

Infrastructure Mitigation Strategies

2009 Strategy Code	Original Strategy Number	Specific Mitigation Strategy	Applicable Hazards	Existing Program	Existing Program, Underfunded	Very High - Unofficial Program-Becomes Official on Plan Adoption, no funding needed	High - Actively Looking for Funding	Moderate	Under Study	Not Applicable, Not Appropriate, or Not Cost Effective	Not Yet Considered	Responsible Agency or Department (Required if Existing Program, under funded, Very High, High, or Under Study)	Ordinance or Resolution # (if existing program), Estimated Cost and Possible Funding Agency (if high priority), Estimated Date of Completion (if study), WHY if not same as regional priority, OR Other Comments
INFR - a - Multi-Hazard (...owned by the infrastructure provider filling out this form, including a city, county, or special district)													
a-1	a-1	Assess the vulnerability of critical facilities owned by infrastructure operators to damage in natural disasters or security threats, including fuel tanks and facilities owned outside of the Bay Area that can impact service delivery within the region. Note - Infrastructure agencies, departments, and districts are those that operate transportation and utility facilities and networks.	EQ LS WF FL SEC	X								Public Works	Water Vulnerability Assessment Completed Nov 2003
a-2	a-2	If a dam owner, comply with State of California and federal requirements to assess the vulnerability of dams to damage from earthquakes, seiches, landslides, liquefaction, or security threats.	EQ LS WF FL SEC							X			No Dams
a-3	a-3	Encourage the cooperation of utility system providers and cities, counties, and special districts, and PG&E to develop strong and effective mitigation strategies for infrastructure systems and facilities.	EQ LS WF FL DR SEC	X								BAWSCA	External Agency
a-4	a-4	Retrofit or replace critical lifeline infrastructure facilities and/or their backup facilities that are shown to be vulnerable to damage in natural disasters.	EQ LS WF FL SEC				X					Public Works	Crocker Tank Structural Upgrade Plan Glen Park Tank seismic upgrade design complete. Approximate costs \$2 million per tank.
a-5	a-5	Support and encourage efforts of other (lifeline infrastructure) agencies as they plan for and arrange financing for seismic retrofits and other disaster mitigation strategies. (For example, a city might pass a resolution in support of a transit agency's retrofit program.)	EQ LS WF FL DR SEC							X			Unaware of any but would support
a-6	a-6	Develop a plan for speeding the repair and functional restoration of water and wastewater systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water/Wastewater Agency Response Network (WARN). Communicate that plan to local governments and critical facility operators.	EQ LS WF FL DR SEC	X								San Mateo OES	

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a-7	a-7	Engage in, support, and/or encourage research by others (such as USGS, universities, or PEER) on measures to further strengthen transportation, water, sewer, and power systems so that they are less vulnerable to damage in disasters.	EQ LS WF FL DR SEC								X		Not aware of any but would support
a-8	a-8	Pre-position emergency power generation capacity (or have rental/lease agreements for these generators) in critical buildings of cities, counties, and special districts to maintain continuity of government and services.	EQ LS WF FL SEC	X								DPW/OES	Fixed generators provided at City Hall/PD & Fire Station/EOC. Portable generator and shore power connection in place at primary shelter site
a-9	a-9	(REWORDED) Ensure that critical intersection traffic lights function following loss of power by installing battery back-ups, emergency generators, or lights powered by alternative energy sources such as solar. Proper functioning of these lights is essential for rapid evacuation, such as with hazmat releases resulting from natural disasters.	EQ LS WF FL SEC	X								Public Works	Flashing red back up installed all intersections
a-10	a-10	Develop unused or new pedestrian rights-of-way as walkways to serve as additional evacuation routes (such as fire roads in park lands).	EQ LS WF FL SEC								X		
a-11	a-11	Minimize the likelihood that power interruptions will adversely impact lifeline utility systems or critical facilities by ensuring that they have adequate back-up power.	EQ LS WF FL SEC	X								DPW	All water pump stations & secure lift stations have on site emergency power
a-12	a-12	Encourage replacing above ground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new phone and electrical utility lines are installed underground.	EQ LS WF FL SEC	X								Planning and Community Development, Public Works	For new development only- Chapter 17.32.030 Brisbane Municipal Code

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a-13	a-13	If you own a dam, coordinate with the State Division of Safety of Dams to ensure an adequate timeline for the maintenance and inspection of dams, as required of dam owners by State law, and communicate this information to local governments and the public.	EQ LS WF FL SEC							X			No Dams
a-14	a-14	Encourage communication between State Emergency Management Agency (CalEMA), FEMA, and utilities related to emergencies occurring outside of the Bay Area that can affect service delivery in the region.	EQ LS WF FL DR SEC							X			
a-15	a-15	Ensure that transit operators, private ambulance companies, cities, and/or counties have mechanisms in place for medical transport during and after disasters that take into consideration the potential for reduced capabilities of roads following these same disasters.	EQ LS WF FL SEC	X							Fire	JPA entered into on November 10, 2003 with private ambulance provider	
a-16	new	Recognize that heat emergencies produce the need for non-medical transport of people to cooling centers by ensuring that (1) transit operators have plans for non-medical transport of people during and after such emergencies including the use of paratransit and (2) cities, counties, and transit agencies have developed ways to communicate the plan to the public.	Heat	X							Fire/County Health/OES	The city's communication plan to its citizens is robust. Requiring the transit operators to have such a plan is outside our control. There is a county wide program	
a-17	a-17	Effectively utilize the Regional Transportation Management Center (TMC) in Oakland, the staffing of which is provided by Caltrans, the CHP and MTC. The TMC is designed to maximize safety and efficiency throughout the highway system. It includes the Emergency Resource Center (ERC) which was created specifically for primary planning and procedural disaster management. RESPONSIBLE AGENCY: MTC only.	EQ LS WF FL SEC							X			
a-18	new	Develop (with the participation of paratransit providers, emergency responders, and public health professionals) plans and procedures for paratransit system response and recovery from disasters.	EQ LS WF FL Heat SEC	X							Fire	Long standing JPA agreement among county health, the private transport company and the fire service county wide	