Sector/System	Strategy	Description	Department Head/Implementer(s)	Cross-cutting issues	Mitigation Overlap
Residential					
Households and Homes	Develop a residential education campaign	Create and implement a campaign focused on educating and engaging citizens (as well as businesses and institutions) on climate change resiliency practices and initiatives, including the locations and hours of cooling centers, the potential harm of standing water, evacuation routes, and best practices for dealing with power outages.			
	Assess public health impacts	Continue to assess public health impacts of climate change and develop response plan with mitigation strategies.			
	Energy demand warnings	Alert public during extreme weather events to evacuate flood-prone areas.			X
	Organize a pavement removal day	Implement a pavement removal day where residents can apply to have their pavement torn up in order to create more pervious surfaces. This has been done in urban areas such as Somerville, MA by employing teams of volunteers.			

Sector/System	Strategy	Description	Department Head/Implementer(s)	Cross-cutting issues	Mitigation Overlap
Infrastructure					
Transportation	Identify strategies for at-risk transportation infrastructure.	There are three strategies for adapting infrastructure: Accommodate (i.e. elevate), retreat, or abandon. Link these ratings with capital improvement schedules and implement appropriate stormwater BMP's. This is especially relevant to River Road.			
	Organize a pavement removal day	Implement a pavement removal day where residents can apply to have their pavement torn up in order to create more pervious surfaces. This has been done in urban areas such as Somerville, MA by employing teams of volunteers.			X
	Incorporate green infrastructure BMPs into complete streets road design and cosider excessive heat events when selecting materials.	Green infrastructure such as swales, rain gardens, and permeable pavers alongside roads, as well as permeable pavement, can help capture stormwater runoff and mitigate road flooding. Excessive heat events may impact the durability of road surfaces.			X
	Implement a "green the streets" program.	Transform low-volume impervious roads within the LWRP with pervious pavement in order to increase water infiltration and reduce urban flooding.			X
	Implement a citywide green infrastructure program and increase urban greening through a Green Area Factor ranking system.	Trees and other vegetation absorb many harmful chemicals and particular matter that pollute the air. Based on Berlin's Biotope Factor Ranking system (BFR), Bethlehem could create a similar system that ranks surfaces based on its greenery and how pervious it is. This ranking is used to calculate a number applied to various parts of the city (lower requirements in urban areas, higher in low-density areas) in order to increase the overall greenness and reduce impervious surfaces. For an example of this ranking system, go to http://www.stadtentwicklung.berlin.de/umwelt/landschaftsplanung/bff/index_en.shtml			X
Municipal Utilities (water/sewer)	Require new development projects to demonstrate projected water use.	New development projects (including agriculture and other industry) would be required to demonstrate projected water use in order to ensure the Town does not grow beyond its water capacity. Projects should demonstrate water conservation strategies in order to minimize their impact on the water supply. In addition, toilets and sinks should be designed to operate during blackouts.			
	Enact water efficient landscaping standards.	Adopting green landscaping policy can reduce the need for irrigation and application of pesticides and fertilizers. Pesticides and fertilizers create harmful runoff and reduce water quality. Best practices for water-efficient landscaping include planting native and drought resistant species, drip irrigation, minimized lawn space and use of harvested rainwater.			
	Safeguard toxic materials and MSW in flood-prone zones.	Develop and adopt policies regarding the citing, permitting, and maintenance of MSW and other similar facilities in designated and projected flood-prone zones to ensure that dispersal of toxic materials and MSW does not occur durring flooding events.			
	Incorporate projected precipitation data and Hudson River tide levels in future stormwater/CSO mitigation projects and plans.	Ensure that future planning efforts around water are using projections from the most up to date climate models.			
	Develop an integrated two-Way 911 system	Identify locations of vulnerable populations (those who live alone, seniors, low income areas, others at-risk, etc.) and provide each home with a card to indicate if help is needed. have public safety officials go door to door during extreme weather including heat and flooding events as well as during service (power outages) disruptions. The Town should establish a voluntary list of residencies who would be checked on during such events.			
	Identify vulnerable communications infrastructure.	Ensure that communications systems are designed with several redundancies to enhance overall resilience and availability during extreme events.			

Sector/System	Strategy	Description	Department Head/Implementer(s)	Cross-cutting issues	Mitigation Overlap
Emergency Services	Create a plan to address flooding for at-risk critical facilities.	All critical facilities identified as at-risk to future flooding by the vulnerability assessment should be required to create a plan in the event of a flood. Strategies include locating critical appliances and electronics on the second floor and ensuring that there are additional flood protection measures in place.			
	Increase local renewable energy sources, especially for emergency services.	Identify and implement strategies to increase local renewable energy supply such as solar panels for essential services. For instance, install solar panels on an emergency shelter.			X
	Install solar powered generators at critical facilities	Invest in solar powered generators. Diesel generators have significant negative impacts on air quality and should not be used especially during extreme heat events.			X
Economic					
Businesses	Create design standards and update building codes.	Develop design standards and building and zoning codes that address the impacts of climate change. These might include no-build zones and freeboard incentives for flood prone areas.			
	Create flood overlay district/zones and Permit Review Vulnerability Assessments	A vulnerable area overlay district includes both temporal and spatial planning requirements to reflect changes in sea level and flood inundation. Land in this area would be subject to additional building codes and land-use regulation in order to protect property from flooding. New development could be required to conduct a vulnerability assessment that considers enrgy use and flood protection as part of the permit review process, similar to the City of Boston.			**X**
	Work to become a Class 1 Community under FEMA's Community Rating Systems.	The Community Rating System (CRS) is a voluntary program for NFIP-participating communities. The goals of the CRS are to reduce flood losses, to facilitate accurate insurance rating, and to promote the awareness of flood insurance. The CRS has been developed to provide incentives for communities to go beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding. A Class 1 Community receives a 45% premium discount.			

Sector/System	Strategy	Description	Department Head/Implementer(s)	Cross-cutting issues	Mitigation Overlap
Natural/Cultural Resources					
Recreation	Create a communications plan for recreational areas	Develop and implement a communications strategy to alert residents about upcoming storm conditions and how to react to extreme weather events. This should include information on who to contact in case of emergency, call boxes on-site, and evacuation plans.			
Agriculture	Increase sustainable local food production	The Northeast is well-positioned to increase agricultural production due to a longer growing season and increased precipitation. The Town should promote opportunities for sustainable, small scale and organic food production with in the Town and region. Encourage back yard and rooftop vegetable gardens, community gardens and the preservation of productive agricultural lands, including vacant urban land. Also take into account the potential need for crop adaptation.			
Open Space	Conduct tree canopy assessment and implement comprehensive tree planting program.	Understanding the current tree canopy is critical for projecting and enhancing it. This assessment should include the health, and diversity of the trees, in addition to the placement and benefits of the trees that are planted.			**X**
	Prevent future fragmentation and development.	Ensure that habitats are not further fragmented or compromised by development by protecting or restoring key parcels that connect larger patches of habitat.			X
Natural Habitat	Implement an invasive species removal programs	Coordinate with the Conservation Commission and local watershed organizations to initiate invasive species removal days.			
	Incorporate more natural features in Mo-he-cun-nuc Preserve and Henry Hudson Park.	Provide natural habitat as much as possible in open space planning to support biodiversity and as a measure of flood control.			
	Increase stream restoration techniques	Cold water streams are critical environments. Stream restoration can help maintain these environments. Special attention should be paid to ensure that a healthy tree canopy exists along the banks to keep the streams cool.			