Complete Attorney General's Suggested Mitigation Measures

Table 1
The Attorney General's Suggested Mitigation Measures

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Energy Efficiency			
1-1	Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.		
1-2	Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.		
1-3	Install light colored "cool" roofs, cool pavements, and strategically placed shade trees		
1-4	Provide information on energy management services for large energy users.		
1-5	Install energy efficient heating and cooling systems, appliances and equipment, and control systems.		
1-6	Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.		
1-7	Limit the hours of operation of outdoor lighting.		
1-8	Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.		
1-9	Provide education on energy efficiency.		None
Renewable Energy			
1-10	Install solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate consumers about existing incentives.		
1-11	Install solar panels on carports and over parking areas.		
1-12	Use combined heat and power in appropriate applications.		
Water Conservation and Efficiency			
1-13	Create water-efficient landscapes.		
1-14	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Water Conservation and Efficiency			
1-15	Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.		
1-16	Design buildings to be water-efficient. Install water-efficient fixtures and appliances.		
1-17	Use graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines.) For example, install dual plumbing in all new development allowing graywater to be used for landscape irrigation.		
1-18	Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.		None
1-19	Restrict the use of water for cleaning outdoor surfaces and vehicles.		None
1-20	Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site.)		
1-21	Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.		
1-22	Provide education about water conservation and available programs and incentives.		None
Solid Waste Measures			
1-23	Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).		None
1-24	Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.		None
Solid Waste Measures			
1-25	Recover by-product methane to generate electricity.		None
1-26	Provide education and publicity about reducing waste and available recycling services.		None
Land Use Measures			
1-27	Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Land Use Measures			
1-28	Educate the public about the benefits of well-designed, higher density development.		None
1-29	Incorporate public transit into project design.		
1-30	Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.		d
1-31	Develop "brownfields" and other underused or defunct properties near existing public transportation and jobs.		None
1-32	Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.		
Transportation and Motor Vehicles			
1-33	Limit idling time for commercial vehicles, including delivery and construction vehicles.		None
1-34	Use low or zero-emission vehicles, including construction vehicles.		None
1-35	Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.		
Transportation and Motor Vehicles			
1-36	Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.		None
1-37	Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems.		
1-38	Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations.		
1-39	Increase the cost of driving and parking private vehicles by, e.g., imposing tolls and parking fees.		None
1-40	Build or fund a transportation center where various public transportation modes intersect.		
1-41	Provide shuttle service to public transit.		None
1-42	Provide public transit incentives such as free or low-cost monthly transit passes.		None
1-43	Promote "least polluting" ways to connect people and goods to their destinations.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
1-44	Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.		
1-45	Incorporate bicycle-friendly intersections into street design.		
1-46	For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including, e.g., locked bicycle storage or covered or indoor bicycle parking.		
1-47	Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.		
1-48	Work with the school district to restore or expand school bus services.		
Transportation and Motor Vehicles			
1-49	Institute a telecommute work program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.		None
1-50	Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.		None

[1] *Department of Justice,* The California Environmental Quality Act – Addressing Global Warming Impacts at the Local Agency Level, *http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf., 2008.*

Table 2
The Attorney General's Suggested General Plan Mitigation Measures

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Conservation Element			
2-1	Climate Action Plan or Policy: Include a comprehensive climate change action plan that requires a baseline inventory of greenhouse gas emissions from all sources by a date certain; greenhouse gas emissions reduction targets and deadlines; and enforceable greenhouse gas emissions reduction measures.		None

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
2-2	Climate Action Plan Implementation Program: Include mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan, report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management. Allocate funding to implement the plan. Fund staff to oversee implementation of the plan.		None
2-3	Strengthen local building codes for new construction and renovation to require a higher level of energy efficiency.		
Conservation Element			
2-4	Require that all new government buildings, and all major renovations and additions, meet identified green building standards.		
2-5	Adopt a "Green Building Program" to require or encourage green building practices and materials. The program could be implemented through, e.g., a set of green building ordinances.		y
2-6	Require orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Orientation should optimize opportunities for on-site solar generation.		
2-7	Provide permitting-related and other incentives for energy efficient building projects, e.g.. by giving green projects priority in plan review, processing and field inspection services.		None
2-8	Conduct energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization. Offer financial incentives for adoption of identified efficiency measures.		None
2-9	Partner with community services agencies to fund energy efficiency project, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation, and weatherization, for low income residents.		None
2-10	Target local funds, including redevelopment and Community Development Block Grant resources, to assist affordable housing developers in incorporating energy efficient designs and features.		None
2-11	Provide innovative, low-interest financing for energy efficiency and alternative energy projects. For example, allow property owners to pay for energy efficiency improvements and solar system installation through long-term assessments on individual property tax bills		None
2-12	Fund incentives to encourage the use of energy efficient vehicles, equipment and lighting.36 Provide financial incentives for adoption of identified efficiency measures		None

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
2-13	Require environmentally responsible government purchasing.37 Require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, e.g., by giving preference to recycled products over those made from virgin materials.		None
Conservation Element			
2-14	Require that government contractors take action to minimize greenhouse gas emissions, e.g., by using low or zero-emission vehicles and equipment.		None
2-15	Adopt a "heat island" mitigation plan that requires cool roofs, cool pavements, and strategically placed shade trees.39 (Darker colored roofs, pavement, and lack of trees may cause temperatures in urban environments to increase by as much as 6-8 degrees Fahrenheit as compared to surrounding areas.40) Adopt a program of building permit enforcement for re-roofing to ensure compliance with existing state building requirements for cool roofs on non-residential buildings.		
2-16	Adopt a comprehensive water conservation strategy. The strategy may include, but not be limited to, imposing restrictions on the time of watering, requiring water-efficient irrigation equipment, and requiring new construction to offset demand so that there is no net increase in water use.		Maybe
2-17	Adopt water conservation pricing, e.g., tiered rate structures, to encourage efficient water use.		None
2-18	Adopt water-efficient landscape ordinances		
2-19	Strengthen local building codes for new construction and implement a program to renovate existing buildings to require a higher level of water efficiency.		
2-20	Adopt energy and water efficiency retrofit ordinances that require upgrades as a condition of issuing permits for renovations or additions, and on the sale of residences and buildings.		None
2-21	Provide individualized water audits to identify conservation opportunities.45 Provide financial incentives for adopting identified efficiency measures.		None
2-22	Provide water audits for large landscape accounts. Provide financial incentives for efficient irrigation controls and other efficiency measures.		None
2-23	Require water efficiency training and certification for irrigation designers and installers, and property managers		None
2-	Implement or expand city or county-wide recycling and composting programs for residents and businesses. Require commercial and industrial recycling.		None
2-25	Extend the types of recycling services offered (e.g., to include food and green waste recycling).		None

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Conservation Element			
2-26	Establish methane recovery in local landfills and wastewater treatment plants to generate electricity.		None
2-27	Implement Community Choice Aggregation (CCA) for renewable electricity generation. (CCA allows cities and counties, or groups of them, to aggregate the electric loads of customers within their jurisdictions for purposes of procuring electrical services. CCA allows the community to choose what resources will serve their loads and can significantly increase renewable energy.)		None
2-28	Preserve existing conservation areas (e.g., forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits		
2-29	Establish a mitigation program for development of conservation areas. Impose mitigation fees on development of such lands and use funds generated to protect existing, or create replacement, conservation areas.		None
2-30	Provide public education and information about options for reducing greenhouse gas emissions through responsible purchasing, conservation, and recycling.		None
Land Use Element			
2-31	Adopt land use designations to carry out policies designed to reduce greenhouse gas emissions, *e.g.*, policies to minimize or reduce vehicle miles traveled, encourage development near existing public transportation corridors, encourage alternative modes of transportation, and promote infill, mixed use, and higher density development.		
2-32	Identify and facilitate the development of land uses not already present in local districts – such as supermarkets, parks and recreation fields, and schools in neighborhoods; or residential uses in business districts – to reduce vehicle miles traveled and allow bicycling and walking to these destinations.		None
2-33	Create neighborhood commercial districts.		
2-34	Require bike lanes and bicycle/pedestrian paths		
2-35	Prohibit projects that impede bicycle and walking access, *e.g.*, large parking areas that cannot be crossed by non-motorized vehicles, and new residential communities that block through access on existing or potential bicycle and pedestrian routes		
2-36	Site schools to increase the potential for students to walk and bike to school.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Land Use Element			
2-37	Enact policies to limit or discourage low density development that segregates employment, services, and residential areas		
2-38	Where there are growth boundaries, adopt policies providing certainty for infill development.		None
2-39	Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar.		None
Circulation Element			
2-40	In conjunction with measures that encourage public transit, ride sharing, bicycling and walking, implement circulation improvements that reduce vehicle idling. For example, coordinate controlled intersections so that traffic passes more efficiently through congested areas		
2-41	Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking. Before funding transportation improvements that increase vehicle miles traveled, consider alternatives such as increasing public transit or improving bicycle or pedestrian travel routes.		
2-42	Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic		None
2-43	Include safe and convenient bicycle and pedestrian access in all transportation improvement projects. Ensure that non-motorized transportation systems are connected and not interrupted by impassable barriers, such as freeways[55] and include amenities such as secure bicycle parking.		
2-44	Provide adequate and affordable public transportation choices including expanded bus routes and service and other transit choices such as shuttles, light rail, and rail where feasible.		
2-45	Assess transportation impact fees on new development in order to maintain and increase public transit service.		
2-46	Provide public transit incentives, including free and reduced fare areas		None

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Circulation Element			
2-47	Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.[58] For example, reduce parking for private vehicles while increasing options for alternative transportation; eliminate minimum parking requirements for new buildings; "unbundle" parking (require that parking is paid for separately and is not included in rent for residential or commercial space); and set appropriate pricing for parking.		
2-48	Develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20-25% of the morning commute.) Plans may address, *e.g.*, necessary infrastructure improvements and potential funding sources; replacing older diesel buses with low or zero-emission vehicles; mitigation fees to expand school bus service; and Safe Routes to School programs[59] and other formal efforts to increase walking and biking by students.		None
2-49	Create financing programs for the purchase or lease of vehicles used in employer ride sharing programs.		None
2-50	Enter into partnerships to create and expand polluting vehicle buy-back programs to include vehicles with high greenhouse gas emissions.		None
2-51	Provide public education and information about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; public transit; biking and walking; vehicle performance and efficiency (*e.g.*, keeping tires inflated); low or zero-emission vehicles; and car and ride sharing.		None
Housing Element			
2-52	Improve the jobs-housing balance and promote a range of affordable housing choices near jobs, services and transit		
2-53	Concentrate mixed use, and medium to higher density residential development in areas near jobs, transit routes, schools, shopping areas and recreation.		
2-54	Increase density in single family residential areas located near transit routes or commercial areas. For example, promote duplexes in residential areas and increased height limits of multi-unit buildings on main arterial streets, under specified conditions.		
2-55	Encourage transit-oriented developments.		
Housing Element			
2-56	Impose minimum residential densities in areas designated for transit-oriented, mixed use development to ensure higher density in these areas.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
2-57	Designate mixed use areas where housing is one of the required uses.		
2-58	In areas designated for mixed use, adopt incentives for the concurrent development of different land uses (*e.g.*, retail with residential).		None
2-59	Promote infill, mixed use, and higher density development by, for example, reducing developer fees;[62] providing fast-track permit processing; reducing processing fees; funding infrastructure loans; and giving preference for infrastructure improvements in these areas.		None
Open Space Element			
2-60	Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits.		
2-61	Establish a mitigation program for development of those types of open space that provide carbon sequestration benefits. Require like-kind replacement for, or impose mitigation fees on development of such lands. Use funds generated to protect existing, or create replacement, open space.		None
2-62	Allow alternative energy projects in areas zoned for open space where consistent with other uses and values.		
2-63	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, *e.g.*, requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.		
2-64	Connect parks and publicly accessible open space through shared pedestrian/bike paths and trails to encourage walking and bicycling.		
Safety Element			
2-65	Address expected effects of climate change that may impact public safety, including increased risk of wildfires, flooding and sea level rise, salt water intrusion; and health effects of increased heat and ozone, through appropriate policies and programs.		None
2-66	Adopt programs for the purchase, transfer or extinguishment of development rights in high risk areas.		None
Safety Element			
2-67	Monitor the impacts of climate change. Use adaptive management to develop new strategies, and modify existing strategies, to respond to the impacts of climate change.		None

Table 3
OPR's Suggested Mitigation Measures

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Land Use and Transportation			
3-1	Implement land use strategies to encourage jobs/housing proximity, promote transit-oriented development, and encourage high density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.		
3-2	Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings		
3-3	Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.		
3-4	Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.		
3-5	Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit		
3-6	Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.		
3-7	Limit idling time for commercial vehicles, including delivery and construction vehicles.		None
Urban Forestry			
3-8	Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.		
3-9	Preserve or replace onsite trees (that are removed due to development) as a means of providing carbon storage.		
Green Buildings			
3-10	Encourage public and private construction of LEED (Leadership in Energy and Environmental Design) certified (or equivalent) buildings.		

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
Energy Conservation Policies and Actions			
3-11	Recognize and promote energy saving measures beyond Title 24 requirements for residential and commercial projects		
3-12	Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources.		
3-13	Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.		None
3-14	Replace traffic lights, street lights, and other electrical uses to energy efficient bulbs and appliances.		None
3-15	Purchase Energy Star equipment and appliances for public agency use.		None
3-16	Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.		None
3-17	Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.		None
3-18	Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.		None
3-19	Retrofit municipal water and wastewater systems with energy efficient motors, pumps and other equipment, and recover wastewater treatment methane for energy production.		None
3-20	Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings.		None
Energy Conservation Policies and Actions			
3-21	Purchase government vehicles and buses that use alternatives fuels or technology, such as electric hybrids, biodiesel, and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.		None
3-22	Offer government incentives to private businesses for developing buildings with energy and water efficient features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.		None
3-23	Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes.		None

ID	Suggested Mitigation Measures	Feasibility	Relevance to Project
3-24	Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.		
Programs to Reduce Vehicle Miles Traveled			
3-25	Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.		None
3-26	Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.		None
3-27	Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.		None
3-28	Create an online ridesharing program that matches potential carpoolers immediately through email.		None
3-29	Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.		None
Programs to Reduce Solid Waste			
3-30	Create incentives to increase recycling and reduce generation of solid waste by residential users.		None
3-31	Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development		None
3-32	Add residential/commercial food waste collection to existing greenwaste collection programs.		None