

Structural Housing and Climate Readiness Strategies											
Adaptation Strategy	Climate Impacts Addressed				Mitigation Co-Benefits	New/ Existing Housing	Policy or Practice	Strategy Evaluation			Potential Lead Agency
	SLR	Flood	Fire	Heat				Benefits (not an exhaustive list)		Limitations (not an exhaustive list)	
<b>Regional Level Strategies</b>											
Wetland Protection & Restoration	✓	✓			✓	Both		<ul style="list-style-type: none"> <li>Proven efficacy in cities across the US</li> <li>Maintains natural communities and facilitates ecosystem services</li> <li>Promotes biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>Wetland ecosystems are sensitive to additional climate impacts</li> <li>Requires regular maintenance</li> </ul>	FSLRR Agency	
Sea Walls & Levees	✓	✓				Both		<ul style="list-style-type: none"> <li>Proven efficacy in cities across the US</li> <li>Reduces and disperses wave energy</li> <li>Provides reliable protection to at-risk coastal properties</li> </ul>	<ul style="list-style-type: none"> <li>Cost intensive construction &amp; maintenance</li> <li>Sensitive to SLR projections</li> <li>Potential to exacerbate erosion</li> </ul>	FSLRR Agency	
Floodwalls	✓	✓				Both		<ul style="list-style-type: none"> <li>Prevents structural damage to buildings</li> <li>Occupants can remain in-place during retrofit efforts</li> </ul>	<ul style="list-style-type: none"> <li>Potential to increase flood flows on adjacent properties</li> <li>Cost intensive as a retrofit option</li> </ul>	FSLRR Agency	
Community Fuel Treatments			✓			Both	Practice	<ul style="list-style-type: none"> <li>Reduces fuel sources for wildfire</li> <li>Reduces fire strength</li> <li>Increases likelihood of fire suppression</li> </ul>	<ul style="list-style-type: none"> <li>Increases maintenance and landscaping needs</li> </ul>	CaFIRE	
Ridgeline Fuel Breaks			✓			Both	Practice	<ul style="list-style-type: none"> <li>Reduces fuel sources for wildfire</li> <li>Prevents flames from directly affecting structures</li> </ul>	<ul style="list-style-type: none"> <li>Increases maintenance and landscaping needs</li> <li>Extensive land requirements</li> </ul>		
Prescribed Fires			✓			Both	Practice	<ul style="list-style-type: none"> <li>Reduces fuel sources for wildfire</li> <li>Increases water availability</li> </ul>	<ul style="list-style-type: none"> <li>Require careful mointoring to prevent uncontrolled spread</li> <li>Potential to reduce local air quality</li> <li>Potential to adversely impact sensitive plants and animals</li> </ul>	CaFIRE	
Stormwater Retention		✓						<ul style="list-style-type: none"> <li>Reduces stormwater runoff</li> <li>Mitigates and/or prevents localized flooding</li> <li>Water conservation/potential for greywater systems</li> </ul>	<ul style="list-style-type: none"> <li>Increases maintenance and landscaping needs</li> </ul>		
<b>Local Level Strategies</b>											
Adaptation Strategy	SLR	Flood	Wildfire	Heat	Co-benefits	New/ Existing		Benefits	Limitations		
Water Retention Design Features	✓	✓		✓				<ul style="list-style-type: none"> <li>Acceptable for a range of storm conditions</li> <li>Increases pollutant filtration</li> <li>Aesthetically appealing</li> </ul>	<ul style="list-style-type: none"> <li>Unsuitable for high-slope sites - requires more engineering</li> <li>Could increase maintenance and landscaping needs</li> </ul>		
Soft Shorelines	✓	✓			✓			<ul style="list-style-type: none"> <li>Maintains healthy wave patterns and litoral cells</li> <li>Reduces and disperses wave energy</li> <li>Lower cost than hard structural approaches</li> </ul>	<ul style="list-style-type: none"> <li>Ineffective in areas with existing hard infrastructure</li> <li>Requires specialized, site-specific, design</li> <li>Ineffective in high-energy environments</li> </ul>		

Green Streets		✓		✓	✓			<ul style="list-style-type: none"> <li>• Active transportation friendly</li> <li>• Minimizes stormwater runoff</li> <li>• Mitigates and/or prevents localized flooding</li> </ul>	<ul style="list-style-type: none"> <li>• Extensive effort to retrofit existing infrastructure - most cost effective when done with other infrastructure maintenance</li> <li>• Sensitive to underlying soil types</li> </ul>	
Tide Gates & Active Barriers	✓	✓						<ul style="list-style-type: none"> <li>• Fixed and flexible implementation options</li> <li>• Customizable</li> <li>• Can be opened and closed as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to increase flood flows on adjacent properties</li> <li>• Exacerbated flood impacts in case of failure</li> </ul>	
Building Elevation	✓	✓						<ul style="list-style-type: none"> <li>• Long-term protection and avoidance of impacts</li> <li>• Can create area for passive flooding</li> <li>• Limited visual and aesthetic impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Cost intensive construction</li> <li>• Sensitive to SLR projections</li> <li>• Cost intensive as a retrofit option</li> </ul>	
Low Impact Development (LID) Policy	✓	✓		✓	✓		<b>Policy</b>	<ul style="list-style-type: none"> <li>• Promotes groundwater recharge</li> <li>• Aesthetically appealing</li> <li>• Suitable for retrofit projects</li> </ul>	<ul style="list-style-type: none"> <li>• Increases maintenance and landscaping needs</li> <li>• Performance diminishes over time - (need more info)</li> <li>• Potential to increase erosion during severe storms - (need more info)</li> </ul>	
Shade Tree Planting				✓	✓		<b>Both</b>	<ul style="list-style-type: none"> <li>• Cost effective</li> <li>• Provides community-scale benefits</li> <li>• Aesthetically appealing</li> </ul>	<ul style="list-style-type: none"> <li>• Increases maintenance and landscaping needs</li> <li>• Can potentially increase water use</li> </ul>	
Establishment of Cooling (Resilience) Centers				✓		<b>New</b>		<ul style="list-style-type: none"> <li>• Increases resident safety</li> <li>• Reduces demand for emergency response services</li> <li>• Provides a range of public health benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Potential for underutilization due to limited accessibility</li> <li>• Limited occupant capacity</li> </ul>	
Community Microgrid Policy					✓		<b>Policy</b>	<ul style="list-style-type: none"> <li>• Critical infrastructure increases grid reliability and resilience</li> <li>• Reduce grid “congestion” and peak loads</li> </ul>	<ul style="list-style-type: none"> <li>• Utility rate regulation discourages microgrid development</li> <li>• Face conflicting regulation at the federal, state and local levels</li> <li>• Requires batteries which requires space and maintenance</li> </ul>	
Required Air Conditioning in Building Code (Heat Pump)				✓			<b>Policy</b>	<ul style="list-style-type: none"> <li>• Addresses extreme heat impacts</li> </ul>		
<b>Site Level Strategies</b>										
<b>Adaptation Strategy</b>	<b>SLR</b>	<b>Flood</b>	<b>Fire</b>	<b>Heat</b>	<b>Co-benefits</b>	<b>New/ Existing</b>	<b>Policy/ Practice</b>	<b>Benefits</b>	<b>Limitations</b>	
Green Roofs		✓		✓	✓	<b>New</b>	<b>Both</b>	<ul style="list-style-type: none"> <li>• Reduces stormwater runoff</li> <li>• Promotes passive building cooling</li> <li>• Aesthetically appealing</li> </ul>	<ul style="list-style-type: none"> <li>• Cost intensive construction</li> <li>• Requires regular maintenance</li> </ul>	
Heat-Resistant Building Envelopes				✓	✓	<b>New</b>		<ul style="list-style-type: none"> <li>• Promotes passive cooling</li> <li>• Increases energy efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Increased construction costs but Title 24 requires it anyway</li> <li>• Extensive construction required for retrofit</li> </ul>	

Cool Roofs				✓	✓	<b>New</b>	<b>Both</b>	<ul style="list-style-type: none"> <li>• Promotes passive building cooling</li> <li>• Reduces UHI effect</li> <li>• Suitable for building retrofit</li> <li>• Increases roof life</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to increase heating costs during cool months</li> <li>• Requires regular maintenance for aesthetic appeal</li> <li>• Not compatible with roof-top solar</li> </ul>	
Storm Windows & Double Glazing				✓	✓	<b>Both</b>		<ul style="list-style-type: none"> <li>• Promotes passive cooling</li> <li>• Increases energy efficiency</li> <li>• Suitable for new development and retrofit</li> <li>• Reduced indoor noise (positive for TOD near trains)</li> </ul>	<ul style="list-style-type: none"> <li>• Increased materials costs for development but required with Title 24</li> <li>• Requires property-owner collaboration for retrofit but true of most/all retrofits</li> </ul>	
Low Impact Development (LID)	✓	✓		✓	✓		<b>Practice</b>	<ul style="list-style-type: none"> <li>• Promotes groundwater recharge</li> <li>• Aesthetically appealing</li> <li>• Suitable for retrofit projects</li> </ul>	<ul style="list-style-type: none"> <li>• Increases maintenance and landscaping needs</li> </ul>	
Low-Emitting Building Materials				✓	✓	<b>New</b>		<ul style="list-style-type: none"> <li>• Improves indoor air quality</li> </ul>	<ul style="list-style-type: none"> <li>• Increased materials costs for development</li> </ul>	
Varied Building Massing				✓	✓			<ul style="list-style-type: none"> <li>• Reduce UHI effect</li> <li>• Promote passive cooling</li> <li>• Improve urban ventilation corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Ineffective in built-out areas</li> <li>• Reduces achievable density</li> </ul>	
Internal Courtyards		✓		✓		<b>New</b>		<ul style="list-style-type: none"> <li>• Promote passive cooling</li> <li>• Provide recreational open space for residents</li> <li>• Reduce UHI effect</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce buildable land area</li> <li>• Require regular maintenance</li> </ul>	
Flood-Proof Construction	✓	✓				<b>New</b>		<ul style="list-style-type: none"> <li>• Long-term protection for structures</li> <li>• Customizable to individual projects</li> </ul>	<ul style="list-style-type: none"> <li>• Cost intensive construction</li> <li>• Potential to increase flood flows on adjacent properties</li> </ul>	
Floating Structures	✓					<b>New</b>		<ul style="list-style-type: none"> <li>• Suitable for building retrofit</li> <li>• Flexible approach for variable SLR projections</li> </ul>	<ul style="list-style-type: none"> <li>• Cost intensive construction</li> <li>• Special consideration for infrastructure connections</li> <li>• Sensitive to severe weather events</li> </ul>	
Passive Building Design			✓			<b>New</b>		<ul style="list-style-type: none"> <li>• Promotes passive cooling</li> <li>• Increases energy efficiency</li> <li>• Reduces energy costs</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitive to weather conditions</li> <li>• Restricted by existing development patterns</li> <li>• Cost intensive construction</li> </ul>	
Defensible Space Maintenance			✓					<ul style="list-style-type: none"> <li>• Reduces fuel sources for wildfire</li> <li>• Increased barrier between fire hazard and homes</li> </ul>	<ul style="list-style-type: none"> <li>• Increases maintenance and landscaping needs</li> <li>• Requires enforcement by local agencies</li> <li>• Dependent on property owner collaboration</li> </ul>	
Fire Resistant (site-appropriate) Landscaping			✓			<b>Both</b>	<b>Both</b>	<ul style="list-style-type: none"> <li>• Reduces fuel sources for wildfire</li> <li>• Potential to reduce fire strength and spread</li> <li>• Creates biodiversity and wildlife corridors</li> </ul>	<ul style="list-style-type: none"> <li>• Local agencies should provide technical assistance</li> <li>• Dependent on property owner collaboration</li> </ul>	
Roof Fire Sprinkler Requirements			✓				<b>Both</b>	<ul style="list-style-type: none"> <li>• Increases building and occupant safety</li> <li>• Reduces property damage in case of fires</li> <li>• Increases likelihood of fire suppression</li> </ul>	<ul style="list-style-type: none"> <li>• Increased construction cost</li> <li>• Requires regular maintenance</li> </ul>	

Shade Structures				✓		<b>Both</b>	<ul style="list-style-type: none"> <li>• Increases resident safety</li> <li>• Reduces UHI effect</li> <li>• Aesthetically appealing</li> </ul>	<ul style="list-style-type: none"> <li>• Increases construction cost</li> <li>• Localized, site-specific, benefits</li> </ul>	
Community Microgrid					✓	<b>Practice</b>	<ul style="list-style-type: none"> <li>• Critical infrastructure that increases reliability and resilience</li> <li>• Reduce grid “congestion” and peak loads</li> </ul>	<ul style="list-style-type: none"> <li>• Utility rate regulation discourages microgrid development</li> <li>• Face conflicting regulation at the federal, state and local levels</li> <li>• Requires batteries which requires space and maintenance</li> </ul>	