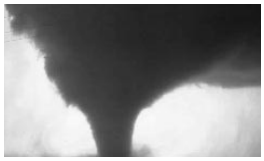
CHECKLIST

MITIGATION MEASURES



WILDFIRE MITIGATION ACTIONS	✔
Site	
Remove vegetation and combustible materials around structures	
Provide more than one means of access into and out of a community	
Provide fire breaks to prevent the spread of fire	
Provide fire roads to aid in firefighting	
Buildings/Contents	
Replace roofing with fire-resistant materials	
WIND MITIGATION ACTIONS	
Public Works/Utilities	
Electrical	
Provide higher grade poles for electrical distribution.	
Provide guy wires on poles subject to failure	
Provide emergency back-up power to critical facilities: emergency generators, secondary feeds, portable generators with standard camlock connections	
Analyze communication lines on power poles: If they cause unacceptable loads, remove when possible	
Make sure right-of-way around power lines is free of trees or limbs that may cause damage	
Traffic	
Protect traffic lights and other traffic controls from high winds	
Vegetation Thin trees to reduce wind damages and plant species of plants that are more resistant to wind damage	
Emergency Shelters Structurally analyze all buildings or rooms identified as shelters and strengthen these as necessary	
Buildings—Residential and Commercial	
Install shutters on windows and doors or otherwise protect building openings from wind damage	
Ensure that roof-mounted equipment, including cowlings and flashing, is securely mounted to the building	
Install additional connections (such as hurricane straps and tie downs) to resist wind loads	
When re-roofing a building, check and refasten the roof sheathing	
When re-roofing a critical building, consider providing additional protection from water damage (such as a layer of mopped felt)	
When re-roofing a building, avoid gravel or ballast on single-ply-membrane roof: Hurricane force winds could pick this up and damage buildings	
Consider underground electrical service (check on flooding hazard)	
Provide additional bracing for roof trusses	
Reinforce existing unreinforced masonry walls with the addition of reinforced columns and bond beams	
Minimize the number and size of existing windows and other openings and reinforce walls around openings	
Strengthen or select a wind-resistant exterior wall finish	
Inspect installation of pre-engineered metal buildings and strengthen as necessary	
SEISMIC MITIGATION ACTIONS	
Public Works/Utilities	
Replace brittle equipment in electrical substations	
Analyze/strengthen water towers	
Retrofit bridges, overpasses, and other critical transportation links	
Provide shut-off valves in distribution lines for water and gas service	
Buildings/Contents	
Add additional seismic connections through methods such as bolting	
Add shearwalls in buildings	
Brace equipment (such as sprinkler piping) whose failure could lead to increase building damages following an earthquake	
Brace equipment (such as mechanical equipment, chillers, emergency generators, and elevators) whose failure may disrupt the operation of a critical facility, such as a hospital	

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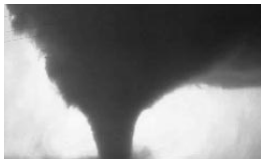

MITIGATION MEASURES

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Brace high value equipment (such as computers and medical equipment) that could topple and get damaged	
Brace equipment that could block building exits or kill or injure people	
Brace parapet walls on buildings; brace or demolish outdoor shelters that pose collapse hazards	
Structurally retrofit unreinforced masonry buildings	
Structurally retrofit roofs during re-roofing	
Provide emergency back-up power to critical facilities: Emergency generators, secondary feeds, portable generators with standard camlock connections	
Harden critical wireless emergency communication systems	
Control use of sites with known high geological and seismic risk	
FLOOD MITIGATION ACTIONS	
Public Works/Utilities	
Protect or elevate ground-mounted transformers	
Elevate vulnerable equipment, electrical controls, and other equipment at waste water treatment plants, potable water treatment plants, and pump stations	
For sewer lines in the floodplain, fasten and seal manhole covers to prevent floodwater infiltration	
Protect wells and other potable water from infiltration and flood damage by raising controls and well pipe	
Replace low bridges or other obstructions that may induce flooding of houses or businesses	
Move building contents to a higher floor or store outside of the floodplain	
Residences	
Elevate existing residences above flood elevation on a new foundation	
Relocate residences outside floodplain	
Acquire and demolish residences	
Store important documents and irreplaceable personal objects (such as photographs) where they will not get damaged	
Elevate or relocate furnaces, hot water heaters, and electrical panels	
Provide openings in foundation walls that allow floodwaters in and out, thus avoiding collapse	
Build and install flood shields for doors and other openings (after evaluating whether the building can handle the forces) to prevent floodwaters' entering	
For drains, toilets, and other sewer connections, install backflow valves or plugs to prevent floodwaters from entering home	
Buy and install sump pumps with back-up power	
Businesses	
Elevate, floodproof, relocate, or demolish buildings	
Store important documents, such as insurance papers and other business papers, where they will not get damaged	
Elevate or relocate furnaces, hot water heaters, electrical panels, and other equipment	
Provide openings in foundation walls that allow floodwaters in and out, thus avoiding collapse	
Build and install flood shields for doors and other openings (after evaluating whether the building can handle the forces)	
For drains, toilets, and other sewer connections, install backflow valves or plugs; these can be tested by a plumber before a flood by plugging the sewer drain and filling waste pipes with clean water	
Backflow of sewer lines can occur outside of the flooded areas, particularly where there are combined sanitary or storm sewer systems; check with the city or county engineer for advice	
Move inventory that may be flooded; reduce inventory that may be flooded, if possible elevating, relocating, or protecting equipment that can be flooded	
Identify stored hazardous materials or other chemicals that could be flooded; and relocate or elevate these	

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