

DRAFT HCR Strategies by Lead Agency

Strategy No.	Strategy Name	Responsible Agency	Potential Partners	Cost Estimate
C-5.09	Establish Evacuation Strategy for People with Access and Functional Needs	DAAS/MOD	Age and Disability Friendly SF, DEM, Fire Dept and first responders, DBI	Medium: \$500K to \$5M
B-1.06	Complete the Mandatory Soft-Story Retrofit program (pre-1978 buildings with 5+ units and 2+ stories)	DBI	ORCP	Low: \$0-\$500K
C-1.07	Assess vertical evacuation options in high-hazard areas and guidance for large-building refuges	DBI,DEM	MOD, DPH, DPW, SFFD, CA Tsunami Program, BOMA, BERT/NERT, San Francisco Alert and NEN	Medium: \$500K to \$5M
C-1.06	Develop a public outreach campaign and wayfinding plan for tsunami awareness and evacuation procedures	DEM	Port, REC, DPW, SFMTA Sign Shop, CA Tsunami Program, BCDC, National Weather Service, Coast Guard	Low: \$0-\$500K
C-5.05	Develop a Preparedness Equipment Purchase Program to direct and fund the purchase of climate preparedness equipment	DEM or DPH	DPW, ORCP, SFE, SFFD	Low: \$0-\$500K
B-3.01	Study and deploy emergency clean air and cooling capacity at key community facilities	DPH	DCYF, ORCP, HSA, MOHCD, REC, SFE, SFUSD, LIB	Medium: \$500K to \$5M
C-5.18	Improve San Francisco's climate health research capacity	DPH	Each study would have diverse partners including, but not limited to, DEM, schools and SFUSD board, community based organizations, care facilities	Low: \$0-\$500K
C-5.19	Develop and Implement a Centralized Air Quality and Extreme Heat Preparedness Campaign	DPH	DEM, ORCP, CBOs, SFE, DPW, Public Government Affairs Staff, PIOs	Low: \$0-\$500K
C-5.04	Create a program to coordinate existing City programs providing in-home and resident-facing services related to hazard and climate mitigation	DPH DEM	HSA, ORCP, MOHCD, SFE, CBOs, DBI, Planning	Medium: \$500K to \$5M
B-5.04	Increase resilience and operation efficiency of maintenance yards	DPW	REC, SFMTA, SFE, SFPUC, Port	High: \$5M and above

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IN-2.06	Expand the StreetTreeSF Climate Resilient Tree Planting Initiative	DPW	Friends of the Urban Forest, Clean City Coalition, Climate Action Now (non-profits), OEWD, and other City agencies with streetscape projects	High: \$5M and above
IN-2.13	Develop a strategy to conserve and monitor water use by capital projects	DPW, SFPUC	DPW, IDC/BDC clients, building operators (RED, Port, LIB, SFMTA, SFO)	Medium: \$500K to \$5M
B-5.02	Install solar + storage systems at critical facilities	DPW/Varies	ORCP, SFE, SFPUC, Building owners/operators (Port, SFMTA, REC, DBI)	Medium: \$500K to \$5M
C-5.02	Develop a Homelessness Disaster Response Plan	HSH	DPH, HSA, DEM, ORCP	TBD
C-5.07	Perform Gap analysis of vulnerable populations (ie. Access and Functional Needs) and available city services	MOD	DAAS, DEM (DAFN workgroup), Controllers Office, Age & Disability Friendly Initiative	Low: \$0-\$500K
C-5.08	Develop Community Based Capacity Building Initiative	MOD	DAAS, , DPH, SFCARD, DEM, NEN, RTSF, H4H, Age & Disability Friendly Initiative	Medium: \$500K to \$5M
C-1.01	Address seismic retrofit needs within San Francisco's affordable housing stock	MOHCD	Chinatown Community Development Center, Mission Economic Development Agency, SF Community Land Trust, SF Housing Development Corporation, Mission Housing Development Corporation, Tenderloin Neighborhood Development Corporation, Bernal Heights Neighborhood Center, Mercy Housing	High: \$5M and above
C-1.05	Continue to meet housing production goals	MOHCD	OClI, Planning, DBI, nonprofit housing developers	High: \$5M and above
C-5.06	Expand the Neighborhood Empowerment Network (NEN) Empowered Communities Program (ECP) to additional neighborhoods	NEN, ADM, DEM, NERT	Other Agencies, CBO's, Private Businesses, etc.	Low: \$0-\$500K
C-1.04	Develop a post hazard open for business campaign	OEWD	SF Travel, Visit California, Chamber of Commerce, GO – Biz, Bay Area Council, SVLG, SFMade, CMAC, GlobalSF	TBD

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C-4.03	Explore toxins abatement workforce development programs	OEWD	DPW	TBD
C-5.10	Continue Small Business COOP Assistance	OEWD	DEM, SBDC, GO-Biz, FEMA	TBD
C-5.11	Support the Small Business Development Center	OEWD	SBDC, USSBA, GO-Biz	TBD
C-5.12	Establish disaster relief funding and small business resilience fund	OEWD	MEDA, CON	TBD
C-5.13	Expand layoff outplacement services	OEWD	EDD, Regional WIBs, Chamber, GO-Biz, Bay Area Council, SVLG, SFMade, SBDC	TBD
C-5.14	Expand Women's Entrepreneurship Fund	OEWD		TBD
B-1.01.01	Assess and seismically retrofit municipal buildings	ORCP	BOS, ADM, SFO, CON, MYR, Budget Office, DPW, HSH, any impacted departments	High: \$5M and above
B-1.02	Develop an earthquake risk improvement program for non-structural components of municipal buildings	ORCP	DPW, RED, Land owning agencies (SFPUC, Port, SFMTA, REC, etc.)	High: \$5M and above
B-2.01	Develop multi-hazard resilience design guidelines for municipal buildings	ORCP	DPW, Planning, SFPUC, Port, SFMTA, SFO, External Technical Advisory Committee	Low: \$0-\$500K
B-2.02	Review the Guidance for incorporating sea level rise into capital planning	ORCP	Capital Planning Committee, DPW, SFPUC, SFMTA, Port, Planning	Low: \$0-\$500K
C-5.01	Identify and create Clean Air/Cooling Hub (CACH) Public Respite Facilities	ORCP	SFPL, DEM, REC, ADM, DPW, SFAC,	Medium: \$500K to \$5M
C-5.17	Develop a communications strategy for citywide climate resilience efforts	ORCP	Planning, Port, SFE, DPH	Low: \$0-\$500K
IN-1.05	Complete the Lifelines Restoration Performance Project and implement recommendations	ORCP	City Agencies and Private Companies	

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IN-5.07	Develop a Citywide Climate Resilience Framework	ORCP	SF Planning, SF Environment, SFPUC, DBI	Low: \$0-\$500K
B-1.03	Develop a voluntary program for seismic retrofits of one- to four-unit woodframe soft-story buildings	ORCP, DBI	FEMA, CEA, OEWD, Office of Small Business, Private sector building owners and tenants	Low: \$0-\$500K
B-1.07.01	Develop a program (standards and guidance) to screen, evaluate and retrofit older steel buildings	ORCP, DBI	SFO, Private sector building owners/managers	Medium: \$500K to \$5M
B-1.07.02	Develop a program to screen, evaluate, and retrofit non-ductile concrete buildings	ORCP, DBI	SFO, External engineering firms, Private sector building owners/tenants	Medium: \$500K to \$5M
C-1.03	Improve San Francisco's Implementation of the State's Safety Assessment Program	ORCP, DBI		High: \$5M and above
B-1.04	Implement the Tall Building Strategy to address the seismic vulnerability of buildings taller than 250 feet	ORCP, DBI, DEM DataSF	Planning, SFE, SFPUC	Medium: \$500K to \$5M
B-1.05	Extend and Improve the Building Occupancy Resumption program (BORP)	ORCP, DBI, DPW	DBI Commission Committees, Building Owners/Tenants	Medium: \$500K to \$5M
C-1.02	Develop a downtown recovery strategy	ORCP, DPW, DBI, DEM, Port, Planning	SFE, SFPUC	
C-5.16	Develop and manage a system for hazard and climate resilience data	ORCP/DT	DEM, Planning, DPH	Low: \$0-\$500K
B-5.06	Develop comprehensive and coordinated code amendments for multi-hazard resilience of private development	Planning	DBI, SFE (green building code), Port, SFO, DBI CES, private developers and property owners	Low: \$0-\$500K
IN-2.01	Develop projects to address flooding around Islais Creek	Planning	Port, SFMTA	Medium: \$500K to \$5M

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C-5.15	Study the overlap between vulnerable populations and vulnerable buildings	Planning, DPH, ORCP	DBI, SFPUC, SFE, MOHCD, HSH, CBOs	Low: \$0-\$500K
IN-1.02	Conduct a research project for earthquake mitigation of marine structure piles	Port	UC System, other west coast cities/ports, FEMA	High: \$5M and above
IN-2.02	Develop a process to move utilities from under pier structures	Port		High: \$5M and above
IN-2.09	Participate in US Army Corps of Engineers (USACE)/Port Flood Study	Port	City Depts, regional transportation, planning and resource/regulatory agencies, business community, including Port tenants and small businesses, nonprofits	High: \$5M and above
IN-5.02	Reduce seismic and flood risk along three miles of the San Francisco Waterfront from Fisherman's Wharf to Mission Creek	Port	Various City Depts (including OEWD), regional transportation, planning and resource/regulatory agencies, business community, including Port tenants and small businesses, nonprofits	High: \$5M and above
IN-1.01	Conduct a seismic assessment of critical City assets along the Southern Waterfront	Port	Planning, SFMTA, SFPUC, OCRP	Low: \$0-\$500K
IN-1.08	Implement multi-hazard mitigation improvements for harbor dock infrastructure	Port, REC	DEM, TIDA, California Tsunami Program	Medium: \$500K to \$5M
IN-1.10	Implement the East Harbor Renovation Project	Port, REC	SFPUC, DEM, TIDA, California Tsunami Program	High: \$5M and above
B-1.01.02	Seismically improve the Port's Department Operations Control Center, Headquarters, and Joint Operations Control facilities	Port, SFPD, SFFD, CPC	DEM	High: \$5M and above
B-5.05	Explore options to use Recreation Centers as public respite facilities	REC	DEM, DPH, ORCP	TBD
IN-2.04	Adapt shoreline parks to sea level rise and salt water intrusion, using marshes and plant diversity	REC	Port, USACE	TBD

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IN-2.05	Assess the current stormwater catchment potential of open space managed by the Recreation and Parks Department	REC	SFPUC	
IN-2.10	Explore increasing tree canopy in parks to provide shade	REC	Friends of Urban Forest, Capital Planning	TBD
IN-2.11	Assess current plant pallettes and tree canopy needs to increase consideration of future climate conditions in the selection options	REC	DPW Urban Forestry Division	TBD
IN-3.04	Improve Fire Prevention in Recreation Areas	REC	SFFD, DEM	TBD
IN-1.09	Develop a hazard mitigation and emergency response evacuation plan for at SF Zoo	SF Zoo, Rec	DEM, Planning and SFE, CA Tsunami Program	Medium: \$500K to \$5M
IN-1.06	Increase the Resilience of the Municipal Fiber Optic Network	SFDT	SFMTA, SFPUC, SFFD, Joint Pole Association, PG&E	High: \$5M and above
IN-1.07	Increase the Resilience of the 911 Radio System	SFDT	SFMTA, SFPUC, SFFD, Joint Pole Association, PG&E	High: \$5M and above
B-3.02	Increase privately-owned building weatherization rates	SFE		Low: \$0-\$500K
B-3.03	Support increased building electrification (fuel switching) and mechanical upgrades	SFE	DPW, SFO, SFUSD, SFPUC, OEWD	Low: \$0-\$500K
C-4.01	Expand household hazardous waste collection efforts	SFE	Recology SF, DPW, DEM, DPH	Low: \$0-\$500K
IN-2.16	Strengthen citywide efforts to conserve, restore, and steward biodiversity	SFE	Various public and private agencies	Low < \$500k
C-4.02	Replace mercury-containing lighting in preschools and daycare centers	SFE, SFUSD	DCYF, DPH, Recology SF, First 5 San Francisco (nonprofit)	Low: \$0-\$500K
B-5.03	Secure a resilient public safety training facility for SFFD	SFFD	SFPD, SHF	High: \$5M and above

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IN-3.02	Improve the capacity of the Portable Water Supply System to fight fires following earthquakes and other large urban fires	SFFD	DEM, SFPUC	High: \$5M and above
C-5.03	Support volunteer emergency preparedness, response, and recovery programs including the Neighborhood Emergency Response Team (NERT) and Auxiliary Law Enforcement Response Team (ALERT).	SFFD/SFPD	DEM, Private (VOAD), MYR, Funders	Medium: \$500K to \$5M
B-1.08	Implement the SFMTA Parking Strategy	SFMTA		Medium: \$500K to \$5M
B-5.01	Amend the capital improvement program for transportation facilities to consider hazard mitigation opportunities	SFMTA	DPW, SFPUC, Planning, REC, MOHCD, SFO, PG&E, Regional transit partners	High: \$5M and above
IN-1.11	Implement SFMTA Security Strategy	SFMTA		Medium: \$500K to \$5M
IN-2.15	Implement a Coastal Multimodal Resilience Strategy	SFMTA	Port, Planning, ORCP, Public Works	Medium: \$500K to \$5M
IN-5.01	Conduct a system wide multi hazard vulnerability and operational assessment for Muni	SFMTA	DPW, SFPUC, Planning, PG&E, Regional transit partners, State and Federal disaster funding agencies	High: \$5M and above
IN-5.08	Implement SFMTA Communications & IT Strategy	SFMTA		High: \$5M and above
IN-5.09	Implement SFMTA Asset Management & State of Good Repair Strategy	SFMTA		High: \$5M and above
IN-5.10	Implement SFMTA Transit Fixed Guideway Strategy	SFMTA		High: \$5M and above
IN-1.03.01	Develop technologies, systems, and capacity to treat sanitary sewage at SFO	SFO		High: \$5M and above

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IN-1.03.02	Develop redundant and resilient electrical power capacity and distribution at SFO	SFO, SFPUC	PG&E	High: \$5M and above
B-2.03	Develop a program to analyze, identify, and evaluate properties at risk of stormwater flooding	SFPUC	Planning (for the strategy phase); implementation would involve other departments, e.g. Assessor, DBI	Low: \$0-\$500K
B-2.04	Implement floodproofing and elevation projects for properties at risk of stormwater flooding citywide	SFPUC	Assessor, DBI, Planning, SFO	High: \$5M and above
IN-1.04	Conduct a Risk and Resilience Assessment and Emergency Response Plan for the City's water infrastructure system	SFPUC		Medium: \$500K to \$5M
IN-2.03	Continue to implement the Ocean Beach Master Plan	SFPUC	DPW, SFMTA, REC, GGNRA, SF Zoo	High: \$5M and above
IN-2.07	Complete the Extreme Precipitation Study	SFPUC	Port, SFO, ORR	Medium: \$500K to \$5M
IN-2.08	Complete a comprehensive assessment of combined flood risks for San Francisco	SFPUC	SFPUC, ORCP, SF Planning. Pending scope, could include other agencies (SFMTA for example)	Medium: \$500K to \$5M
IN-2.12	Diversify water supply options year-round by improving the use of new water sources and drought management	SFPUC	DPH, DBI, specific customers and stakeholders who will be served with alternate water supplies (e.g., REC, private developers), advocacy organizations that participate in pilot research/projects (e.g., Water Reuse)	High: \$5M and above
IN-2.14	Develop a Long-term Vulnerability Assessment and Adaptation Plan for the Hetch Hetchy Regional Water System	SFPUC	Bay Area Water Supply & Conservation Agency (BAWSCA)	Medium: \$500K to \$5M
IN-3.03	Continue to mitigate wildfire hazards in SFPUC owned-watersheds to protect source water quality and minimize risk to SFPUC water and power infrastructure.	SFPUC	Yosemite National Park, Stanislaus National Forest, CalFire and relevant County Sheriff and local Fire Departments	Medium: \$500K to \$5M

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IN-5.03	Continue to advance Sewer System Improvement Program (SSIP) projects to meet level of service objectives	SFPUC	None	High: \$5M and above
IN-5.04	Implement the Pipe Replacement Prioritization Program	SFPUC	SFFD, DPH, DEM, NERT, Bay Area Peninsula city governments	High: \$5M and above
IN-5.05	Continue to improve power distribution infrastructure to support new development and increase resiliency	SFPUC	PG&E	High: \$5M and above
IN-5.06	Improve Resilience and Sustainability for regional dams and ancillary facilities from probably maximum flood (PMF) and maximum credit earthquake (MCE) events	SFPUC, DSOD	Downstream municipalities such as San Mateo County, Alameda County	High: \$5M and above
IN-3.01	Complete studies, analysis, and capital projects to improve and expand the Emergency Firefighting Water System (EFWS)	SFPUC, SFFD, DPW	DEM, ADM	High: \$5M and above