

# ELEMENT 1 CHECKLIST

# CLIMATE RISKS AND COMMUNITY VULNERABILITIES ASSESSMENT

Yes = Action completed     Somewhat = Action in progress or incomplete     No = No action planned or taken     Unknown = Status or action unknown     N/A = Does not apply

GENERAL		Value	Rank
1.0.1	Does your health care facility receive notifications of weather warnings, alerts, and advisories for the following hazard conditions?:		
	• Extreme heat	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Extreme cold	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Extreme weather - freezing rain, blizzard, ice storm, hail, snow	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Drought	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Wildfire	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Tornado	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Flash Floods and/or Coastal Floods	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Hurricanes or Severe storms	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Avalanche or landslides	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Poor air quality and smog	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Water-borne contamination and/or diseases	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Vector-borne diseases	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

STEP 1: Understand Climate Risks		Value	Rank
<i>“Climate vulnerability assessment” is the analysis of the expected impacts, risks and adaptive capacity of a region or sector to the extreme and gradual effects of climate change. A vulnerability assessment is more than simple measurement of the potential harm caused by extreme weather events resulting from climate change includes an assessment of the ability to adapt.</i>			
1.1.1	Is local or regional government conducting climate risk and vulnerability assessments for the healthcare sector?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• If “yes”, are these assessments regularly updated with emerging data and climate science?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.2	Does local government communicate to your organization and the community information on local extreme weather hazard trends, including likely hazard impacts?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.3	Does your organization have partnerships with universities or other climate and health-focused organizations to inform your understanding of climate and health risks?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.4	Does disaster risk assessment inform local development policies? <i>(Are local and municipal government authorities acting on climate change information in formulating development policies?)</i>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.5	If the answers above are “no”, has your organization conducted an independent climate risk assessment?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• If the answer is ‘yes’, does your organization utilize the resultant information as a basis of planning?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.1.6	Based on your response to the questions above, rank your level of climate risk understanding.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

STEP 2: Assess Community Preparedness and Vulnerabilities		Value	Rank
<i>A resilient health care facility is dependent in part on the climate resiliency of the broader community. Climate variability and climate change may create risks in your community that can affect your health care facility. The community may have limited capacity to cope and certain vulnerability factors (e.g. institutional, demographic, socio-economic) may increase future risks. Step 2 questions should be completed for each campus or unique facility location.</i>			
1.2.1	Are local government organizations equipped with knowledge, experience and resources to manage disaster risk reduction and climate change adaptation at a community or neighborhood level?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.2.2	Are there existing partnerships between the community, healthcare organization and local authorities to reduce climate vulnerability in the surrounding communities?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.2.3	Does the local government support vulnerable local populations <i>(particularly elderly, children)</i> to actively participate in risk reduction decision making, policy making, planning and implementation?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

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1.2.4	Does your healthcare organization have an understanding of local community vulnerability to extreme temperatures, flooding and other extreme weather hazards?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
1.2.5	Do staff from your health care facility regularly participate on community disaster planning committees (e.g. when emergency management or community vulnerability assessments are undertaken)?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
1.2.6	When conducting risk assessments, does your health care facility receive and exchange information about risks in the community (e.g. vulnerability of infrastructure, critical resources, vulnerability of the population) from knowledgeable community partners?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
1.2.7	Does your healthcare organization participate in community educational programs to assist the local community in reducing climate risk and vulnerabilities?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
1.2.8	Is your healthcare system engaged in community health programs to improve community health in the face of particular climate risks (for example, home care for asthma to reduce health vulnerabilities during heat waves)?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
1.2.9	Based on your response to the questions above, rank your level of community preparedness for climate change impacts	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

STEP 3: Prepare a Climate Risk and Vulnerability Analysis		Value	Rank
<i>Step 3 should be completed for each campus or unique facility location.</i>			
1.3.1	Has your organization reviewed, evaluated and cataloged extreme weather risks for this healthcare delivery location?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.2	When identifying climate risks, is uncertainty around changing weather patterns, including future climate variability, considered?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.3	Have you projected future climate impacts to 2050 or 2080?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.4	Does your facility/organization consider how indirect climate risks (drought, food prices, water availability, fossil fuel price increases) may affect future vulnerabilities or risks?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.5	Does your organization prepare and regularly update a Hazard Vulnerability Analysis?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.6	Does your Hazard Vulnerability Analysis include consideration of the impacts of extreme weather risks on both your buildings and infrastructure?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.7	Have you completed the following components of a Climate Risk Assessment for each facility/campus:	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Do you maintain a database of extreme weather losses from past events on your campus(es), city or region?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you mapped the intensity and probability of extreme weather events across all your campuses (today, 2050, 2080)?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you identified the vulnerabilities and hazard exposures your community may face? <b>See Section 1.2 above.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you determined the degree of vulnerability and exposure to the hazard your campus or buildings may face? <b>See Elements 2 and 3 for guidance.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you assessed the impact of community vulnerabilities on patient surge and non-traditional needs the community may expect a medical facility to provide? <b>See Element 4 for guidance.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you identified the capacities and resources available within your organization, neighborhood or community to provide redundancy? <b>See Element 4 for guidance.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Have you determined the potential to mitigate extreme weather impacts through enhanced ecosystem adaptations? <b>See Element 5 for guidance.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
1.3.8	Based upon the responses to questions above, rank the state of climate risk and vulnerability analysis for the campus or facility?	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

STEP 4: Prepare a System-wide Climate Risk and Vulnerability Analysis		Value	Rank
1.4.1	If your campus is part of a larger health system, does the system have a comprehensive hazard vulnerability planning process that considers strategic relocation of people and assets during and following extreme weather events...		
	• Within each campus?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Within the system?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Within a larger regional delivery system?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

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**1.4.2** National and regional assessments of climate-related hazards are conducted approximately every 5 years. How often are risk assessments at your health care facility carried out *(or revisited and updated)*?

• Every year		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
• 2-5 years		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
• 6-10 years		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
• Never		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A

**1.4.3** Based upon the responses to questions above, rank the state of climate risk and vulnerability analysis for your system?

3 (Exemplary)   
 2 (Functional)   
 1 (Marginal)   
 0 (None)   
 N/A

**SUMMARY**

	Value	Rank
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*Based on your responses above, develop a list of action items to address Clinical Care Service Delivery issues identified.*

**1.5.1** Have you determined climate risks for each building and campus based on hazard vulnerability assessments and/or this checklist?

Yes   
 Somewhat   
 No   
 Unknown   
 N/A

**1.5.2** Have you determined climate vulnerabilities and risks for the system as a whole?

Yes   
 Somewhat   
 No   
 Unknown   
 N/A

**1.5.3** Have you mapped priority strategies for this Element across a timetable for implementation? *Refer to the Getting Started section of the Climate Resilience Toolkit toolkit.climate.gov.*

Yes   
 Somewhat   
 No   
 Unknown   
 N/A

*This checklist is one component of a five element framework and toolkit for improving healthcare facility climate resilience.  
The full set of checklists, companion resources and case studies are available at [toolkit.climate.gov](http://toolkit.climate.gov).  
This document is provided to the public for informational purposes and voluntary use. It does not represent official HHS policy.*

# ELEMENT 2 CHECKLIST

# LAND USE, BUILDING DESIGN AND REGULATORY CONTEXT

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GENERAL		Value	Rank
<b>2.0.1</b>	Understand the physical parameters of each site or campus; facilities or campuses located in areas noted below are subjected to higher levels of hazard		
	<ul style="list-style-type: none"> <li>Is the site located on low-lying barrier island and/or coastal regions?</li> <li>Is the site located on or near 100-year or 500-year floodplains or wetlands?</li> <li>Is the site located in close proximity to major levees or dams?</li> <li>Is the site located in close proximity to steep slopes subject to erosion?</li> <li>Is it located in close proximity to an area subject to fire risk?</li> <li>If you answered 'yes' or 'somewhat' to the questions above, have you developed comprehensive hazard mitigation plans (HMPs) for affected sites?</li> <li>Are you participating in local community and/or regional initiatives around mitigation and adaptation for these hazards?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<i>In recent years, U.S. health facilities have been impacted by extreme weather events and will continue to be impacted by climate-related hazards. Health care facilities can learn from each other by sharing lessons learned and best practices.</i>			
<b>2.0.2</b>	Does your health care facility collect best practices and lessons learned regarding building envelop and healthcare campus resilience from other health care facilities that have experienced extreme weather disasters?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.0.3</b>	Are the individuals responsible for maintenance of your health care campuses and building envelopes adequately trained to manage an extreme weather related emergency or disaster ( <i>for examples of climate-related hazards, please refer to the hazards listed in Element 1</i> )		
	<ul style="list-style-type: none"> <li>Are front-line workers engaged in the development of plans and responses?</li> <li>Do site and building maintenance procedures include specifications on how weather may affect the safety and continued functioning of your facility?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

STEP 1: Understand Land Use, Siting and Landscape		Value	Rank
<i>Perform Step 1 for each campus or site</i>			
<b>2.1.1</b>	Inventory stormwater management infrastructure		
	<ul style="list-style-type: none"> <li>Is the capacity of existing stormwater management system adequate for anticipated 50- or 100-year storm events today?</li> <li>Will the system be adequate in 2030/2050/2080??</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.1.2</b>	Inventory heat-island contributors		
	<ul style="list-style-type: none"> <li>Have you installed reflective white roofs on buildings to reduce heat island impacts?</li> <li>Do you have high-albedo, light colored paving on parking areas and walkways?</li> <li>Have you installed green roofs to mitigate heat-island impacts?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.1.3</b>	Inventory plant material and landscape vulnerabilities		
	<ul style="list-style-type: none"> <li>Are existing trees and plants resilient to climate change effects, both in general climate terms and pest/disease risks?</li> <li>Are they drought tolerant?</li> <li>In coastal areas, are they salt-tolerant to storm surge?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.1.4</b>	Based on answers to the above, rank the resilience of land use, siting and landscape	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

STEP 2: Transportation and Site Access		Value	Rank
<i>Perform Step 2 for each campus or site</i>			
<b>2.2.1</b>	Assess transportation and site access resilience.		
	<ul style="list-style-type: none"> <li>Do you have two unique access routes to critical healthcare facilities?</li> <li>Do you have contingency plans in place for loss of an access route or routes?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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	<ul style="list-style-type: none"> <li>Have you surveyed existing landscape elements to ensure that if damaged they will not block on-site access routes to the facility?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.2.2</b>	<b>Inventory pavement design and materials</b>		
	<ul style="list-style-type: none"> <li>Are pavements designed to withstand extreme temperatures, freezing and thawing, or solar radiation?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.2.3</b>	<b>Inventory transportation options for each site</b>		
	<ul style="list-style-type: none"> <li>Is the building or campus served by public transportation systems, such as light rail or subway?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>If so, have local public transportation systems undertaken climate resilience efforts?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Is public transportation likely to remain operational during or immediately following an extreme weather event?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Do you have a contingency plan for personnel transportation?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>If the building or campus is automobile and/or bus dependent, have you surveyed transportation vulnerabilities associated with weather extremes?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Is there a helipad?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Have you evaluated the location of the helipad against extreme weather risks? <i>(For example, at grade flooding or rooftop vulnerability to damage from high winds.)</i></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.2.4</b>	<b>Inventory evacuation routes and their vulnerabilities</b>		
	<ul style="list-style-type: none"> <li>Have you developed contingency plans for evacuation during or following an extreme event?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Are evacuation routes vulnerable to falling trees, utilities <i>(fallen wires or poles)</i>?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Are evacuation routes above flood elevation?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.2.5</b>	<b>Based on answers to the above, rank the resilience of transportation and site access.</b>		<input type="radio"/> 3 <i>(Exemplary)</i> <input type="radio"/> 2 <i>(Functional)</i> <input type="radio"/> 1 <i>(Marginal)</i> <input type="radio"/> 0 <i>(None)</i> <input type="radio"/> N/A

<b>STEP 3: Critical Building Inventory</b>		<b>Value</b>	<b>Rank</b>
<i>Perform Step 3 for each critical building on the campus or site</i>			
<b>2.3.1</b>	<b>Develop inventory of buildings vulnerable to each risk.</b>		
	<ul style="list-style-type: none"> <li>Have you mapped building locations relative to hazard maps?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Have you compiled building envelope and performance vulnerabilities for each critical building?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Have you reviewed building code design baselines against extreme weather intensities <i>(wind speeds, rainfall volumes, etc.)</i> for each critical building?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Have you incorporated expected climate change data over time into building vulnerability assessments?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.3.2</b>	<b>Assess potential injuries and property loss associated with hazards</b>		
	<ul style="list-style-type: none"> <li>Have you prepared a building asset inventory?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Where vulnerabilities are identified, have you used HAZUS or FEMA 386 to calculate potential losses?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.3.3</b>	<b>Develop a checklist for each building that summarizes major principles that should be considered when developing policies or capital projects</b>		
	<ul style="list-style-type: none"> <li>Have you reviewed local or regional resources on improving building resilience?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Review USGBC's "Green Building and Climate Resilience" for regional strategies. <b>See Resources.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>For Hospitals, review FEMA-577 for flood and high wind. <b>See Resources.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>For Residential Healthcare Facilities, review FEMA-577 and P-361 for Safe Rooms. <b>See Resources.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>For ambulatory facilities, review FORTIFIED®. <b>See Resources and Step 4.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.3.4</b>	<b>In flood regions, understand if the buildings on your campus comply with the following specific regulations:</b>		
	<ul style="list-style-type: none"> <li>NFIP or FEMA Coastal Construction Manual and FEMA-577. <b>See Resources.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>Additional flood requirements per local jurisdiction</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	<ul style="list-style-type: none"> <li>ASCE 24-05, Flood Resistant Design and Construction. <b>See Resources.</b></li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

2.3.5 Based on answers to the above, rank the state of critical building inventories  3 (Exemplary)  2 (Functional)  1 (Marginal)  0 (None)  N/A

**STEP 4: Building Construction and Vertical Transportation** Value Rank

*Perform Step 4 for each critical building on the campus or site*

**2.4.1** Inventory Building Envelope design parameters for each critical building

• What is the date of construction/occupancy?		<input type="radio"/> Unknown <input type="radio"/> N/A
• What are the design wind loads for envelope?		<input type="radio"/> Unknown <input type="radio"/> N/A
• What are the design wind loads for windows?		<input type="radio"/> Unknown <input type="radio"/> N/A
• What are the design wind loads for roofs?		<input type="radio"/> Unknown <input type="radio"/> N/A
• What are the design snow loads for roofs?		<input type="radio"/> Unknown <input type="radio"/> N/A
• What are the design peak rainfall parameters for roof drainage systems?		<input type="radio"/> Unknown <input type="radio"/> N/A
• In high wind areas, are there places of refuge designed as part of the structure?		<input type="radio"/> Unknown <input type="radio"/> N/A
• Have building insulation and windows been updated to comply with contemporary energy codes?		<input type="radio"/> Unknown <input type="radio"/> N/A

**2.4.2** Create places of refuge by hardening envelope and building shell

• Have buildings taller than 60 feet or having long span roofs ( <i>more than 150'</i> ) been peer reviewed for structural design for increased extremes?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Have rooftop structures and equipment ( <i>and their attachments</i> ) been reviewed for anticipated wind speeds?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Have rooftop structures and equipment ( <i>and their attachments</i> ) been reviewed for extreme precipitation and/or hail vulnerabilities?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Are skylights uplift resistant and impact resistant?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Do exterior wall systems meet the requirements for wind and water resistance?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• In high wind areas, have you installed impact resistant glazing or opening protectives?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

**2.4.3** Review vertical transportation system vulnerabilities

• Are machine rooms resistant to flooding or high wind/rooftop damage?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Are vertical transportation systems dispersed to allow for partial use if some infrastructure is damaged or disabled?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• In flood zones, is a portion of the elevators constructed to remain operational during and following flood events?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

**2.4.4** Review interior construction for hazard vulnerabilities

• Is interior construction water-resistant below 500-year flood elevations?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Is stairwell construction fortified against high-wind events?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Is there a designated high wind "safe area"?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

2.4.5 Based on answers to the above, rank the overall status of critical building construction and vertical transportation systems for each campus?  3 (Exemplary)  2 (Functional)  1 (Marginal)  0 (None)  N/A

**STEP 5: Passive Survivability Inventory** Value Rank

*Perform Step 5 for each critical building on the campus or site*

*Understand how buildings will perform if mechanical/electrical systems are disabled for an extended period of time. Assess overall passive survivability for the applicable conditions below:*

**2.5.1** In extreme heat:

• Are windows operable to provide for ventilation air and to maintain habitable conditions?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Are there exterior shading devices, trees or other architectural features that mitigate solar gain?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Have you assessed the length of time people can remain in place before overheating requires evacuation?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

**2.5.2** In extreme cold:

• Do building orientation, glazing and/or shading devices provide for supplemental daytime solar gain?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Is the building well-insulated, with high efficiency glazing systems?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Does the building have significant thermal mass to reduce heat loss?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Are there any sources of supplemental building heat?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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<ul style="list-style-type: none"> <li>Have you assessed the length of time people can remain in place before extreme cold requires evacuation?</li> </ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
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SUMMARY	Value	Rank
<i>Based on your responses above, develop a list of action items to address Land Use, Building Design and Regulatory Issues identified.</i>		
<b>2.6.1</b> Have you determined key resilience improvement strategies for each building and campus?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>2.6.2</b> Have you mapped priority strategies for this Element across a timetable for implementation? <i>Refer to the Getting Started section of the Climate Resilience Toolkit at <a href="http://toolkit.climate.gov">toolkit.climate.gov</a>.</i>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

*This checklist is one component of a five element framework and toolkit for improving healthcare facility climate resilience.  
The full set of checklists, companion resources and case studies are available at [toolkit.climate.gov](http://toolkit.climate.gov).  
This document is provided to the public for informational purposes and voluntary use. It does not represent official HHS policy.*

# ELEMENT 3 CHECKLIST

# INFRASTRUCTURE PROTECTION AND RESILIENCE PLANNING

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GENERAL		Value	Rank
<i>The ability of a health care facility to continue to provide care in a changing climate is in part dependent on the infrastructure and system elements that provide a safe and healthy hospital environment.</i>			
3.0.1	Is information about the vulnerability of your facility’s infrastructure and systems to current and future climate variability and changing weather patterns continually included in hospital facility risk assessments?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.0.2	Does your health care facility collect best practices and lessons learned regarding infrastructure and related systems resilience from other health care facilities that have experienced extreme weather disasters?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.0.3	Are the individuals responsible for maintenance of your health care facilities, systems and infrastructure adequately trained to manage an extreme weather related emergency or disaster <i>(for examples of climate-related hazards, please refer to the hazards listed in Element 1)</i>		
	• Are front-line workers engaged in the development of plans and responses?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Do maintenance procedures of your health care facilities’ systems and infrastructure include specifications on how weather may affect the safety and continued functioning of your facility?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.0.4	Does your health care facility invest in infrastructural upgrades or redundancy measures to make your facility more resilient to extreme weather or longer-term gradual impacts from climate change?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.0.5	Develop a checklist for each building system that summarizes major principles that should be considered when developing policies or capital projects. <b>Refer to Element 2 Resources and Checklist.</b>		
	• For Hospitals, have you reviewed FEMA-477 for flood and high wind?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• For Residential Healthcare Facilities, have you reviewed FEMA-477 and P-361 for Safe Rooms?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• For ambulatory facilities, have you reviewed FORTIFIED®?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.0.6	Have you completed a time to failure <i>(96 hour or greater)</i> assessment of all major building infrastructure systems?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

STEP 1: Energy and Utility Infrastructure: Power and Thermal Energy		Value	Rank
<i>Perform Step 1 for each campus or site</i>			
3.1.1	Climate change may result in more power outages in your community, which may result in increased frequency and/or duration of power disruptions at your health care facility. Review energy and utility infrastructure vulnerabilities and parameters of operating without essential utilities <i>(island operation)</i> that may be required in extreme weather events		
	• What is the current anticipated length of time you can operate without grid power or refueling? <i>(96 hours is the minimum requirement, but some campuses may have circumstances that require a longer period of time.)</i>		<input type="radio"/> N/A
	• Is this adequate to meet the projections for extreme weather event durations?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Do you produce electricity on-site through CHP or renewable systems?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Do you have any other source beyond the municipal grid for normal power provisions?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Given the location of the campus and weather risks, is your refueling supply chain resilient to extreme weather disruptions?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Are all critical facilities equally equipped to operate without grid power for extended outages?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• If not, are there plans in place to address identified shortfalls and vulnerabilities?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
3.1.2	Review locations of energy and utility infrastructure relative to extreme weather hazards.		
	• Are all utility connections above 500-year flood elevation?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Is the infrastructure located in buildings that can withstand damage from wind or hail?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Is all major energy and utility infrastructure located above 500-year flood elevations?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A



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<input type="radio"/> If not, are major energy and utility infrastructure elements located below flood elevations protected by flood-proof enclosures?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is roof mounted energy and utility infrastructure secured for high wind and protected from impact damage?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are emergency generators located above design flood elevations?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are emergency generators safe from impact damage during high wind events?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Based on your answers above, rank the resilience of your energy and utility infrastructure locations		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A
<b>3.1.3</b> In a climate-related emergency involving a power outage at your health care facility, does your facility have back-up power sources available to supply electricity to critical areas?		
<input type="radio"/> What percentage of your base electrical demand is covered by emergency generators?		<input type="radio"/> N/A
<input type="radio"/> Do you have redundancy ( <i>N+1</i> ) for all emergency generators?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Does your emergency generator fuel capacity allow for the projected hours of operation indicated in Question 3.1.1?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Does the emergency generator have a dedicated fuel source?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Do you have external connections for portable emergency generators?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is food refrigeration equipment on emergency power?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> In a climate related emergency, assess the capability of your back up power sources to continue functioning.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A
<b>3.1.4</b> In extreme events, thermal ( <i>heating</i> ) energy systems may be taxed. Review the following items related to thermal systems.		
<input type="radio"/> Have you reviewed the duration of island operation that may be required for the thermal plant in extreme weather events? Enter value here		<input type="radio"/> N/A
<input type="radio"/> How many hours of steam production are possible with fuel reserves?		<input type="radio"/> N/A
<input type="radio"/> Are your thermal plant fuel source(s) subject to delivery disruptions?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is your heating system electric ( <i>ground source heat pumps or electric baseboard</i> )?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> If the answer above is “yes”, is it on the emergency power system?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are boilers dual-fueled?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are fuel reserves adequate for the anticipated hours of operation without refueling?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are steam sterilizers fed by oil or natural gas?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are domestic hot water systems electric?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> If the answer above is “yes”, is domestic hot water on the emergency power system?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> In a climate related emergency, assess the capability of your heating energy system to continue functioning.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A
<b>3.1.5</b> In extreme events, thermal ( <i>cooling</i> ) energy systems may be taxed. Review the following items related to thermal systems:		
<input type="radio"/> What is the the duration of “island operation” that may be required for the thermal plant in extreme weather events?		<input type="radio"/> N/A
<input type="radio"/> What percentage of the cooling load is on emergency power?		
<input type="radio"/> Is your cooling plant capable of operating when grid power is lost?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Have you reviewed anticipated design temperatures for future plant upgrades?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.1.6</b> In a climate related emergency, assess the capability of your cooling systems to continue functioning.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

## STEP 2: Energy Conservation

Value

Rank

Perform Step 2 for each campus or site

<b>3.2.1</b> Energy efficiency initiatives contribute to resiliency by reducing future climate-related health risks ( <i>through greenhouse gas emission reductions</i> ) and reducing reliance on energy on a regular basis ( <i>to be better prepared when power supply is disrupted</i> ).		<input type="radio"/> N/A
<input type="radio"/> Does your health care facility have an energy conservation program?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Have you audited and benchmarked energy use in your facility through EnergyStar or equivalent programs?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Have you set energy or greenhouse gas reduction targets?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Do you monitor or track energy use?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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<input type="radio"/> Do you evaluate energy reduction strategies, monitor cost savings, greenhouse gas reductions?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Do you educate staff, patients and visitors about energy reduction strategies ( <i>energy awareness campaigns</i> )?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.2.2</b> Have you engaged in any of the following energy conservation measures?		
<input type="radio"/> Central plant or mechanical equipment upgrades?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Low-energy lighting, such as T-5 or LED?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Install lighting control systems to minimize energy consumption?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Install energy efficient equipment?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.2.3</b> Has your facility or system investigated the possibility of diversifying energy sources and including renewable energy sources for your buildings or campuses ?		
<input type="radio"/> Solar ( <i>photovoltaic or thermal</i> )		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Wind		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Methane ( <i>from landfill or industrial/agricultural sources</i> )		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Biomass		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.2.4</b> Extreme weather could have cost implications for your health care facility, ( <i>if air conditioning units will need to run at higher intensities and for longer periods of time.</i> ) Do you consider how future climate variability, increasing utility or energy costs could affect costs to run equipment when developing future plans, strategies and programs ( <i>e.g. when investments are made</i> )?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.2.5</b> Based on your responses to Step 2 above, assess your energy conservation program.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A

<b>STEP 3: Water Supply</b>	<b>Value</b>	<b>Rank</b>
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*Perform Step 3 for each campus or site*

<b>3.3.1</b> Climate change may cause more water restrictions or contamination. Does your health care facility have sufficient plans for water resources in the event of a water related emergency?		
<input type="radio"/> Are there two independent water sources to the facility?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is there a functioning well on your site?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> If yes, is it adequate to supply the facility?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is the water source potable without treatment?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> If treatment is required, is there a sufficient supply?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is there a surface water source; ie, pond, lake, etc that can provide process water needs in an emergency?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.3.2</b> Climate change may cause more water restrictions in your community. Does your health care facility have protocols to secure back-up supplies of water in the event of a water related emergency?		
<input type="radio"/> How much on-site emergency water storage do you have ( <i>gallons</i> )?		<input type="radio"/> N/A
<input type="radio"/> What duration of operation can this storage provide ( <i>hours</i> )?		<input type="radio"/> N/A
<input type="radio"/> Do you rely on bottled drinking water for emergencies?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> If so, how much do you store and for what duration?		<input type="radio"/> N/A
<b>3.3.3</b> Based on your response above, rank your overall water supply resilience.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A

<b>STEP 4: Water Usage</b>	<b>Value</b>	<b>Rank</b>
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*Perform Step 4 for each campus or site*

<b>3.4.1</b> Water distribution systems may be impacted by climate related events. Assess water distribution system vulnerabilities.		
<input type="radio"/> Is all utility water piping below frost lines?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is all internal water piping protected by insulation and routed through heated spaces?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.4.2</b> Water usage tracking and benchmarking can help you understand needs and vulnerabilities. Rank your awareness of water usage and cost.		
<input type="radio"/> Have you audited and benchmarked your water usage ( <i>gal/day</i> )?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Do you track or monitor water use for performance measures?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Do you monitor cost savings of water use reduction strategies?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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<ul style="list-style-type: none"><li>• Do you have a campaign to increase awareness about water conservation/use in the facility among staff, visitors and patients?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<b>3.4.3</b> A water conservation program could include a variety of initiatives. Has your health care facility adopted any of the following water conservation related strategies?						
<ul style="list-style-type: none"><li>• Low flow showers and faucets?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Low flow toilets?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Water efficient landscaping practices (<i>drip or no irrigation systems</i>)?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Water efficient laundry equipment?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Food service equipment?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Sterilization equipment?</li></ul>		<input type="radio"/> Yes	<input type="radio"/> Somewhat	<input type="radio"/> No	<input type="radio"/> Unknown	<input type="radio"/> N/A
<b>3.4.4</b> Based on your responses above, rank your water usage patterns and opportunities for improvement.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A				

STEP 5: Sewage and Wastewater	Value	Rank
<i>Perform Step 5 for each campus or site</i>		
<b>3.5.1</b> Sewage and Wastewater systems may be impacted by climate related events. Inventory backflow prevention systems for all critical buildings or campuses.		
<ul style="list-style-type: none"><li>• Do buildings have check valves or equivalent backflow prevention devices installed on the main sewer discharge line to prevent sewage from flowing back into the building during a major flood event?</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Are all floor drains below flood elevation outfitted with drain plugs?</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Do you have any provisions for storing sewage in the event municipal systems are disabled or lost?</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.5.2</b> Based on your responses above, rank your sewage and wastewater infrastructure resilience.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A

STEP 6: Communications Infrastructure	Value	Rank
<i>Perform Step 6 for each campus or site.</i>		
<b>3.6.1</b> Climate related events can disrupt power and communication systems. Does your facility or campus have multiple communication systems in the event of extreme weather emergencies?		
<ul style="list-style-type: none"><li>• Landline telephone systems</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Mobile phone systems</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Radio systems</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Other (please specify): _____</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.6.2</b> Is your healthcare facility part of a regional network of healthcare facilities with coordinated communication systems and protocols?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.6.3</b> Does your facility or healthcare system have a system to provide “essential personnel” credentials to all required staff during or following extreme weather events, when traffic may be restricted and gasoline rationed?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.6.4</b> Rank your communication and information system resilience based on the answers to the questions above.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A

STEP 7: Medical Information Infrastructure	Value	Rank
<i>Perform Step 7 for the campus or site.</i>		
<b>3.7.1</b> Healthcare facilities require Medical Information Systems (MIS) to remain available in order to continue to deliver patient care. Does your facility or system have the following systems in place?		
<ul style="list-style-type: none"><li>• Electronic Medical Records</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Paper record storage in appropriate location (<i>above flood level or in safe rooms</i>)</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Off-site data center(s)</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.7.2</b> Does your facility or campus have medical information systems that will operate in the event of extreme weather emergencies?		
<ul style="list-style-type: none"><li>• Are Medical Information Systems on emergency power?</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<ul style="list-style-type: none"><li>• Is there an off-site data center or backup to on-site Medical Information Systems?</li></ul>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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<input type="radio"/> Is there a backup telecommunications system if the telephone infrastructure fails?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Is there a municipal or regional backup telecommunications system?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.7.3</b> Inventory record storage systems and locations and assess their safety.		
<input type="radio"/> Are medical records safe from flooding?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are building infrastructure record documents safe from flooding?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<input type="radio"/> Are all building infrastructure records digitized?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.7.4</b> Rank your Medical Information System resilience based on the answers to the questions above.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

<b>SUMMARY</b>	<b>Value</b>	<b>Rank</b>
<i>Based on your responses above, develop a list of action items to address Infrastructure Protection and Resilience Planning issues identified.</i>		
<b>3.8.1</b> Have you determined key infrastructure resilience improvement strategies for each building and campus from this checklist?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>3.8.2</b> Have you mapped priority strategies for this Element across a timetable for implementation? <i>Refer to the Getting Started section of the Climate Resilience Toolkit toolkit.climate.gov.</i>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

*This checklist is one component of a five element framework and toolkit for improving healthcare facility climate resilience. The full set of checklists, companion resources and case studies are available at [toolkit.climate.gov](https://www.toolkit.climate.gov). This document is provided to the public for informational purposes and voluntary use. It does not represent official HHS policy.*

# ELEMENT 4 CHECKLIST

# ESSENTIAL CLINICAL CARE SERVICE DELIVERY PLANNING

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STEP 1: Determine Clinical Care Needs	Value	Rank
4.1.1 Have you developed planning metrics for extreme weather related events?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.1.2 Determine the appropriate length of time for self-sustaining care within the facility without re-supply of equipment, supplies and staff (96 hours is a common default)		<input type="radio"/> Unknown <input type="radio"/> N/A
4.1.3 Determine the appropriate length of time with no mutual aid from the local community that will be used for planning purposes (96 hours is a common default)		<input type="radio"/> Unknown <input type="radio"/> N/A
4.1.4 Determine Average Daily Occupancy (census) (the average daily number of occupied beds over the preceding year)		<input type="radio"/> Unknown <input type="radio"/> N/A
4.1.5 Determine average number of patients that qualify for early discharge; check number periodically		<input type="radio"/> Unknown <input type="radio"/> N/A
4.1.6 Determine factors for community surge		
• Is this facility the place of refuge for community long term care, assisted living, or other medical residential care uses?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Are there particular health vulnerabilities in the community that will likely increase admissions during an extreme event?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.1.7 Set target for surge capacity (for example: 5%, 10%, 20% of bed totals)	%	<input type="radio"/> Unknown <input type="radio"/> N/A
4.1.8 Do you have a plan for Mass Fatality management and accommodation associated with extreme weather events?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Morgue Capacity		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Portable Refrigerated Trailers		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Spaces capable of additional cooling		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.1.9 Assess your overall understanding of clinical care needs and patient surge in an extreme weather event.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

STEP 2: Determine Personnel Availability	Value	Rank
4.2.1 Have you calculated the number of personnel that will not likely report to work due to inability to travel, illness or safety concerns (e.g., 40% or 200 out of 500)?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.2.2 Have you prepared a Staffing Strategy during surge? (who can work from home, who can work from an alternate location; who is necessary at the hospital?)		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.2.3 Does your health care facility disaster plan include a protocol to receive external assistance from outside partners (e.g. other health care facilities, community, provincial agency, federal agency) in the event of climate-related emergency?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.2.4 Assess your overall understanding of personnel availability in an extreme weather event based on your answers to the questions above.		<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

STEP 3: Identify Clinical Care and Support Space Vulnerabilities	Value	Rank
4.3.1 Inventory the locations of critical medical care departments, support services and diagnostic equipment listed below. Are these departments or services accessible and out of harm's way in an extreme weather event?		
• Urgent Care		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Emergency Services		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Main Lobby/ Building Entrances		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Helipad		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Imaging		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Critical Care and/or Bed Units		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Pharmacy		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Medical Records/ IT		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Emergency Command Center		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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• Kitchen/ Food and Potable Water Storage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Clinical Supplies accessible	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Clinical Laboratories	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Hazardous Waste Storage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Morgue	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Ambulance Fleet Refueling/ Garage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Internal building connecting corridors/links	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Assess your vulnerability to extreme events based on your responses above.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A
<b>4.3.2</b> Based on your inventory above, do you have workaround and/or contingency plans for possible disruption of vulnerable services and functions related to an extreme weather related event?	
• Urgent Care	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Emergency Services	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Main Lobby/ Building Entrances	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Helipad	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Imaging	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Critical Care and/or Bed Units	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Pharmacy	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Medical Records/ IT	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Emergency Command Center	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Kitchen/ Food and Potable Water Storage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Clinical Supplies accessible	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Clinical Laboratories	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Hazardous Waste Storage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Morgue	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Ambulance Fleet Refueling/ Garage	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Internal building connecting corridors/links	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Do you have workarounds for services listed below?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Assess your contingency plans for vulnerable locations based on your responses above.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A
<b>4.3.3</b> A climate-related emergency may affect waste management practices at your health care facility. Does your health care facility have a contingency waste management plan if primary waste management processes are limited or unavailable in an climate-related emergency scenario?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>4.3.4</b> Assess your overall clinical care and support vulnerabilities in an extreme weather event based on your answers to the questions above.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A

<b>STEP 4: Identify Locations for Anticipated Patient Surge</b>	<b>Value</b>	<b>Rank</b>
<b>4.4.1</b> Identify the number of unoccupied beds ( <i>total capacity - average census</i> )		<input type="radio"/> Unknown <input type="radio"/> N/A
<b>4.4.2</b> Identify number of early discharge recoverable beds ( <i>see 4.1.4</i> )		<input type="radio"/> Unknown <input type="radio"/> N/A
<b>4.4.3</b> Have you inventoried and assessed Expanded Treatment Areas (ETA) ( <i>additional areas on campus or off-campus at locations owned or operated by the hospital</i> ) for treating lower acuity patients, either admits or transfers from the hospital? <b>See Element 4 Resources for an APC Checklist for Expanded Treatment Areas.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>4.4.4</b> Have you inventoried and ranked Alternate Care Sites ( <i>off-campus locations owned or operated by businesses other than the hospital</i> ) to which lower acuity hospital patients may be transferred for treatment by attending hospital staff? ( <i>These may be churches, schools, hotels/motels, etc., not large regional community-wide alternate care sites established by the community.</i> ) <b>See Element 4 Resources for an APC Checklist for Alternate Care Sites.</b>	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>4.4.5</b> Assess overall provisions for anticipated patient surge during and following extreme weather events based on your responses to the questions above.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

STEP 5: Personnel and their Accommodation	Value	Rank
4.5.1 Have you identified Temporary Staffing Sources - ie, Red Cross, Emergency Response Teams, etc?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.2 Have you identified and equipped Essential Staff Sleeping Area(s)?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.3 Do you have a Dependent Care Plan that Identifies essential staff dependent care options, both on and off-site? <i>See Element 4 Resources for APC model plan.</i>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.4 Do you have a Pet Care Plan that in part encourages employees to anticipate and proactively find accommodations for pets before the emergency? <i>See Element 4 Resources for APC model plan.</i>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.5 Do your response and recovery plans for climate-related emergencies or disasters include the provision of psychological support to address mental health impacts of health care facility staff in the short term and long-term?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.6 Do you have a system to manage professional and allied healthcare and non-healthcare volunteer personnel?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.5.7 Rank overall provisions for personnel and their accommodation during and following extreme weather events based on your responses to the questions above.	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

STEP 6: Health Care Resources and Supplies	Value	Rank
<i>Procurement of health care resources and supplies is critical for any health care facility to provide care. Climate variability and extreme weather events may affect access to these resources. This includes “just in time delivery” of supplies in emergency situations. Consider the questions below and assess your supply chain resilience.</i>		
4.6.1 At planning venues with community partners, do you discuss how institutional changes in combination with climate variability might affect delivery and/or access to health care resources or supplies?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.6.2 Do you have a plan to accommodate increased supply storage for the extended period of time that the facility will be self-sufficient?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.6.3 Do you currently have access to sufficient inventories of essential supplies and resources to continue to provide care during one or more climate-related emergencies? Please respond according to essential back-up supplies listed below.		
• Medications, treatments, drugs, pharmaceuticals, vaccines		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Medical equipment: dialysers, etc.		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Food		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Water		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
• Non-medical materials, such as bed linens, cleaning supplies		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.6.4 Rank your overall supply chain preparedness, based on your answers to the questions above	<input type="radio"/> 3 (Exemplary) <input type="radio"/> 2 (Functional) <input type="radio"/> 1 (Marginal) <input type="radio"/> 0 (None) <input type="radio"/> N/A	

SUMMARY	Value	Rank
<i>Based on your responses above, develop a list of action items to address Clinical Care Service Delivery issues identified.</i>		
4.7.1 Have you determined key clinical care improvement strategies for each building and campus from this checklist?		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
4.7.2 Have you mapped priority strategies for this Element across a timetable for implementation? <i>Refer to the Getting Started section of the Climate Resilience Toolkit toolkit.climate.gov.</i>		<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A

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# ELEMENT 5 CHECKLIST

# ENVIRONMENTAL PROTECTION AND ECOSYSTEM ADAPTATIONS

Yes = Action completed     Somewhat = Action in progress or incomplete     No = No action planned or taken     Unknown = Status or action unknown     N/A = Does not apply

GENERAL		Value	Rank
<b>5.0.1</b>	A climate resilient health care facility recognizes and commits to sustainable practices that benefit the hospital and broader community. Does your health care facility undertake any of the following measures to be more sustainable?		
	• Develop sustainability goals and action plans	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Track sustainability performance ( <i>setting targets, identifying indicators</i> )	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Implement strategies and activities to continuously improve sustainable management	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Build community partnerships with organizations or agencies to contribute to a resilient community	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Learn about new and emergent programs and technologies to be more sustainable ( <i>assessing sustainable practices of suppliers, for example</i> )	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>5.0.2</b>	Many states and municipalities have begun to address climate change by developing climate action plans, undertaking vulnerability assessments, and restoring or adapting ecosystems for improved resilience. Is your health care facility aware of or participating in ecosystem based climate change adaptation or mitigation initiatives in your area?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>5.0.3</b>	Do you design and construct buildings using green design best practices, standards or guiding principles ( <i>e.g. Leadership in Energy and Environmental Design (LEED), Living Building Challenge, or equivalent</i> )?	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>5.0.4</b>	Does your health care facility take any of the following measures to contribute to improving air quality in your community?		
	• Engage in air quality initiatives in the community	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Avoid the use of toxic chemicals wherever possible indoors	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Avoid the use of toxic chemicals wherever possible in landscape management	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Support local suppliers to reduce transportation miles for supplies	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Support mass transit, carpooling or ride sharing	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Support active transportation ( <i>walking or biking</i> )	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Minimizes transport related emissions by understanding how facility location/design impacts transportation uses	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Other ( <i>specify</i> ): _____	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	

STEP 1: Treat Water as a Resource		Value	Rank
<i>Review the site or campus stormwater management system against future climate predictions for capacity and opportunities.</i>			
<b>5.1.1</b>	Does your facility practice any of the following sustainable stormwater management practices to reduce local flooding in extreme rain events?		
	• Permeable paving	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Green roofs	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Bioswales	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Open space for groundwater recharge	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>5.1.2</b>	Does your facility practice any of the following sustainable stormwater management practices to reduce reliance on water supplies for landscape irrigation in droughts?		
	• Native and drought tolerant species	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
	• Rainwater harvesting	<input type="radio"/> Yes <input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A	
<b>5.1.3</b>	Rank overall stormwater management system with regard to capacity to recharge groundwater and manage extreme precipitation ( <i>rainfall or snowfall</i> ) events.	<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A	



STEP 2: Value Soils		Value	Rank
<b>5.2.1</b>	Sustainable food programs can include a variety of elements that enhance resilience. Does your health facility undertake any of the following sustainable food activities?		
	• Diversify suppliers to include local food	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• On-site food production ( <i>greenhouse, roof gardens</i> )	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Support or host community farmers markets	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Organic food procurement	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Antibiotic-free meat and dairy	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Reduce or eliminate sugar-sweetened beverages	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.2.2</b>	Does your facility or system compost food waste?	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.2.3</b>	Does your healthcare facility practice Integrated Pest Management or other sustainable landscaping and groundskeeping practices related to the following strategies?		
	• Control invasive species	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Reduce pesticide use	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Reduce fertilizer impacts	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Restore disturbed soils	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.2.4</b>	Does your facility practice any of the following sustainable landscaping protocols that enhance ecosystem services?		
	• Habitat for endangered species	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Bird-friendly provisioning; nesting, food plants, water	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Native landscape, wetlands or forest restoration programs	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.2.5</b>	Based on the number of “yes” responses to the question above, rank your progress on valuing soils.	<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A	

STEP 3: Preserve Vegetative Cover and Open Space		Value	Rank
<b>5.3.1</b>	Is your facility or campus inside the limits of any of the following sensitive sites:		
	• Endangered species habitat	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Wetlands	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Prime agricultural land	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Prime forest	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• If yes, have you have implemented measures to mitigate negative impacts from your site development in partnership with community? If so, include these measures as part of your resilience strategies. Measures may include applying setbacks, land covenant protections, etc.		
<b>5.3.2</b>	Does your campus or facility actively seek opportunities to preserve vegetative cover, preserve open space, or create habitat through any of the following measures?	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Structured parking lots in lieu of surface parking	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Dedicated open space	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Green roofs	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Shaded roadways	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Bioswales	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• On site food production	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
	• Landscaping with native and adapted plant species	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.3.3</b>	Many municipalities are enacting policies to preserve wildlife corridors, reopen covered streambeds, or otherwise engage in ecological restoration in order to improve resilience to future extreme weather events. Does your hospital or health system participate in and/or support your local programs?	<input type="radio"/> Yes	<input type="radio"/> Somewhat <input type="radio"/> No <input type="radio"/> Unknown <input type="radio"/> N/A
<b>5.3.4</b>	Rank your progress on preserving vegetative cover and open space based on answers to the questions above.	<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A	

STEP 4: Reduce Waste		Value	Rank
<b>5.4.1</b> Sustainable waste-management programs could include a variety of initiatives. Minimizing waste production can have co-benefits ( <i>cost-savings, environmental benefits, health benefits</i> ) and contributes to a climate resilient health care facility. Has your health care facility adopted any of the following sustainable waste management strategies?			
• Audit all waste streams		<input type="radio"/> Yes	<input type="radio"/> Somewhat
• Conserve and reduce all waste streams, measure and report progress		<input type="radio"/> Yes	<input type="radio"/> Somewhat
• Segregate waste to minimize regulated medical waste (RMW)		<input type="radio"/> Yes	<input type="radio"/> Somewhat
• Purchase reusable products and products that minimize packaging and waste		<input type="radio"/> Yes	<input type="radio"/> Somewhat
• Alternative disposal and treatment technologies ( <i>e.g., anaerobic digestion of organic waste, autoclave landfill</i> )		<input type="radio"/> Yes	<input type="radio"/> Somewhat
• Recycling programs		<input type="radio"/> Yes	<input type="radio"/> Somewhat
<b>5.4.2</b> Rank the overall performance of your waste management programs, based on answers to the questions above.		<input type="radio"/> 3 ( <i>Exemplary</i> ) <input type="radio"/> 2 ( <i>Functional</i> ) <input type="radio"/> 1 ( <i>Marginal</i> ) <input type="radio"/> 0 ( <i>None</i> ) <input type="radio"/> N/A	

SUMMARY		Value	Rank
<i>Based on your responses above, develop a list of action items to address Environmental Protection and Ecosystem Adaptation issues identified.</i>			
<b>5.5.1</b> Have you determined key sustainability and ecosystem adaptation strategies for each building and campus from this checklist?		<input type="radio"/> Yes	<input type="radio"/> Somewhat
<b>5.5.2</b> Have you mapped priority strategies for this Element across a timetable for implementation? <i>Refer to the Getting Started section of the Climate Resilience Toolkit toolkit.climate.gov.</i>		<input type="radio"/> Yes	<input type="radio"/> Somewhat

*This checklist is one component of a five element framework and toolkit for improving healthcare facility climate resilience. The full set of checklists, companion resources and case studies are available at [toolkit.climate.gov](http://toolkit.climate.gov). This document is provided to the public for informational purposes and voluntary use. It does not represent official HHS policy.*