trucks as they become commercially available. Ensure contracts with motor carriers include air quality incentives or requirements, such as providing incentives to fleets that met United States Environmental Protection Agency (EPA) SmartWay standards or requiring use of zero-emission (ZE) or near zero-emission (NZE) trucks.

- (d) Use a “clean fleet” of delivery vehicles as they become commercially available, but no later than 2025.
- (e) Use zero-emission forklifts, pallet trucks and jacks, stackers, and other yard equipment.
- (f) Implement practices to control and remove fugitive dust and other contaminants from paved areas.
- (g) Consider exemptions for grocery stores and medical facilities.

#### HS-P1.8



Prohibit non-essential idling of diesel engines countywide, and prohibit non-essential idling of all vehicles within 100 feet of sensitive receptors.

#### HS-P1.9



Require new development to locate sensitive receptors as far away as possible from significant pollution sources. (8-111, 8-do)

#### HS-P1.10



Require that new residential developments are located in such a way as to ensure homes will not be exposed to elevated levels of air pollution, including fine particulate matter (PM<sub>2.5</sub>), by adhering to BAAQMD's Healthy Communities Guidelines.

#### HS-P1.11



Require housing projects to evaluate and mitigate the health risks from surrounding air pollution for the future occupants of the project, not just impacts of the project on the surrounding environment.

### Actions

#### HS-A1.1



Adopt an ordinance that matches or is more stringent than the State's maximum idling law, and coordinate with CARB, BAAQMD, and law enforcement to achieve compliance.

#### HS-A1.2



Develop and implement a plan to provide convenient and accessible clean air refuges during times when outdoor air quality is unhealthy.

#### HS-A1.3



Conduct a housing condition survey in areas highly likely to be impacted by a shelter-in-place event to identify units



requiring upgrades to provide adequate protection from chemical fires or releases. Based on the findings of this survey, target outreach to provide information about weatherization and similar improvement programs.

## A2. Air Quality in Impacted Communities

### Goal HS-2

Healthy air quality for all communities so no community bears the disproportionate burden of environmental hazards and health risks.

### Policies

#### HS-P2.1



When evaluating health risk impacts of projects in Impacted Communities, use an excess cancer risk of 6.0 per million and a non-cancer (acute and chronic) hazard index greater than 1.0 as the threshold for finding that the project could cause a cumulatively considerable contribution and a significant impact.

#### HS-P2.2



Increase the tree canopy on public property, especially in Impacted Communities and areas with a high heat index, by prioritizing funding for new street tree planting and maintenance.

#### HS-P2.3



Support protection, restoration, and enhancement of natural landscapes in and near Impacted Communities for their role in improving air quality and community health.

### Actions

#### HS-A2.1



Coordinate with community members and appropriate regulatory agencies to prepare community-scale plans for reducing and mitigating air pollutant emissions and industrial hazards, such as pipeline risks, accidents, potential water or soil contamination, and impacts to sensitive ecological resources, for each Impacted Community, or group of Impacted Communities, as appropriate. Require that future projects demonstrate consistency with those plans.

#### HS-A2.2



Coordinate with community members, BAAQMD, and other appropriate regulatory agencies to facilitate Assembly Bill (AB) 617 citizen-led programs, including data collection, monitoring of pollution exposure, and identification and implementation of solutions in Impacted Communities. Consider future General Plan and Zoning Code amendments as needed to support BAAQMD in meeting AB 617 objectives.

### HS-A2.3



Coordinate with BAAQMD to determine where to focus a targeted permit inspection program in Impacted Communities to help ensure enforcement of air quality permits.

### HS-A2.4



Prepare a tree master plan for the county that emphasizes planting of low-maintenance native tree species and includes quantified goals and tracking methods, including mapping the tree canopy, and prioritizes planting in Impacted Communities.

*See Section F of this Health and Safety Element and the Conservation, Open Space, and Working Land Element for additional policies and actions related to tree preservation and planting. See also the Transportation Element for policies and actions related to air quality associated with vehicular emissions.*

## B. GREENHOUSE GASES

### Goal HS-3

Communities that reduce existing and anticipated greenhouse gas (GHG) emissions.

## Policies

### HS-P3.1



Prioritize implementation of the Contra Costa County Climate Action Plan to reduce GHG emissions from community-wide sources and adapt to changing climate conditions.

### HS-P3.2



Require new development to demonstrate consistency with the Contra Costa County Climate Action Plan and incorporate applicable GHG-reduction and adaptation measures.

### HS-P3.3



Facilitate carbon-neutral development projects and communities that support a circular economy, net-zero-emission modes of transportation, reliable and renewable energy resources, energy-efficient buildings, zero waste, water efficiency and conservation, green infrastructure, soil conservation, and a system of natural and working lands that support carbon sequestration and climate resilience.

### HS-P3.4



Require incorporation of measures to reduce or eliminate otherwise preventable GHG emissions in new commercial and industrial projects exceeding 10,000 square feet of gross floor area. These measures may include, but are not limited to, reducing on-site energy consumption, increasing on-site



energy generation and energy storage, contributing toward development of renewable energy projects in the surrounding community, reducing vehicle trip generation, and reducing waste generation. (8-113)

### HS-P3.5



Support efforts to protect, maintain, and improve soil health as a carbon sequestration tool.

- (f) An implementation and monitoring program to track the County's progress toward achievement of the GHG-reduction targets; and
- (g) A community and stakeholder engagement program for CAP preparation and implementation.

*See also the Transportation Element for policies and actions related to GHG emissions and the Conservation, Open Space, and Working Lands Element for policies and actions related to soil health.*

## Actions

### HS-A3.1



Update the Contra Costa County Climate Action Plan as needed to maintain consistency with CEQA Guidelines Section 15183.5(b) and best practices. Future updates must include:

- (a) Inventories of GHG emissions in the unincorporated county;
- (b) GHG reduction targets for 2030, 2040, and 2050 at a minimum;
- (c) Forecasts of GHG emissions for the unincorporated county consistent with growth assumptions of this General Plan;
- (d) GHG-reduction measures or strategies with quantifiable outcomes;
- (e) Climate adaptation and resilience strategies to ensure the county's communities can respond to changing climate conditions;

## C. CLIMATE CHANGE, RESILIENCE, AND ADAPTATION

### Goal HS-4

Resilient communities that are prepared for, responsive to, and recover from hazards created or worsened by climate change.

## Policies

### HS-P4.1



Consider the effects of climate change, particularly increased frequency and intensity of hazards, when reviewing new development applications.

### HS-P4.2



Discourage new below market-rate housing in mapped hazard zones, including 100- and 500-year flood plains, High or Very High Fire Hazard Severity Zones or the Wildland-Urban Interface, and areas at risk of temporary or permanent inundation from sea-level rise by 2100. If below market-rate housing must be within a mapped hazard zone, require development to be hardened to remain habitable to the greatest extent possible.

### HS-P4.3



In hazard-prone areas, such as slopes exceeding 15 percent, mapped floodplains, Alquist-Priolo Earthquake Fault Zones, and Fire Hazard Severity Zones, allow for decreased residential density, including below the minimum density requirement for the applicable land use designation, as the severity of risk increases. (3-29)

## Actions

### HS-A4.1



Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration), and collaborate with community partners to restore and permanently protect these habitats from development. (SB 379)

### HS-A4.2



Update the capital project planning and budgeting processes to account for anticipated effects of climate change hazards on County capital investments, including buildings and infrastructure, either by integrating the Countywide Climate Vulnerability Assessment or the best-available climate science data related to impacts, risks, sensitivities, adaptive capacities, and vulnerabilities. (SB 379)

## D. FLOOD HAZARDS AND SEA-LEVEL RISE

### D1. Flood Hazards

#### Goal HS-5

Minimized risk of loss of life, injury, damage to property, and economic or social dislocations resulting from flood hazards.

## Policies

### HS-P5.1

Prohibit urban development in areas designated 100- or 200-year (or 500-year when used as a proxy for the 200-year) floodplain, as shown on Figure HS-X (Flood Hazards Map), unless appropriate mitigations are implemented. (10-33) (AB 162)





### HS-P5.2

Require flood-proofing of new and expanded buildings and structures in any area subject to flooding, including areas near watercourses, in the Delta, or along the waterfront. Flood-proofing methods will be determined on a project-by-project basis by the Floodplain Manager, and may include, but not be limited to:

- (a) Anchoring to prevent flotation, collapse, or lateral movement.
- (b) Using flood-resistant construction materials.
- (c) Employing construction methods and practices that minimize flood damage.
- (d) Elevating building pads and habitable building floors above the base flood elevation plus required freeboard.
- (e) Providing adequate venting to allow for equalization of hydrostatic flood forces. (10-38) (AB 162)

### HS-P5.3

For any development project in a Federal Emergency Management Agency (FEMA)-designated floodplain, require review by the Floodplain Manager to consider the potential downstream flood damages that may result from the project. (10-40)

### HS-P5.4

Evaluate development within the Sacramento-San Joaquin Valley for consistency with the California Department of

Water Resources' Urban Level of Flood Protection Criteria. Prohibit new single-family residences, density increases, subdivision maps, or development agreements for any property within a 200-year flood hazard zone in an urban or urbanizing area, unless an adequate finding can be made pursuant to California Water Code Sections 9600 to 9603. (10-55) (SB 5, AB 162)

### HS-P5.5

Prohibit permanent buildings and structures in designated floodways where such impediments could increase risks to human life or restrict the floodway's carrying capacity. (10-57) (AB 162)

### HS-P5.6

Prohibit residential subdivisions and other density increases in areas subject to increased flood hazards due to subsidence, unless flooding impacts can be fully mitigated. (10-H, 10-59, 10-60)

### HS-P5.7

Prohibit urban and suburban development in reclaimed areas unless flood protection is constructed at a minimum to the standards of the Flood Disaster Protection Act of 1973. Require levees protecting these areas to meet the standards of the U.S. Army Corps of Engineers. (10-63) (AB 162)

### HS-P5.8



Prohibit construction of critical infrastructure in areas subject to flooding or sea-level rise unless no feasible alternative exists. (10-41, 10-42)



### HS-P5.9

Require new residential projects within the inundation area of a levee or dam, as shown in Figure HS-X, to include a deed notification to future owners explaining that the property may be subject to flooding if the levee or dam were to fail or be overwhelmed. (10-cl)

### HS-P5.10

Require new development in designated tsunami hazard zones to be designed to withstand anticipated tsunami forces, based on County-prepared studies conducted pursuant to Action HS-A5.5.

## Actions

### HS-A5.1



Review flooding policies and maps in this General Plan on an annual basis and incorporate best-available information regarding 100-, 200-, and 500-year floodplains and projected sea-level rise due to climate change. (10-52, 10-53, 10-ai)

### HS-A5.2

Maintain a flood-management information database, including dam and levee inundation data, based on data from appropriate agencies. (10-47)

### HS-A5.3



Establish countywide protection priorities for vulnerable communities and their populations identified to be at high risk of displacement from future flooding and sea-level rise in

the Countywide Climate Vulnerability Assessment or the best-available climate science data and use regional funding mechanisms to plan and implement protection measures in these locations or for these populations.

### HS-A5.4



Amend the Floodplain Management Ordinance to address hazardous material storage.

### HS-A5.5

Conduct a study of existing development within designated tsunami hazard zones to determine evacuation and emergency response needs prior to and during a tsunami event.

### HS-A5.6

Pursue a TsunamiReady designation and certification as a TsunamiReady Tier Two community.

*See also the Public Facilities and Services Element for policies and actions related to flood hazards and sea-level rise, the Conservation, Open Space, and Working Lands Element for policies and actions related to flood control, and the Sea-Level Rise section of this element for policies and actions related to adaptive management of rising tides.*



## D2. Sea-Level Rise

### Goal HS-6

Resilient and thriving Bayshore and Delta communities that are safeguarded and adaptively managed for rising sea levels.

### Policies

#### HS-P6.1



Require new development to locate habitable areas of buildings above the highest water level expected during the life of the project, based on Figure HS-X (Sea-Level Rise Projection Map), accounting for sea-level rise or other changes in flood conditions, or to construct a levee adequately designed to protect the structure for the expected life of the project. (10-G, 10-49, 10-50)

#### HS-P6.2



Support tidal wetland restoration projects that will protect and enhance the broad benefits that wetlands provide, including flood-risk reduction, habitat, biodiversity, and water quality.

#### HS-P6.3



Limit development of agricultural lands and open space that can serve as a buffer between sea-level rise and urbanized land uses.

#### HS-P6.4



Require new industrial development in areas subject to sea-level rise and tsunami inundation to provide plans for prevention and remediation of any contaminant releases, along with bonds that guarantee remediation plans are implemented. Remediation should meet standards that protect people and the environment in the event of future permanent inundation.

#### HS-P6.5



Work with transportation agencies and infrastructure owners, such as railroads, to harden transportation networks against sea-level rise and increases in flooding intensity.

### Actions

#### HS-A6.1



Coordinate with ABAG, Bay Conservation and Development Commission, Delta Stewardship Council, BayAdapt, cities, utilities, affected agencies, property owners, community groups, residents, and other entities to create a public-private partnership to develop, fund, and implement relevant, regionally coordinated sea-level rise adaptation measures through programs like Resilient by Design that



leverage the results of Adapting to Rising Tides and other studies and programs. (SB 379)

### HS-A6.2



Coordinate with regional agencies, cities, utilities, property owners, community groups, residents, and other stakeholders to prepare and adopt a countywide sea-level rise adaptation plan addressing increased flooding and sea-level rise that provides unique adaptation options for the entire county shoreline and identifies funding mechanisms for implementation. Use Figure HS-X (Sea-Level Rise Projection Map) or the best available climate science data to identify where sea-level rise hazards are likely to occur and lead efforts to:

- (a) Maximize public awareness and disclosure to property owners and the public.
- (b) Assess and address impacts to future development.
- (c) Plan opportunity areas for adaptation.
- (d) Inform funding and financing decisions about short-term and long-term adaptation projects.
- (e) Ensure that the disproportionate impacts on vulnerable populations and Impacted Communities are addressed.

### HS-A6.3



Partner with the Adapting to Rising Tides Program, Delta Stewardship Council, property owners, and community-based organizations to conduct a managed retreat feasibility study that identifies specific assets at risk and the cost of facilitating managed retreat.

### HS-A6.4



Adopt standards to conserve and expand natural shorelines, including converting hardened coastal structures to natural shorelines. These shorelines must protect native biodiversity while enhancing community resilience to flooding and sea-level rise. Standards must provide criteria for siting, appropriate vegetation and other materials, construction, maintenance and monitoring activities, recreational access as appropriate, and other key considerations.

### HS-A6.5



Incorporate Figure HS-X (Sea-Level Rise Projection Map) into the County's geographic information system for use as a publicly accessible tool for tracking flooding and sea-level rise.

### HS-A6.6



Amend the Floodplain Management Ordinance to apply to areas subject to sea-level rise under at least a medium-high risk aversion scenario by 2100, in accordance with State and regional guidance.



### HS-A6.7



Adopt a Sea-Level Rise Overlay Zone with associated land use regulations for site planning and minimum construction elevations that reflects sea-level rise data under at least a medium-high risk aversion scenario by 2100.

### HS-A6.8



Partner with cities to develop and fund a countywide plan to increase the resiliency of the shoreline road system that will be impacted by sea-level rise and tsunamis to ensure emergency responders can get to those in need and that community members, including those that rely on public transit, can continue to reach services.

## E. WILDFIRE HAZARDS

### Goal HS-7

Minimized injury, loss of life, and damage to property from wildfire hazards.

## Policies

### HS-P7.1



Prohibit new residential subdivisions in Very High Fire Hazard Severity Zones and limit residential subdivisions to four or fewer lots in High Fire Hazard Severity Zones.

### HS-P7.2




Require any construction of buildings or infrastructure within a Very High Fire Hazard Severity Zone, wildland-urban interface, or State Responsibility Area, as shown on Figure HS-X, to incorporate fire-safe design features and complete a site-specific fire protection plan that covers the entire parcel and includes measures for fire-resistant construction materials and modifying fuel loading, as well as a plan to maintain that protection over time. The fire protection plan shall include a risk analysis, fire response capabilities, defensible space requirements, fire safety requirements for infrastructure, building ignition resistance, mitigation measures and design for non-conforming fuel modification, wildfire education, and maintenance and limitations. The fire protection plan shall also include a plan for emergency preparedness, response, and evacuation. (7-AD, 7-71, 7-81, 7-az, 10-bb, 10-bc)

### HS-P7.3



Require that new development is constructed using fire-resistant building materials, is served by adequate firefighting services, provides safe access for emergency response vehicles, includes visible street signs and address numbers,



and has adequate water supplies for structural fire protection. (7-au, 10-bd) (SB 1241)

#### HS-P7.4



Require new development within mapped Very High Fire Hazard Severity Zones, wildland-urban interface areas, or State Responsibility Areas to meet or exceed State Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations for road ingress and egress, fire equipment access, and adequate water supply. (California Government Code Section 66474.02)

#### HS-P7.5



Work with property owners within mapped Very High Fire Hazard Severity Zones, wildland-urban interface areas, and State Responsibility Areas to ensure establishment and continued maintenance of fire breaks and defensible space, vegetation clearance, emergency access roads, water supply and fire flow, signage, and firefighting infrastructure that meets current adopted State, County, or community fire safety standards. (7-au, 10-bd) (SB 1241) (CAL FIRE)

#### HS-P7.6

Promote installation of smoke detectors at the time of sale or lease agreement and maintenance of smoke detectors in existing residences and commercial facilities that were constructed prior to the requirement for their installation.

#### HS-P7.7



Construct critical facilities, such as Office of Emergency Services facilities and other uses on the County's designated critical facilities list, with fire-resistant materials, defensible space, and fire-resistant landscaping that allows them to maintain structural integrity and ensure functional operation to the greatest extent feasible. Avoid locating these facilities in high fire risk areas to the extent possible. (SB 1241)

#### HS-P7.8



Facilitate post-fire recovery by supporting efforts to stabilize slopes, control erosion, and replant them with native species.

#### HS-P7.9



Coordinate with electricity service providers to underground power lines, especially in the wildland-urban interface and fire hazard severity zone areas.

#### HS-P7.10



Work with electricity service providers to ensure an adequate power supply to vulnerable populations during planned power shutoffs.



### HS-P7.11



Work with water service providers and fire protection agencies to ensure the long-term integrity of water supplies to meet firefighting needs and ensure that new and existing developments in high fire risk areas have suitable infrastructure to deliver water supplies.

### HS-P7.12

Coordinate with regional partners to support State legislative efforts to reduce fire insurance cost to minimize resident concerns about rising liabilities and risk of dropped policies.

## Actions

### HS-A7.1



Collaborate with local fire safe councils, CAL FIRE Santa Clara Unit, and other fire protection agencies to update and implement the *Community Wildfire Protection Plan* for Contra Costa County.

### HS-A7.2



Support local fire protection agencies with efforts to seek funding for development and implementation of a continuous vegetation management program in fire-hazard severity zones and wildland-urban interface areas.

### HS-A7.3



Update countywide fire hazard severity zone and wildland-urban interface mapping as new data becomes available

from the California Board of Forestry and Fire Protection. (SB 1207)

### HS-A7.4



Adopt and have certified by the Board of Forestry and Fire Protection an ordinance that exceeds the minimum statewide standards in the State Responsibility Area Fire Safe Regulations for new development in the State Responsibility Area or Very High Fire Hazard Severity Zones. (CAL FIRE)

### HS-A7.5



Following a large fire, evaluate the feasibility and resilience of redevelopment, and consider changes to building or development standards to improve resilience. (CAL FIRE)

### HS-A7.6



Collaborate with local or regional fire safe councils, CAL FIRE Santa Clara Unit, and other fire protection agencies to develop a fire safe education program to provide information about State fuel modification, defensible space, access, water, signage, and other fire safe regulations.

### HS-A7.7



Apply for grants and other funding mechanisms to retrofit ventilation systems at County buildings to provide refuge for residents during periods of unhealthy air quality caused by excessive wildfire smoke. (AB 836)

See also the Public Facilities and Services Element for policies and actions related to fire and emergency services.

## F. EXTREME HEAT

### Goal HS-8

Communities that can continue to function and thrive with an increase in average temperatures and extreme heat days.

### Policies

#### HS-P8.1



Coordinate with public agencies, utilities, and community-based organizations to provide community resilience hubs in all regions of the county during extreme heat events, severe weather events, and other highly hazardous conditions. Work to ensure that these facilities are in highly accessible areas and that information about their availability is widely distributed.

#### HS-P8.2



Work with electricity service providers to promote programs encouraging reduced energy use during extreme heat events.

#### HS-P8.3



Support the East Bay Regional Park District, California State Parks, and other recreation agencies in efforts to ensure recreation facilities, including parks, trailheads, and sports courts/fields, provide adequate cooling through shading or tree planting, and installation of refillable water stations.

#### HS-P8.4



Require new commercial parking lots with 50 or more spaces to mitigate heat gain through shade trees, solar arrays, and/or other emerging cooling technologies.

### Actions

#### HS-A8.1



Coordinate with transit providers to identify and advertise ways for individuals with restricted mobility to reach resilience hubs and cooling centers. (AB 836)

#### HS-A8.2



Encourage the Contra Costa Certified Emergency Response Team (CERT) Coalition to provide updated training on hazards and related risks identified in the Countywide Climate Vulnerability Assessment or the best-available climate science data.

See Section A of this Health and Safety Element and the Conservation, Open Space, and Working Land Element for additional policies and actions related to tree preservation, planting, and air quality.





## G. MANAGEMENT OF HAZARDOUS MATERIALS AND HAZARDOUS WASTE

### G1. Hazardous Materials and Hazardous Waste Management

#### Goal HS-9

Communities that are protected from hazards associated with the use, manufacture, transport, storage, treatment, and disposal of hazardous materials and hazardous waste, including from fossil fuels, chemical refining, and power plants, as well as pipelines, rail lines, and truck transportation. (10-N)

#### Policies

##### HS-P9.1



Provide equitable inspection and enforcement of hazardous material and hazardous waste regulations throughout the county.

##### HS-P9.2



Assist hazardous waste generators in effectively reducing and managing their hazardous waste. (7-cf)

##### HS-P9.3

Ensure Hazardous Materials Program staff have an opportunity to review and comment on development applications for projects involving use of hazardous materials or waste.

##### HS-P9.4



In the order of importance listed, require that new industrial development eliminate the generation and disposal of hazardous materials to the maximum extent feasible by:

- (a) Implementing operational source reduction strategies and replacing hazardous materials with less hazardous materials.
- (b) Reducing generation of those wastes not amenable to source reduction or recycling.
- (c) Recovering and recycling the remaining waste for reuse.
- (d) Properly disposing of hazardous wastes and residuals generated from treatment of hazardous waste. (7-AM, 7-AN, 7-101)

##### HS-P9.5



Actively support development of alternative hazardous



waste management technologies and methodologies that reduce the relative risk to human health and the environment. (7-102)

#### HS-P9.6



Require facilities that manage hazardous materials or hazardous waste in stationary or fixed storage tanks and that are in areas at risk from sea-level rise and flooding to conduct sea-level rise studies to determine the risk of hazardous materials release from rising water levels. Require these facilities to incorporate best management practices, to reduce the risk of release.

#### HS-P9.7



Encourage transport of hazardous materials via the safest available method for each material, avoiding populated areas and areas subject to sea-level rise whenever possible. (10-82)

#### HS-P9.8



Prioritize implementation of safety projects in hazardous material transportation corridors to address high-risk scenarios, including the effects of sea-level rise on rail transportation.

#### HS-P9.9



Require applicants for projects in Impacted Communities that involve hazardous materials or hazardous waste to provide clear information in plain language about the hazards faced by nearby residents from the project. Review

and verify this information, make it available to nearby residents, and encourage project applicants to host at least one community meeting to discuss potential hazards.

#### HS-P9.10



Oppose construction of new large-scale hazardous waste facilities.

#### HS-P9.11



Prohibit hazardous waste facilities in the following areas:

- (a) Watersheds of an existing or planned drinking water reservoir;
- (b) Ecologically significant resource areas;
- (c) Within 200 feet of an active or potentially active fault;
- (d) Within a 100-year floodplain;
- (e) Within 100 feet of a sensitive receptor; or
- (f) Areas that would result in a concentration of similar facilities. (7-104, 7-106, 7-111, 7-113, 7-123, 7-125, 7-127, 7-128, 7-129, 7-131)

#### HS-P9.12



Require design and operation of new or expanded hazardous waste facilities to adhere to the following criteria:

- (a) Minimize risk to the surrounding area in the case of a hazardous waste accident or spill.



- (b) Ensure migration of waste will not occur near rivers, streams, creeks, lakes, or other bodies of water or environmentally sensitive resources by incorporating buffers as appropriate and/or using engineered structural design features (e.g., spill containment and monitoring devices).
- (c) Avoid known or suspected groundwater recharge areas or areas where residential uses rely on wells. If located in such areas, facilities must provide properly engineered spill containment features, inspection measures, and other environmental protection controls.
- (d) In areas with unstable soils, such as steep slopes and areas subject to liquefaction or subsidence, ensure structural stability through engineered design features.
- (e) Use access roads leading to major transportation routes that:
  - Do not traverse residential neighborhoods;
  - Minimize, buffer, or employ physical barriers to residential frontages; and
  - Demonstrate road network safety through road design, construction, accident rates, and traffic flow.
- (f) Minimize noise impacts on the surrounding area. (7-105, 7-108, 7-109, 7-110, 7-112, 7-113, 7-118, 7-121)

#### HS-P9.13



Require hazardous waste facilities to prepare a cumulative risk assessment that analyzes, characterizes, and quantifies the combined risks to human health and the environment from the facility, in combination with other off-site hazardous materials risks. The assessment shall consider risks in the absence of actions to control or mitigate a potential release and determine whether buffers or other mitigation is necessary to protect residential uses, immobile populations (e.g., schools, hospitals, behavioral health facilities, convalescent homes, and prisons), other places where people gather, environmentally sensitive resources, and other sensitive areas from adverse emissions or contamination. Require that project applicants fund the needed technical review for the assessment. (7-114, 7-115, 7-117, 7-119, 7-129, 7-134)

#### HS-P9.14

For hazardous waste facilities projects, require periodic (i.e., every one to three years) review for compliance with conditions of approval. (7-122)

#### HS-P9.15



Encourage and facilitate establishment of adequate sites for the collection of household hazardous waste (HHW), unused pharmaceuticals, and universal wastes, including provisions for residents that don't own cars or are physically unable to deliver materials to a collection site.

## Actions

### HS-A9.1



Provide information to county residents about less toxic alternatives to household products containing universal wastes and the safe handling, storage, and disposal of such products, including pharmaceuticals.

### HS-A9.2



Update the Oil Spill Contingency Plan to protect the bay and shoreline areas in the event of an oil or other hazardous materials spill. (8-n)

## G.2 Management of Historical Hazardous Waste Releases

### Goal HS-10

Communities that are protected from the impacts of historical hazardous waste releases. (7-AK)

## Policies

### HS-P10.1



Coordinate with local and regional agencies in efforts to remediate or treat contaminated surface water, groundwater, and soils in or affecting Impacted Communities. (7-116)

### HS-P10.2



Prohibit development of contaminated sites unless any deficiencies found after the most recent five-year review of the site have been corrected or if the site has been remediated pursuant to the County's Brownfields and Contaminated Sites Cleanup Policy since the last review, and the site is otherwise not in violation of any land use covenants or deed restrictions imposed by the Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board.

### HS-P10.3



Consider the inventory of contaminated sites published by the DTSC and California State Water Resources Control Board when reviewing development projects in the vicinity of contaminated sites. (7-cd)



## Actions

### HS-A10.1



Support public access to the inventory of contaminated sites published by the DTSC and California State Water Resources Control Board by posting links to this information on the County's website. (7-cd)

### HS-A10.2



In collaboration with local environmental justice organizations, update the County's Brownfields and Contaminated Sites Cleanup Policy and prioritize implementation of clean-up efforts in Impacted Communities. (7-116)

### HS-A10.3



Establish a mechanism, possibly similar to the surety bonds required by the US EPA for underground tanks, to ensure that new or expanded industrial uses involving hazardous materials will fund any needed clean-up of resulting contamination.

## H. SEISMIC AND GEOLOGIC HAZARDS

### Goal HS-11

Communities and infrastructure that are protected from seismic and geologic hazards, including severe ground shaking, fault rupture, liquefaction, landslides, and unstable slopes. (10-A, 10-B, 10-C, 10-D, 10-E, 10-F)

## Policies

### HS-P11.1

For projects in areas of known or suspected seismic or other geologic hazards, such as Alquist-Priolo Fault Zones, liquefiable soils, landslides, and steep slopes, require submittal of a geotechnical report and ensure appropriate mitigation measures are incorporated into the project design. (9-11, 10-4, 10-9, 10-14, 10-22, 10-23, 10-26, 10-I)

### HS-P11.2

Prohibit construction of buildings intended for human occupancy in areas where seismic and other geologic hazards (e.g., landslides, liquefaction, and fault lines) cannot be adequately mitigated. (10-30)

### HS-P11.3

Generally prohibit construction of buildings intended for human occupancy and critical facilities in Alquist-Priolo Fault Zones. Where such buildings and facilities already exist, encourage earthquake retrofitting. If there is no feasible alternative to locating these buildings inside the Fault Zone, they must be carefully sited, designed, and constructed to withstand the anticipated earthquake stresses. (10-6, 10-12, 10-15, 10-16)

### HS-P11.4

Refer geotechnical or soils reports to the County Geologist for review and approval. (10-27, 10-p)

### HS-P11.5



Discourage development on slopes exceeding 15 percent, and generally prohibit development on slopes exceeding 25 percent, to avoid slope instability, extensive grading, and unnecessary land disturbance. (8-cc, 9-11, 10-24, 10-28, 10-29, 10-r)

### HS-P11.6

Do not accept public road dedications or allow construction of private roads in unstable hillside and landslide hazard areas unless potential hazards have been mitigated to the County's satisfaction. (8-cc, 10-32)

## I. EMERGENCY PREPAREDNESS, RESPONSE, AND EVACUATION

### 11. Preparedness, Response, and Recovery

#### Goal HS-12

Communities and local economies that continue to function during all hazards and have coordinated and current response and recovery procedures. (10-S)

#### Policies

##### HS-P12.1



Implement the 2018 Contra Costa County Local Hazard Mitigation Plan, which was adopted by the Board of Supervisors and certified by the Federal Emergency Management Agency and is incorporated into this Health and Safety Element of the Contra Costa County General Plan. (AB 2140)

##### HS-P12.2



When considering development proposals and land use changes, treat susceptibility to hazards and threats to health and human life as primary considerations.



### HS-P12.3



Locate critical County facilities, such as Office of Emergency Services facilities and other uses on the County's designated critical facilities list, outside of identified hazard areas whenever possible, accounting for how climate change may increase frequency and intensity of hazards. If critical facilities must be located in hazard areas, ensure these facilities and their access routes are protected from the hazard risks inherent to each location. (10-41, 10-42) (SB 379)

### HS-P12.4



Coordinate with cities, school districts, and park and recreation districts to ensure adequate emergency shelters and alternate care sites are available when natural disasters and other highly hazardous conditions, such as industrial accidents, occur.

### HS-P12.5



Ensure there are adequate identified locations for alternate care sites, especially in Impacted Communities.

### HS-P12.6

In areas susceptible to industrial accidents, support residents' ability to safely shelter-in-place, with appropriate air exchange rates and protection from contaminants. (10-j)

## Actions

### HS-A12.1



Update the *Contra Costa County Local Hazard Mitigation Plan* as necessary to remain valid, to comply with State and federal laws, and to reflect changing climate conditions. (10-96, 10-ay) (AB 2140)

### HS-A12.2



Upon updates to the *Contra Costa County Local Hazard Mitigation Plan*, incorporate the assessment and projection for future emergency service needs from the most recent Municipal Services Review. (CAL FIRE)

### HS-A12.3



At least every eight years, evaluate the effectiveness of and update public safety, preparedness, and hazard mitigation policies, including in this Health and Safety Element, considering changing climate conditions. (SB 379, SB 1035)

### HS-A12.4



Identify and map existing community facilities, such as libraries, gymnasiums, community centers, and auditoriums, that can serve as community resilience hubs and support people with access and functional needs during hazard events. Work with the appropriate agencies to identify and implement facility upgrades, prioritizing facilities in Impacted Communities. (10-j)



### HS-A12.5



Establish standardized temperature or air quality triggers for opening County-operated community resilience hubs.

### HS-A12.6



Conduct a comprehensive energy resilience needs assessment for critical County facilities and community resilience hubs and pursue funding opportunities to meet the identified needs.

### HS-A12.7



Install backup power and water resources at critical County facilities, emergency shelters, community resilience hubs, and cooling centers in case of power and water outages.

### HS-A12.8



Identify and, as feasible, retrofit critical County-owned buildings, roadways, and facilities in areas prone to flooding, seismic hazards, landslide and debris flows, tsunamis, or wildfire to maximize defensible space and outdoor fireproofing, improve drainage systems, stabilize nearby slopes, and take other actions as appropriate to minimize the hazard. (10-e, 10-f, 10-ae)

### HS-A12.9



Partner with community-based organizations, homeowners associations, and neighborhood groups to make information available to community members about human-caused,

natural, and climate change-induced hazards, how to prepare for them, what to do when a shelter-in-place order is issued, and resources that can help. Make this information widely available in various formats and languages to all community members, with special effort aimed at reaching persons experiencing homelessness and persons with access and functional needs.

### HS-A12.10



Continue to provide alerts about potential, developing, and ongoing emergency situations in languages and formats appropriate to county residents through the Joint Information Center.

### HS-A12.11



Continue providing Community Emergency Response Team (CERT) training programs.

## 12. Evacuation Routes and Plans

### Goal HS-13

Effective evacuation capacity and capabilities throughout the county in response to emergencies and major hazards of concern.



## Policies

### HS-P13.1



Require new development of 10 units or more to have access to at least two emergency evacuation routes.

### HS-P13.2



Encourage existing development of 10 units or more to have access to at least two emergency evacuation routes.

### HS-P13.3



Coordinate with transit agencies and community service and faith-based organizations to assist with evacuation efforts and ensure that evacuation services are made available to persons with limited English proficiency and access to transportation, communication, and other lifeline resources and services.

## Actions

### HS-A13.1



Cooperate with cities and public protection agencies to delineate evacuation routes, identifying their capacity, safety, and viability under different hazard scenarios, as well as emergency vehicle routes for disaster response, and where possible, alternate routes where congestion or road failure could occur. Update as new information and technologies become available.  
(10-68, 10-97, 10-98, 10-ak, 10-ar, 10-ba) (AB 747)

### HS-A13.2



At least every five years, update maps identifying neighborhoods with only one emergency evacuation route.

### HS-A13.3



Develop minimum roadway, ingress, and egress standards for evacuation of residential areas in Very High Fire Hazard Severity Zones. (CAL FIRE)

*See also the Public Facilities and Services Element for policies and actions related to emergency medical services.*

## J. NOISE

### Goal HS-14

An acceptable noise environment in all areas of the county. (11-B)

**TABLE HS-X: MAXIMUM ALLOWABLE NOISE EXPOSURE BY LAND USE**

Land Use Type	Noise Level, L <sub>dn</sub> (dBA)						
	0-55	56-60	61-65	66-70	71-75	75-80	>81
Residential <sup>a, b</sup>							
Urban Residential Infill							
Hotels, Motels							
Schools, Libraries, Churches, Hospitals, Extended Care Facilities							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial, and Professional							
Mining, Industrial, Manufacturing, Utilities, Agriculture							
	<b>Normally Acceptable.</b> Specified land use is satisfactory based on the assumption that any buildings involved are of normal, conventional construction, without any special noise insulation requirements.						
	<b>Conditionally Acceptable.</b> New construction or development should be undertaken only after a detailed analysis of the noise-reduction requirements is made and needed insulation features have been included in the design.						
	<b>Unacceptable.</b> New construction or development should not be undertaken.						

<sup>a</sup> A day-night average sound level (DNL) of 60 decibels or less may not be achievable in all residential areas due to environmental, economic, or aesthetic constraints. One example is small balconies associated with multi-family housing. In this case, second- and third-story balconies may be difficult to control to the standard. A common outdoor use area that meets the goal can be provided as an alternative.

<sup>b</sup> If the primary noise source is passing trains, the standard for outdoor noise levels in residential areas is a DNL of 70 decibels.

## Policies

### HS-P14.1



Require projects that would locate noise-sensitive land uses where the projected ambient noise level is greater than the "normally acceptable" noise level indicated in Table HS-X to provide an acoustical analysis that recommends appropriate mitigation to meet the noise compatibility standards. (5-bs, 11-1, 11-2, 11-3, 11-9)

### HS-P14.2



Require new single- and multi-family housing projects, hotels, and motels exposed to a day-night average sound level (DNL) of 60 decibels (dB) or greater to provide a detailed acoustical analysis describing how the project will provide an interior DNL of 45 dB or less. (11-4)

### HS-P14.3



Require new non-residential uses exposed to a DNL of 65 dB or greater to provide a detailed acoustical analysis describing how the project will provide an interior of 50 Leq(1-hr).

### HS-P14.4



In areas exposed to a DNL in excess of 65 dB due to single events, such as train operation, require that new residential development provide an acoustical analysis describing how indoor noise levels from these single events will not exceed a maximum A-weighted noise level of 35 dB in bedrooms and



55 dB in other habitable rooms. In areas exposed to a DNL in excess of 65 dB, use an indoor residential noise-level threshold of 45 dB community noise equivalent level (CNEL). (11-5)

#### HS-P14.5



Protect noise-sensitive land uses listed in Table HS-X from adverse noise impacts by requiring mitigation to the degree feasible for projects that would increase long-term noise in excess of the following thresholds, when measured at the sensitive use property line:

- (a) Greater than 1.5 dBA DNL increase for ambient noise environments of 65 dBA DNL and higher.
- (b) Greater than 3 dBA DNL increase for ambient noise environments of 60 to 64 DNL.
- (c) Greater than 5 dBA DNL increase for ambient noise environments of less than 60 dBA DNL. (11-6)

#### HS-P14.6



Design County projects to minimize long-term noise impacts on existing residents and follow best practices to minimize short-term impacts from construction noise. (11-7)

#### HS-P14.7



Limit noise-generating construction activities to weekdays and non-holidays, as follows:

- (a) Within 1,000 feet of noise-sensitive uses: 8:00 a.m. to 5:00 p.m.

- (b) Over 1,000 feet from noise-sensitive uses: 7:00 a.m. to 6:00 p.m. (11-8)

#### HS-P14.8



When evaluating development projects for which future roadway volume data are not available, use Table HS-X to evaluate whether a project would cause a substantial traffic noise increase along surrounding roadways. Projects that would not exceed the screening criteria shown in the table would require no further traffic noise analysis.

**TABLE HS-X: APPROXIMATE NUMBER OF NEW VEHICLE TRIPS TO INCREASE NOISE LEVELS BY 1.5 DBA DNL**

Existing Average Daily Traffic (ADT) <sup>1</sup>	New Daily Vehicle Trips	Future ADT
500	200	700
1,000	400	1,400
2,000	800	2,800
3,000	1,200	4,200
4,000	1,600	5,600
5,000	2,000	7,000
10,000	4,000	14,000

Notes: This table shows the approximate number of new vehicle trips needed to increase noise levels by 1.5 dBA DNL or more along a given roadway segment. This screening method is conservative in that it assumes all project traffic would travel along a single given roadway. This screening table doesn't apply to projects that involve a substantial number of new truck trips (e.g., from a warehouse).

<sup>1</sup> Apply to the lowest volume roadway segment in the project vicinity.

#### HS-P14.9



Require new development to evaluate noise impacts on the natural environment, including impacts on wildlife, when deemed appropriate. (11-11)

### HS-P14.10



When evaluating projects with new vibration-sensitive uses near an existing railroad or BART line, use Table HS-X to evaluate whether the project could expose the sensitive uses to excessive groundborne vibration. Projects with sensitive uses within the screening distances identified in the table would require preparation of a groundborne vibration and noise evaluation that is consistent with Federal Transit Administration-approved methodologies.

**TABLE HS-X: RAIL VIBRATION SCREENING DISTANCES**

Type of Rail	Distance in Feet		
	Land Use Category 1	Land Use Category 2	Land Use Category 3
Conventional Commuter Rail or Rapid Transit (BART)	600	200	120

**Notes:**

Land Use Category 1: Vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, universities conducting vibration-sensitive research, concert halls, TV and recording studios, and theaters.

Land Use Category 2: Residential, hotels, and hospitals without vibration-sensitive equipment.

Land Use Category 3: Institutional uses such as schools, churches, and medical offices without vibration-sensitive equipment.

### HS-P14.11



Provide appropriate measures along major transportation facilities/corridors to reduce impacts on adjacent noise-sensitive land uses. (5-34)

## Actions

### HS-A14.1



Adopt a noise ordinance establishing exterior noise standards for stationary, non-transportation sources and construction sources at receiving sensitive land uses. (11-f, 11-h)

### HS-A14.2



Pursue federal Quiet Zone status for rail crossings that are a noise nuisance to nearby residential areas and other noise-sensitive land uses.