Key Terms and Definitions

APPENDIX A

Below is a glossary of key terms and definitions for the Handbook.

Adaptation (Climate Change): Adjusting to a changing environment. Adaptation involves working to reduce or eliminate the impacts of climate change on a community. Adaptation can minimize harm and costs and take advantage of potential opportunities associated with the impacts of climate change. Adaptation includes addressing current and future natural hazards (i.e., wildfire, drought, cyclones, heat waves), as well as gradual changes (i.e., sea level rise, increasing temperatures) that could impact economic sectors, natural resources, and community well-being.

Adaptation Measure: An action that addresses a climate impact. A measure will reduce risk and/or vulnerability for a specific resource, asset, project component, or community.

Adaptive Capacity: A project's existing capacity to cope with the effects of climate change (an element of vulnerability.) Adaptive capacity includes the policies, programs, plans, and practices that are already in place or can be easily implemented, which prepare a project for climate change, as well as the financial resources to implement such actions.

Albedo: The fraction of solar radiation reflected by a surface or object. Snow covered surfaces have a high albedo, while vegetation-covered surfaces and oceans have a low albedo. The Earth's albedo varies, because of the dynamic nature of clouds, snow, ice, leaf area, and land cover changes. The normal albedo of snow, for example, is around 1.0, whereas the albedo of vegetation can be as low as 0.1. Human-made surfaces designed to have high albedos (i.e., near 1.0) reflect solar radiation and can help reduce

the urban heat island effect. Other human-made surfaces, such as asphalt or conventional shingle roofs, have low albedo and increase the urban heat island effect.

Anti-Displacement: Policies, programs, and actions that help people to remain in their communities, buffering the effects of rising costs (especially housing), lowered incomes, loss or conversion of housing units, or other factors.

Below Market Rate Housing: Housing provided at rates lower than the market rate. Below market rate housing is designed to assist lower-income families. When below market rate housing is provided near job centers or transit, it provides lower-income families with desirable job/housing match or greater opportunities for commuting to work through public transit.

Biogenic Emissions: Carbon dioxide (CO_2) emissions that result from materials that are derived from living cells, as opposed to CO_2 emissions derived from fossil fuels, limestone, and other materials that have been transformed by geological processes. Biogenic CO_2 contains carbon that is present in organic materials, including wood, paper, vegetable oils, animal fat, and waste from food, animals, and vegetation (such as yard or forest waste).

Building Climate Zones: Geographic areas of similar climatic characteristics, including temperature, weather, and other factors that affect building energy use. The California Energy Commission identified 16 Building Climate Zones for the Title 24 Standards. Building climate zones are different from Energy Demand Forecast Zones (EDFZs), which were developed by the California Energy Commission and used in the Residential Appliance Saturation Survey (RASS) and the 2018–2030 Uncalibrated Commercial Sector Forecast (Commercial Forecast).

Carbon Dioxide Equivalent (CO_2e): A measure for comparing CO_2 with other greenhouse gases (GHG). CO_2e is calculated by multiplying the metric tons of a GHG by its associated global warming potential (GWP).

California Environmental Quality Act (CEQA): A statute passed in 1970 that requires state and local agencies to identify the significant environmental impacts of their actions, to avoid or mitigate those impacts, and for projects with significant impacts to consider alternatives. The statute also requires public participation in the review of environmental documents.

Carbon Monoxide (CO): CO is a colorless, odorless, gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. While there are no ecological or environmental effects from CO, human exposure to CO at high concentrations can cause fatigue, headaches, confusion, dizziness, and chest pain.

Carbon Sink: Any process or mechanism that removes carbon dioxide from the atmosphere. A forest is an example of a carbon sink because it sequesters carbon dioxide from the atmosphere.

Climate Action Plan (CAP): A plan or series of plans that outline a strategy for an entity, such as a City, County, company, public agency, etc. to reduce their GHG emissions

and/or to make the jurisdiction or agency more resilient to climate change. Some CAPs only cover GHG emissions and some also cover climate adaptation. The foundation of a CAP is usually a GHG inventory, forecast of the trajectory of emissions in the absence of any action, and a GHG reduction target by a set year. The CAP must include GHG reduction measures, such as those presented in this Handbook, for the entity to meet their stated GHG goals.

Co-Benefits: Additional benefits that accompany the emissions reductions associated with GHG reduction measures, such as improvement in air quality, employment, climate resiliency, or community quality of life.

Combined Heat and Power (CHP): CHP is the generation of both heat and electricity from the same process, such as combustion of fuel, with the purpose of utilizing or selling both simultaneously. In combined heat and power systems, the thermal energy byproducts of a process are captured and used, whereas, in a separate heat and power system, the byproducts would be wasted. Examples of combined heat and power systems include gas turbines, reciprocating engines, and fuel cells. CHP is also known as *cogeneration*.

Community Benefits Agreement: A contract signed by community groups and a project proponent that requires the proponent to provide specific amenities and/or mitigations to the local community or neighborhood. In exchange, the community groups agree to publicly support the project, or at least not oppose it. These amenities and/or mitigations are then included in the record of decision as conditions of approval, mitigation measures, or developer agreement, as appropriate.

Community Engagement: Process of involving and working collaboratively with individuals and groups for the benefit of a community. Effective community engagement ensures that community members from diverse backgrounds have ample opportunity to communicate their priorities and concerns and participate in planning and decision-making activities.

Commute Shed: The area from which a business can expect employees to be drawn, typically a 45-minute drive, but often in metropolitan areas include areas farther away.

Cordon Pricing: Tolls charged for entering a particular area (a *cordon*), such as a downtown core. For example, New York City is currently evaluating an $8 daily fee for passenger vehicles and a $21 daily fee for trucks entering Manhattan below 86th Street from 6 am to 6 pm on weekdays.

Criteria Pollutants: Criteria pollutants are a group of six common air pollutants for which the federal and state governments have set national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively. The standards are set to protect public health and welfare and the environment. The federal criteria pollutants are ozone (O_3), CO, lead (Pb), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and particulate matter (PM), which consists of particulates 10 microns in diameter or less (PM10) and 2.5 microns in diameter or less (PM2.5). Definitions of these pollutants are provided in this appendix (see *Carbon Monoxide*, *Lead*, *Nitrogen Dioxide*, *Ozone*, *Particulate Matter*, and

Sulfur Dioxide). California has set CAAQS for these six pollutants, in addition to standards for visibility reducing particles, hydrogen sulfide, and vinyl chloride.

Cultural Competency: As defined by the Child Welfare League of America, "the ability of individuals and systems to respond respectfully and effectively to people of all cultures, classes, races, ethnic backgrounds, sexual orientations, and faiths or religions in a manner that recognizes, affirms, and values the worth of individuals, families, tribes, and communities, and protects and preserves the dignity of each" (National Technical Assistance and Evaluation Center for Systems of Care 2009).

Destination Accessibility: A measure of the number of jobs or other attractions reachable within a given travel time. Destination accessibility tends to be highest at central locations and lowest at peripheral ones.

Disadvantaged Community: A disadvantaged community is defined by the State of California as a census tract that is in the top 25 percentile of CalEnviroScreen, an environmental justice screening tool developed by the Office of Environmental Health Hazard Assessment to evaluate communities for their environmental pollution burden as well as vulnerability due to socioeconomic conditions. Disadvantaged community designation is often used by the State of California in funding and other programs (California Environmental Protection Agency 2017).

Disadvantaged community may be alternatively defined based on other metrics or indicators, such as those included in the California Healthy Places Index, or even defined by local communities themselves. See also *Vulnerable Places* and *Vulnerable Population*, which are alternative terms used by the CDPH.

Elasticity: The percentage change of one variable in response to a percentage change in another variable. For example, if the elasticity of vehicle miles traveled (VMT) with respect to density is -0.12, this means a 100 percent increase in density leads to a 12 percent decrease in VMT. Elasticity is represented by the following formula [percent change in variable A] / [percent change in variable B], where the change in B leads to the change in A.

Emission Factor: A relative value that relates the quantity of a pollutant to an activity associated with the release of that pollutant. Emission factors are typically expressed in terms of pollutant weight divided by an activity rate. For example, metric tons of CO_2 emitted per VMT (annotated as MT CO_2/VMT).

ENERGY STAR: A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy which sets national standards for energy-efficient consumer products. ENERGY STAR-certified products are guaranteed to meet the efficiency standards specified by the program.

Environmental Justice: The right of all communities to live, work, and play in a healthy, climate-resilient, and sustainable environment. Environmental justice also includes the right of communities for meaningful involvement and self-determination in land use planning and environmental decision-making (California Environmental Justice Alliance 2021).

Equity: Equity is the "just and fair inclusion into a society in which all can participate, prosper, and reach their full potential" (Policy Link 2021). Equity means creating the conditions, practices and environment that would enable all communities and individuals to lead healthy, thriving lives, recognizing that communities and individuals have historically faced and continue to face today discrimination and oppression because of their race, gender, sexuality, ability, citizenship status, or other characteristics. Thus, distributional equity includes increasing access to power, redistributing and providing additional resources, and eliminating barriers to opportunity.

Equality: Equality is treating every community and individual in the same way but may not recognize that communities and individuals are coming from different places and histories and have different needs and abilities.

Evapotranspiration: The loss of water from the soil both by evaporation and by transpiration from plants growing in the soil.

Exposure (to climate hazards): The effects of climate change that a project will face. Exposure includes change in the severity and location of a climate hazard (i.e., flood intensity associated with a flood zone). Projects can be exposed to both primary effects of climate change (i.e., sea level rise, reduced precipitation) and associated secondary effects (i.e., extreme high tides, reduced snowpack).

Exposure (to air pollution): The effects of air pollution that a project will face. People are exposed to air pollution in multiple ways, including breathing polluted air, eating foods that have accumulated pollutants, drinking contaminated water, ingesting contaminated soils, and touching contaminated surfaces. The primary human health and ecological impacts from exposure to criteria pollutants are defined in this appendix (see *Carbon Monoxide*, *Lead*, *Nitrogen Dioxide*, *Ozone*, *Particulate Matter*, and *Sulfur Dioxide*). Certain reduction measures, such as MERV 13 filters in ventilation systems, may reduce exposure to air pollution.

General Plan: A set of long-term goals and policies that guide local land use decisions. The General Plan Guidelines developed by the California Office of Planning and Research provide advice on how to write a general plan that articulates a community's long-term vision, fulfills statutory requirements, and contributes to creating a prosperous community.

Global Warming Potential (GWP): The ratio of radiative forcing that would result from the emission of one unit of a GHG (e.g., methane, nitrous oxide) to that from the emission of one unit of CO_2 over a fixed period (e.g., 20 years, 100 years). For example, methane has a 100-year GWP of 25, which means 1 metric ton of methane has the same global warming impact as 25 metric tons of CO_2.

Gray Water: Water from sinks, showers, tubs, and washing machines that has not contacted biological pathogens. It is non-drinkable water that can be collected and reused on site for irrigation, flushing toilets, and other purposes.

Greenhouse Gas (GHG): This report focuses on the following five gases: CO_2, nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), and sulfur hexafluoride (SF_6), but there are several others.

Hazard (Climate Hazard): A danger to a project or a community caused or exacerbated by climate change, including extreme weather events or gradual changes in climate (i.e., flooding, wildfires, drought, increasing temperatures, reduced snowpack).

Headway: The amount of time, typically measured in minutes, that elapses between two public transit vehicles servicing a given route. Headways for buses and rail are generally shorter during peak periods and longer during off-peak periods. Headway is the inverse of frequency (i.e., headway = 1/frequency), where frequency is the number of arrivals over a given time, such as the number of buses per hour.

Health Equity: Health equity is achieved when all people have full and equal access to opportunities that enable them to lead healthy, thriving lives (California Health and Safety Code Section 131019.5).

Impact (on climate change): The way a project experiences an effect of climate change. A climate hazard's impact is determined by the project's vulnerability to a hazard and its adaptive capacity. Impacts can be direct (sea level rise, changes in precipitation) or secondary, meaning they are related to a specific sector (i.e., public health, water management, natural resources).

Infill Development: A project that is located within or contiguous with the central city. Examples of infill projects are construction on redevelopment areas, abandoned sites, or underutilized older buildings/sites.

Kilowatt Hour (kWh): The kilowatt hour is a measure of electrical energy that is equal to 3,600 kilojoules. It is commonly used by utilities to measure and bill consumers for their electricity use. The kWh is basis for most energy-related greenhouse gas emissions calculations. Alternatively, megawatt hours (MWh) are also used. There are 1,000 kWh hours in 1 MWh.

Lead (Pb): Pb is a soft metal that was previously added to gasoline, which when combusted, generated small Pb particles that could be inhaled and deposited in the environment (soil and water). Once absorbed into the body, Pb accumulates in bones and adversely affects multiple organ systems. Children are particularly at risk of lead poisoning. The primary health impacts of Pb exposure are anemia, behavioral disorders, low IQ, reading and learning disabilities, and nerve damage. Ecological effects of Pb include losses in biodiversity, changes in community composition, and decreased growth and reproductive rates in plants and animals. Leaded fuel in the U.S. was banned in all on-road vehicles in 1996. The primary sources of Pb emissions today are metal refineries, smelters, battery manufacturers, iron and steel producers, and racing and aircraft industries.

LGBTQIA+: Lesbian, gay, bisexual, transgender, queer and questioning, intersex, asexual, and other gender identities.

Lifecycle Emissions: Emissions that are produced from the energy and resources used throughout the lifecycle of a product or material. Lifecycle emissions include the extraction of raw resources, physical distribution, use of the product or material, and disposal at the end of a product's life.

Locational Context: Used to identify emission reduction measures within the transportation sector that are appropriate in certain types of neighborhoods differentiated by transportation characteristics and level of development (e.g., urban, rural, suburban). See *Suburban*, *Urban*, and *Rural*.

Lumen: A unit measure of the brilliance of a source of visible light, or the power of light perceived by the human eye. The more lumens, the brighter the light. For example, a 100-watt incandescent bulb produces about 1,600 lumens. A 40-watt energy savings bulb produces about 450 lumens.

Measure Scales: The measures in this report are applicable to different scales and geographies (Project/Site scale and Program/Community scale). *Project/Site* refers to measures that reduce emissions at the scale of a parcel, employer, or development project. *Program/Community* refers to measures that reduce emissions at the scale of a neighborhood (e.g., specific plan), corridor, or entire municipality (e.g., city- or county-level).

Mixed-Use: A development project that incorporates more than one type of land use. For example, a mixed-use development may be a building with ground-floor retail and housing on the floors above. A larger mixed-use development may incorporate a variety of land uses within a short proximity of each other. This may include integrating office space, shopping, parks, schools, and residential development. Given the close proximities, mixed-use developments can encourage walking and other non-auto modes of transport from residential to office/commercial/institutional locations (and vice versa).

Multiplier Effect: The multiplier effect refers to the increase in final income arising from any new injection of spending. Some forms of new spending in a community can increase the total income of that community beyond the initial spending depending on how they interact with the local economy. Different types of economic activity will have different multiplier effects.

Nitrogen Dioxide (NO_2): NO_2 can be directly emitted from combustion sources, such as boilers, gas turbines, and mobile and stationary engines. NO_2 is also naturally formed through photochemical reactions among nitric oxide (NO) and other air pollutants. Human exposure to NO_2 at high concentrations can aggravate lung and heart problems, intensify responses to allergens in asthmatics, decrease lung-function in children, and potentially lead to premature death. NO_2 is a precursor to O_3 formation and acid rain and can contribute to global warming and reduce water quality. High ambient NO_2 concentrations over prolonged periods may also injure crops.

Ordinance: A local law usually found in municipal code. Examples of ordinances include those related to noise control, snow removal, pet restrictions, and zoning.

Ozone (O_3): Ground-level O_3, or smog, is not directly emitted into the atmosphere. Rather, it is naturally formed through photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_X) (both by-products of combustion). Concentrations of ground-level O_3 are typically greatest on sunny days in urban environments, but because O_3 can be transported long distances in the air, rural communities also experience O_3 pollution. Exposure to ground-level O_3 at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggravate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Within the environment, ground-level O_3 can cause crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death.

Particulate Matter: PM pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. NAAQS and CAAQS have been set for two sizes of PM—PM10 (10 microns in diameter or less) and PM2.5 (2.5 microns in diameter or less). PM10 typically deposits on the surfaces of the larger airways of the upper region of the lung and can induce tissue damage and lung inflammation and is linked with asthma and chronic obstructive pulmonary disease. PM2.5 travels into and deposits on the surface of the deeper parts of the lung and can induce tissue damage and lung inflammation and is also linked with hospitalizations from heart and lung causes. Depending on its composition, PM10 and PM2.5 can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain.

Photovoltaic (PV): A system that converts sunlight directly into electricity using cells made of silicon or other conductive materials. When sunlight hits the cells, a chemical reaction occurs, resulting in the generation of electricity. There are often many PV cells in a single solar panel.

Program/Community: See *Measure Scales*.

Project/Site: See Measure Scales.

Quimby Requirements: The Quimby Act, within the Subdivision Map Act, authorizes the legislative body of a city or county to require the dedication of land or to impose fees for park or recreational purposes as a condition of the approval of a tentative or parcel subdivision map, if specified requirements are met. This is the primary source of funding and land for park development at the local level.

Racial Equity: Racial equity is both an outcome and a process. As an outcome, racial equity is achieved when race is no longer a predictor for life and socio-economic outcomes, and when everyone can lead healthy, thriving lives, regardless of their race. "As a process, we apply racial equity when those most impacted by structural racial inequity are meaningfully involved in the creation and implementation of the institutional policies and practices that impact their lives" (Race Forward 2021). We achieve racial equity by eliminating the policies, structures, practices, mindsets, and cultural messages

that perpetuate racist outcomes and processes. (Race Forward 2021; Nelson et al. 2015; Racial Equity Tools 2020)

Recycled Water: Non-drinkable water that can be reused for irrigation, flushing toilets, and other purposes. It has been processed through a wastewater treatment plant, unlike greywater, and typically needs to be redistributed from the treatment plant to the site where it will be used.

Renewable Energy: Energy sources that are sustainable, and include non-carbon technologies, such as solar energy, hydropower, and wind, as well as carbon-neutral technologies such as biomass.

Resilience (to climate change): The ability of an individual, project, community, or natural system to prepare, cope, and recover from disruptions, shocks, and stresses caused by climate impacts.

Ridesharing: A form of carpooling or vanpooling where multiple people travel in the same vehicle instead of separately driving in individual vehicles. Ridesharing can be casual and formed independently or as part of an employer program.

Rural: An area characterized by little development. Compared to urban and suburban areas, rural areas have a lower density of residences, higher numbers of single-family residences, and higher numbers of vehicle dependent land use patterns. Where applicable, the Handbook provides three land use distinctions within the *rural* locational context category—R ^{a}, R ^{b}, and R ^{c}. R ^{a} refers rural areas within a master-planned community. These rural areas often include a broad offering of amenities and services, which may be accessed by walking or other alternative forms of transportation. R ^{b} refers to rural areas adjacent to a commuter rail station with convenient rail service to a major employment center. As the name implies, these rural areas have greater access to commuter rail as an alternative mode of transportation. R ^{c} refers to rural areas with transit service and that are near jobs/services.

Sector: Categories used to organize the sources that generate GHG emissions. Sectors are the standard method of categorizing emissions, such as transportation or energy.

Self-Selection: A type of bias where individuals select themselves into a group, potentially creating a non-representative sample.

Sensitivity (to climate change): The project's susceptibility to the effects of climate change. The degree to which different components of a project will be exposed to climate change and their capabilities hindered. Points of sensitivity include the project's functions, structures, and individuals who interact with the project. Sensitivity is an element of *Vulnerability*.

Separate Heat and Power: A typical system for acquiring heat and, separately, acquiring power. Thermal energy and electricity are generated and used separately. For example, heat is generated from a boiler while electricity is acquired from the local utility. Separate heat and power systems can be replaced by more efficient combined heat and power systems.

Sequestration/Sequester: The process of increasing the carbon content of a carbon reservoir other than the atmosphere. Biological approaches to sequestration include direct removal of carbon dioxide from the atmosphere through afforestation, reforestation, and practices that enhance soil carbon in agriculture. Physical approaches include separation and disposal of carbon dioxide from flue gases or from processing fossil fuels to produce hydrogen- and carbon dioxide-rich fractions and long-term storage in underground depleted oil and gas reservoirs, coal seams, and saline aquifers.

Spillover (Parking): A term used to describe the effects of implementing a parking management strategy in one area that has the unintended consequence of impacting surrounding areas. For example, if parking meters are installed on all streets in a commercial/retail block with no other parking strategies implemented, customers may no longer park in the metered spots and will instead "spillover" to the surrounding residential neighborhoods where parking is unrestricted.

Suburban: An area characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside of the central city. Also known as a suburb.

Sulfur Dioxide (SO_2): SO_2 is generated by burning fossil fuels, industrial processes, and natural sources, such as volcanoes. Exposure to SO_2 at certain concentrations can increase incidence of pulmonary symptoms and disease, decrease pulmonary function, and lead to increased risk of mortality, especially among the elderly and people with cardiovascular disease or chronic lung disease. SO_2 deposition in the environment contributes to soil and surface water acidification and acid rain.

Title 24: Title 24, Part 6 regulates building energy efficiency standards in California. Regulated energy uses include space heating and cooling, ventilation, domestic hot water heating, and some hard-wired lighting. Title 24 determines compliance by comparing the modeled energy use of a "proposed home" to that of a minimally Title 24 compliant "standard home" of equal dimensions. Title 24 focuses on building energy efficiency per square foot; it places no limits upon the size of the house, or the actual energy used per dwelling unit. The current Title 24 standards were published in 2019.

Transit Ridership: The number of passengers who use a public transportation system, such as buses and subways.

Transportation Demand Management (TDM): A transportation strategy designed to increase the transportation system efficiency and reduce demand on the system. Common TDM strategies include discouraging single-occupancy vehicle travel; encouraging more efficient travel patterns and alternative modes of transportation (e.g., walking, bicycling, public transit, and ridesharing); and shifting travel patterns from peak to off-peak hours and to closer destinations.

Transit-Oriented Development (TOD): TOD refers to projects built in compact, walkable areas that have easy access to public transit, ideally in a location with a mix of uses, including housing, retail offices, and community facilities. TODs are generally described as places within a 10-minute walk (0.5 mile) of a high-frequency rail transit station (either rail, or bus with headways less than 15 minutes).

Underserved (or Under-Represented), Under-Resourced, and/or Marginalized Communities: Communities that have been historically neglected by governments at all levels, whether because of policy (e.g., redlining), systemic racism, or a combination of factors. These communities are likely to not only experience greater levels of day-to-day pollution burdens, but also have greater vulnerability to climate disasters, economic disruptions, and other challenges. In addition, community members have often been excluded from decision-making and lack the resources and capacity to participate meaningfully in land use planning and other civic and political processes.

Urban: An area located within the central city with higher density land uses than in the suburbs. Often characterized by multi-family housing, tall office buildings and dense retail.

Urban Heat Island Effect: A term used to describe when a developed area is warmer than the surrounding rural areas, caused by urban land surfaces that retain heat (e.g., concrete, asphalt, metal, and other materials found in buildings and pavements). These urban surfaces can be darker than natural vegetation found in more rural areas. Darker surfaces absorb more sunlight that lighter surfaces, resulting in more heat (see *Albedo*). Urban environments also tend to have fewer plants and trees compared to rural locations. Plants and trees release water vapor to the air through transpiration, cooling the ambient temperature. Urban tree planting and measures requiring lighting building surfaces can help reduce the urban heat island effect.

Vehicle Miles Traveled (VMT): The number of miles driven by vehicles, an important traffic parameter, and the basis for most traffic-related greenhouse gas emissions calculations.

Vehicle Occupancy: The number of persons in a vehicle during a trip, including the driver and passengers.

Vulnerable Places: Places or communities with inequities in the social, economic, educational, or physical environment or environmental health and that have insufficient resources or capacity to protect and promote the health and well-being of their residents (Health and Safety Code Section 131019.5).

Vulnerable Population (to climate change): A group of individuals or a community that faces greater risks and has higher sensitivity to the impacts of climate change. Additionally, these groups may have a lower ability and/or fewer or insufficient resources to manage or recover from climate impacts. Populations may be vulnerable because of their physical environment, socio-economic demographics, political status, or other drivers. Example factors that can contribute to a population's vulnerable status include race, class, sexual orientation, sexual identification, and income-status.

Vulnerability (to climate change): The extent to which a project is susceptible to climate change. Vulnerability is the combination of a project's sensitivity, exposure, and adaptive capacity to climate hazards. Vulnerability includes susceptibility to direct climate impacts as well as secondary climate impacts. Vulnerability encompasses not only physical threats to a project's structure or facilities, but also impacts to a project's functions, operations, and users.

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