

Methodology for Developing and Prioritizing Proposed Strategies and Actions May 2017

Format

This Plan follows a logical, hierarchal methodology to developing and prioritizing the myriad actions needed to accomplish resiliency in Springfield.

PVPC created the Climate Action Assessment Tool (CAAT) to inventory and compare the City of Springfield's existing climate-related actions and strategies to best management practices (BMPs) gleaned from highly-regarded, successful climate action plans (CAPs) from similar cities around the country.

The results of the CAAT informed the Strategies and Actions Ranking Matrix (SARM), which also compiled the results of the CARP's resident and stakeholder outreach meetings to create a list of prioritized strategies and actions.

Springfield's identified climate action goals of reducing greenhouse gas (GHG) emissions from the 2017 baseline by 80% by 2050 and increasing community resilience through adaptation to and mitigation of climate change impacts form the basis of the tool. Objectives, measurable targets taken to achieve the climate goals, relate to the specific sectors of GHG emissions and climate related vulnerabilities. Lastly, specific recommendations toward furthering Springfield's already existing actions outline the steps towards meeting Springfield's objectives.

Methodology

Literature Review

To establish the initial goals, objectives, and actions for the Springfield Climate Action & Resilience Plan, the PVPC project team reviewed the strategies and recommendations identified in the 2015 *City of Springfield Climate Action/Resilience Plan Framework* and surveyed the document's source plans for any updates since its original publishing.

The project team also reviewed greenhouse gas (GHG) emissions inventories and climate action strategies from six cities identified as being similar in population size and history (with the exception of Eugene) to Springfield. Chattanooga, TN was the visit city for Springfield's 2015 "City to City" tour. An additional criteria for the cities selected for case study was that they must have well-regarded climate action plans.

City	Population
Worcester, MA	182,544
Chattanooga, TN	173,366
Knoxville, TN*	183,270
Louisville, KY	253,128
Grand Rapids, MI	192,294
Eugene, OR	159,150

* USDOE's Climate Action Champion

In addition to the six climate action plans identified above, the team also reviewed plans from several other cities designated as "Climate Heroes" by the US Department of Energy: Boston, MA; Dubuque, IA; Minneapolis, MN; Oberlin, OH; and Portland, OR.

The PVPC team compared each climate action plan's objectives and recommended strategies to develop a baseline understanding of best practices and actionable goals in use by the country's most successful municipalities. The team identified strategies targeted toward reducing GHG emissions by sector (energy and buildings, transportation and urban form, waste, food and agriculture) as well as towards mitigating the effects of climate change (extreme precipitation and flooding, urban heat island effect, drought, etc).

Concurrently to reviewing municipal climate action plans, the project team conducted a review of best practice reports related to policy and programs for climate adaptation. These reports, published by federal agencies and national organizations, detail policies that can be adapted to any city in the country and emphasize solutions based in systems theory (**see Annotated Bibliography**). Springfield's climate action plan recognizes climate change as a threat multiplier: acute stresses caused by climate change, such as increased severe weather, have the ability to aggravate existing stresses within the City such as systemic racism, economic disparity, and food insecurity. Therefore, PVPC framed its climate action and strategies research with the understanding that climate solutions must not only protect the status quo, but provide a net increase in social equity throughout the city. Of every recommended climate strategy, PVPC sought to understand:

- its climate mitigation or resilience goals
- how it affected disparate demographics across the city
- which demographics it helped the most
- which (if any) demographics it harmed.

During the course of this extensive literature review, PVPC learned that the most highly effective strategies and actions were those which followed the SMART Objective criteria (Specific, Measurable, Achievable, Responsible, and Time-bound). Across the country, those strategies and actions which identified specific and trackable objectives were those which were implemented by their communities most successfully. PVPC additionally found that in order to be "achievable," strategies and actions must be cost effective (with co-benefits in GHG emissions reductions across multiple sectors and/or in community resilience), politically feasible, and applied with a social/climate justice lens.

Application to Springfield

With a resulting list of 97 potential actions and strategies, PVPC created a Climate Action Assessment Tool (CAAT) (**see Climate Action Assessment Tool**) with which to compare Springfield's existing climate-targeted actions and strategies (as identified in the *Climate Action/Resilience Plan Framework* and related plans) with the BMPs established from the climate action plan and literature review. The Commission distributed the CAAT to relevant municipal departments (Department of Public Works, Conservation, Planning and Economic Development, Emergency Preparedness, Health and Human Services, and Housing) and the Springfield Water and Sewer Commission (SWSC) for their review and comment, and compiled the results into a master document, the Strategies and Action Ranking Matrix (SARM).

The Strategies and Actions Ranking Matrix is a scoring matrix (**see Strategies and Actions Ranking Matrix**) which ranks proposed strategies and actions by the level of demand for and/or commitment to each that the City and its residents and stakeholders have shown. The matrix scores 0 or 1 point when a proposed action:

- appears in a relevant City plan
- is identified in the community and/or stakeholder outreach meetings as a desired course of action
- has GHG emission reduction and/or resilience co-benefits.

The SARM revealed two types of existing “successes” within City policy. The highest scoring strategies/actions were those which the City is already implementing, which have been identified as priorities in the City’s various major plans, and for which the community has expressed support. These include strategies such as adopting and implementing a Complete Streets Policy and prioritization plan, allowing urban agriculture in the zoning code, passing a Community Garden Ordinance, and prioritizing wetland and water resources protection. Some relatively mid- or low-scoring strategies were also considered “successes.” These may not have been identified in City plans or by the community as priorities, but which the City or State is already implementing. The proposed “supporting improved access to utility data for building owners and managers seeking to improve energy and water performance” strategy is an example of a low-scoring success, as the City has access to Mass Energy Insight and property owners can access low- or no-cost Mass Save building audits. PVPC considered this combination of 28 high- and mid-to-low-scoring strategies as “low-hanging fruit” for the City, and developed a single encompassing strategy to encourage the City to “Continue to regularly update and implement all existing City Plans and Strategies related to climate mitigation and resilience.” The remaining 69 strategies were identified as areas of opportunity for the City, and were prioritized for further refinement and adaptation to the conditions existing within Springfield.

Further Refinement and Prioritization

To further refine the remaining strategies, PVPC designed a final community-wide outreach and strategy building workshop based on the Community Resilience Building Workshop Guide (**see annotated Bibliography**). With invitations extended to the community-at-large, key industry and institutional stakeholders, and municipal staff, the goal of the workshop was to gather laypeople and experts together in specific workgroups for two hours to focus on molding PVPC’s 69 remaining generic strategies to implementable, realistic yet aspirational strategies and actions for Springfield. Laypeople and stakeholders were invited to attend the workgroups with the topics which interested them most.

The workgroups were themed around the broad climate/resilience categories into which the remaining strategies fell. These included four broad categories, some of which were in turn subdivided, for a total of seven specific topic areas for discussion:

- Transportation
- Building Confidence in City Government
- Green Streets (policy and infrastructure)
- Urban forestry (increase in urban ecosystem services)
- Renewable energy
- Energy resilience in the event of grid failure
- Reducing energy consumption

To facilitate the focus groups, PVPC identified one or two Springfield “thought leaders” with direct, local expertise in the given field. Each group was presented with a draft problem statement and sample SMART objectives, which had been previously drafted in collaboration with the relevant thought leaders and PVPC, using PVPC’s proposed strategies/actions as a starting point. Each group was then asked to review and revise their problem statement to accurately reflect their perception of conditions in Springfield, and either revise the proposed SMART objectives or draft their own. Each group was advised to consider how their proposed objectives would be funding, whether they were politically feasible, and what intermediary steps or cultural shifts would need to accompany their final objectives. Following this format, each workgroup established and elucidated an understanding of the existing opportunities and barriers in Springfield surrounding their focus topic, and developed actionable strategies for

progress within that framework. These results ultimately formed and prioritized the strategies and actions presented in this Plan today.

Goal: Increase community resilience through adaptation to and mitigation of climate change impacts.

Co-Benefits:

Environ Community

Resilience Strategy	Extreme Heat		Drought		Disaster		Community Health		Jobs & Economy		Social Equity		Local Environ. Quality		Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Adaptation to & Mitigation of Flooding & Extreme Precipitation	✓	✓			✓							✓			Pilot Green Streets streetscape program	Pilot Program				
	✓	✓			✓							✓			Include incorporating green stormwater mgmt as an objective in Complete Streets Policy & projects	Policy	Recommendation to retrofit residential streets with stormwater infrastructure, including permeable pavement and stormwater retention planters. Best practice design elements & key considerations identified for each major street typology. No mention of stormwater mgmt or landscaping in 2015 adopted policy // PVPC Our NExt Future: Strategy to work with DPWs & MassDOT to adopt Green Streets policies in road construction/re-construction projects	City of Springfield Complete Streets Plan	Modest	Revise & adopt Complete Streets Policy under section 4.a. to include EPA's Green Streets Handbook guidelines ; partner with PVPC to create GS policy
	✓	✓			✓							✓			Prioritize green open space in flood plains and in areas buffering waterbodies or wetlands	Policy	Special permit from ZBA needed for development with 100 yr flood plain, in addition to standard CC WPA review // CC has identified sites bordering waterbodies & wetlands for conservation utilizing the tax title process & land gift process // OSRP acknowledges importance of protecting wetland resources already in public ownership from pollution via creation of programs to alleviate stream bank erosion & eutrophication of waterbodies, and pollution abatement programs for surface waters (p 40) and has a stated objective to: "Goal: Acquire open space & recreation lands based on its value as a natural resource or recreational opportunity; Objective: To protect water resources via acquisition of open space and carrying out the WPA" (p 45)	City of Springfield Zoning Ordinance Section 8.4 // OSRP 2015-2022 Appendix III	Modest	Revise language in plans to prioritize open space (Does simply regulating this as FPOD do that? Or do you need specific language?)
					✓							✓			Adopt 500 yr flood plain as the "locally regulated flood plain"	Regulatory	Special permit from ZBA needed for development with 100 yr flood plain, in addition to standard CC WPA review.	City of Springfield Zoning Ordinance Section 8.4		Revise & adopt 500 yr flood plain as criteria for Flood Plain Overlay District
															Develop a comprehensive green spaces plan that identifies important areas that should be preserved as open space, greenways, and parks and provides a connected system of green spaces throughout the area.		OSRP Appendix III identifies priority parcels for acquisition. P 47-8 identifies " Objective: To restore parks and other areas in order to provide greater recreational & open space values... Action Steps...10. Develop Management Plan for Conservaton Areas."	Open Space & Recovery Action Plan (2015-2022) Appendix III		
			✓	✓											Acquire properties at risk of flooding, use the land for infiltration, & help the property owners resettle in the community	Pilot Program, Policy				
	✓				✓										Develop a municipal stormwater design manual that illustrates context-appropriate green infrastructure	Outreach / Education				
					✓							✓			Reduce NPS pollution entering into local stormwater pipes		Stormwater Ordinance // PVPC ONF strategies: implement local stormwater & erosion control standards; implement GI zoning initiatives	City Code Chapter 302		Update stormwater ordinance to comply with NPDES MS4 Permit requirements (ongoing thru E&R Grant partnership with PVPC). Implement GI zoning incentives.
					✓							✓			Reduce quantity & effects of CSOs during storm events through continuing ongoing CS separation & Reducing stormwater inputs to CS through storage & infiltration of stormwater on individual properties & public ROWs before it enters the sewer system.		Springfield's ongoing CS separation work with Connecticut River Clean-up Committee, USEPA, & DEP // PVPC ONF strategy: Coordinate with MassDOT's Impaired Waters Program to reduce peak flow in CSO communities	Our Next Future 2014		Coordinate with MassDOT's Imp. Wat. Prog. By providing information about locations where runoff from MassDOT roads such as I-91 contributes to CSOs & where Springfield has interest in managing stormwater for peak flows. Incentivize the use of GI in (re)development projects and incorporate Green Streets design standards in capital improvement projects.

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> Environ Community </div> <div style="display: flex; justify-content: space-between;"> Extreme Heat Drought Disaster Community Health Jobs & Economy Social Equity Local Environ. Quality </div>							Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
			✓	✓				Increase resilience of critical infrastructure to severe storm events & flooding		Rebuild Springfield? // PVPC PVCACEP strategy: Ensure all dams with a significant or high hazard rating have emergency action plans in place			Identify publically-owned significant & high hazard dams & ensure they have EAPs. Work with owners of private dams to develop plans.
								Create sustainable funding for stormwater infrastructure	Regulatory	Funding acquired for rehabilitating poor or failed stormwater infrastructure (?) // PVPC ONF strategy: adopt stormwater utilities			Partner with PVPC to develop & adopt stormwater utilities.

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> Environ Community </div> <div style="display: flex; justify-content: space-between;"> Flooding & Precip Drought Disaster Community Health Jobs & Economy Social Equity Local Environ. Quality </div>							Action	Action Type	Springfield/Regional Action	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
Adaptation to & Mitigation of Extreme Heat								Map areas prone to UHI & conduct pilot programs in those areas to reduce heat	Pilot Program				
				✓		✓		Identify & support communities most vulnerable to UHI. • Designate cooling centers in neighborhoods with particularly vulnerable populations • Develop an outreach plan for vulnerable populations	Outreach / Education	PVPC ONF strategy: Assist vulnerable populations, provide cooling shelters.	Our Next Future 2014		Partner with PVPC to seek funding for a network of notification procedures for vulnerable populations, "check your neighbor" programs, and new cooling shelters.
	✓	✓		✓			✓	Offer incentives to residents and developers to plant & protect trees	Incentive	Action Steps mention "creating steps" for appropriate landscaping and tree planting. Mentions Mass Re-Leaf as potential source for modest matching grants for tree planting	Rebuild Springfield Plan		
	✓	✓		✓			✓	Include reducing UHI as an objective in Complete Streets Policy & projects	Policy	UHI is not mentioned in Complete Streets Plan			
	✓	✓		✓			✓	Prioritize municipal tree planting in heat-vulnerable locations	Policy	No information			
	✓	✓		✓			✓	Adopt a tree canopy or urban forest goal, master plan, and implementing ordinances	Policy	Action steps in Rebuild Springfield Plan includes mention of tree canopy restoration	Rebuild Springfield Plan		
	✓	✓					✓	Require shade trees in all municipal projects and private parking lots	Regulatory	No requirement			
	✓	✓		✓				Amend site plan requirements & design guidelines to encourage permeable paving, shade, green alleys, vegetation, green or reflective roofs, and tree canopy	Regulatory, Incentives				
✓	✓	✓	✓	✓	✓	✓	Revise zoning ordinance to allow urban agriculture	Regulatory	City has developed Community Garden Regulations to facilitate urban agriculture	Open Space & Recovery Action Plan (2015-2022)			

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> Environ Community </div> <div style="display: flex; justify-content: space-between;"> Flooding & Precip Extreme Heat Disaster Community Health Jobs & Economy Social Equity Local Environ. Quality </div>							Action	Action Type	Springfield Action	Source (Plan or Other)	Level of Change from Existing to BMP	Recs

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Extreme Heat</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Drought</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Disaster</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Community Health</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Jobs & Economy</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Social Equity</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Local Environ. Quality</div> </div>							Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs	
Adaptation to & Mitigation of Drought	✓	✓						Recommend the use of drought-tolerant plants (xeriscaping) as part of water conservation, landscaping, and water waste ordinances	Outreach / Education	None				
	✓							Mandate grey-water ready residential development	Regulatory	None				
	✓	✓						Offer rebates / incentives to encourage residential landscaping with drought tolerant plants, rainwater harvesting, water efficient fixtures, and other water-saving practices.	Incentives	None				
					✓			Require use of water-efficient fixtures through the building code	Regulatory					
					✓			Adopt a city-wide policy promoting water recycling for nonpotable uses	Pilot Program	None?				
								Enact a building energy & water benchmarking ordinance	Regulatory					
					✓			Implement a water impact fee that reflects each property's consumption	Regulatory	None				
	✓							Mandate rainwater harvesting for all new commercial construction	Regulatory	Goal in 7 Yr Action Plan: Partner with organizations to establish rainwater catchment systems	Open Space & Recovery Action Plan (2015-22)			
	✓	✓		✓				Enact a water conservation / waste ordinance to restrict the type of landscaping on new developments and public properties	Regulatory	None?				

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Flood & Precip</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Extreme Heat</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Disaster</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Community Health</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Jobs & Economy</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Social Equity</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Local Environ. Quality</div> </div>							Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
Utilities	✓		✓	✓	✓	✓	✓	Use regional climate change, population demographics, transportation demand, and related projections to understand where community assets could be vulnerable. • Incorporate projections into Master Plan to demonstrate climate change action is a priority. • Mainstream climate change and smart growth into comprehensive, master, capital improvement, and hazard mitigation plans. • Update land use maps & data to identify vulnerable lands. Encourage less vulnerable lands in which to encourage development. • Require new municipal buildings to be in well-connected, less vulnerable areas. • Establish clear annexation policies that take climate change into account	Policy				

Resilience Strategy	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Extreme Heat</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Drought</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Disaster</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Community Health</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Jobs & Economy</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Social Equity</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Local Environ. Quality</div> </div>							Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
General Strategies to Address Vulnerability	✓	✓	✓	✓	✓	✓	Align hazard mitigation, transportation, capital improvement, OSRP, Master Plan, and all other plans so all are working toward same goals	Policy	underway				
	✓	✓	✓	✓	✓	✓	Create a list of desired development elements in more-vulnerable areas, and encourage or require developers to implement a certain number.	Incentives, Regulatory					
	✓		✓				Improve public education about the risks of developing in certain areas	Outreach / Education					
	✓		✓	✓	✓	✓	Evaluate development incentives to see if they encourage development in particularly vulnerable areas.	Incentives					
	✓	✓	✓	✓	✓	✓	Identify, assess, and address the needs of communities who might be particularly vulnerable and/or are likely to be most affected by climate change and related events, especially if they live in higher-risk areas.	Outreach / Education	Assessment of community needs in Springfield and vulnerability to climate change	Springfield Community Development Block Grant Consolidated Plan 2015			
	✓	✓	✓	✓	✓	✓	Incorporate fiscal impact analysis into development review, ensuring inclusion of costs related to climate change impacts.	Policy					
			✓	✓			Reduce risks of hazardous chemical exposure due to climate related events. Incorporate toxics use reduction into community & regional preparedness & climate resiliency planning.	Outreach / Education, Regulatory					

Goal: Enact policies and legislation to reduce emissions generated by transportation, energy inefficiencies, fossil fuel consumption, and waste by 80% from 2017 baselines by 2050.

Co-Benefits: Environ Comm

Sector	Co-Benefits								Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
	Extreme Heat	Drought	Disaster	Flooding & Precip	Community Health	Jobs & Economy	Social Equity	Local Air/Water Quality						
Obj: Create vibrant neighborhoods where 80% (?) of Springfield residents can easily walk or bike to meet all basic daily, non-work needs & have safe pedestrian or bicycle access to transit. Reduce daily per capita vehicle miles traveled by ___% from ___(year) levels.														
Urban Form & Transportation									Adopt Complete Streets design standards	Policy	Adopted Springfield Complete Streets Policy	City of Springfield Complete Streets Policy		
	✓	✓			✓	✓	✓		Encourage compact development policies such as walkable block sizes, transit-oriented development, and mixed-use zoning	Regulatory	Complete Streets Plan encourages walkability as guiding development policy // PVPC ONF strategies: Support Smart Growth Zoning Districts (Chapter 40R); Create regional funding for TODs & TOD Investment Funds; City zoning is based on smart growth principles	City of Springfield Complete Streets Implementation Plan		Establish smart growth zoning districts, and partner with PVPC & investment experts to create TOD investment funds
									Reduce per capita vehicle miles traveled by ___% by .					
								✓	Support adoption of a road usage & fuel efficiency charge as a long-term replacement for declining gas tax revenue.	Regulatory	Bill S.1851 (MA Legislature): An Act to explore alternative funding sources to ensure safe and reliable transportation			Support adoption of Bill S.1851: An Act to explore alternative funding sources to ensure safe & reliable transportation
								✓	Establish a stable funding source adequate to maintain the existing transportation system & to invest in transportation capital projects & programs that reduce carbon emissions & improve equity.	Regulatory				
								✓	Work with regional transit to refine the regional travel demand model to improve projections of vehicle demand and non-auto mode share. Use forecasting tools and methodologies that identify investments that minimize carbon emissions.	Policy	very good working relationship with PVTA			
								✓	Develop & use a transparent & inclusive decision-making framework designed to achieve climate, equity, safety, health, & prosperity goals when making major infrastructure, transportation, land use, community development, and project development plan & investment decisions. Consider existing systems, like STARS & MOSIAC, as models.	Policy, Pilot Program				
								✓	Adopt mode share targets that are consistent across City bureaus & plans that respond to differing community needs & conditions in Springfield's different neighborhoods.	Policy?				
								✓	Study & address gaps in the existing transit network and level of service, with special attention to and input from low-income and transit dependent populations.	Pilot Program	Focus on improving transportation resources to better serve Springfield residents // PVPC ONF: Maintain Equity in Providing Transp. Services & Access Throughout the Region. Incorporate an assessment of transportation equity as part of	Rebuild Springfield Plan // Our Next Future 2014 p 147		Partner with PVPC, PVTA, MassDOT, FHWA, FTA to study & address gaps in the existing transit network & level of service, with special attention to underserved and transit-dependent populations
								✓	Include estimates of carbon emissions in evaluations of major planning scenarios, Comprehensive Plan, and other City plan decisions. Partner with regional transit & regional jurisdictions to develop modeling tools for evaluating emissions impacts of land use & transportation decisions & monitoring carbon emissions.	Policy	Required by Commonwealth, but locally?			
							✓	Continue to support the development of neighborhoods with walkable & bikable access & connections to services, nature, transit, & destinations, locally & across the City, by: a) Implementing Complete Streets Policy, & b) Completing a Comprehensive Plan with supportive maps, goals, policies, & projects.	Policy	Springfield adopted Complete Streets Policy // PVPC ONF strategies: Create zoning for bike & ped amenities; Support bikeway planning and design	City of Springfield Complete Streets Policy // Our Next Future 2014		Partner with MassDOT & PVPC to: 1. design & plan off-road paths to link regional urban centers, commercial and employment areas; 2. create zoning bylaws to require sidewalks, bike path connectors, bike parking, and bike amenities in all new developments/redevelopments in commercial & residential areas.	

											Work with regional partners to continue to advocate for high speed commuter and passenger rail, and collaborate and participate in alignment planning to improve and expand regional connections to Boston and Worcester to the West, Northampton and Greenfield to the North, Hartford to the South.									under way			
											Develop & implement a campaign to decrease single occupancy vehicle commutes. A) Communicate with commuters regarding alternative commuter options such as transit, biking, or walking. Provide information on safe routes to work. B) Assist major employers in developing an alternative commute program.	Outreach / Education	City actively participates in Bike Commute Week; Commonwealth has NuRide; PVPC ONF: Work with major employers to Develop Incentives to Decrease SOV use. Continue to work with MassRides to reduce the % of SOV that commute to work. Incorporate strategies as appropriate into ongoing transp. Planning projects.	Our Next Future 2014									Adopt ONF Language as policy & develop outreach campaigns as such
											Reduce SOV miles traveled/year by ___% by ___.												
											Explore establishing separated bikeway facilities, particularly on high-traffic streets without the potential for bicycle facilities on parallel streets.	Policy, Pilot Program	City working to implement CS plan and apply for CS funds from MassDOTPVPC ONF: Promote the implementation of Bicycle Lanes Where Practical	Our Next Future 2014									Partner with PVPC, MassDOT to identify locations for bike lanes. Determine quantitative goals for number of bike lanes added by year?
Obj: Reduce lifecycle carbon emissions of transportation fuels by ___%.																							
											Update the City's Electric Vehicle Strategy, with the initial goal of adding ___ electric vehicles and plug-in hybrids, and evaluate opportunities to: increase the number of public access fast chargers, address barriers to garage-free homes, install charging infrastructure integrated into streetlights, increase use of electric vehicles in car sharing programs, and support use of electric bikes and buses.		Springfield Parking Authority previously awarded MassEVIP funds	PVPC Transpo plan?									Develop a goal of adding a Quantifiable number of EVs to the City's SOVs within a set time period. Continue to apply for the Mass Electric Vehicle Incentive Program (MassEVIP), which, administered by MassDEP, provides incentives to eligible entities for the acquisition of electric vehicles (EVs) and the installation of Level 2 dual-head charging stations.
											Advocate for the adoption and implementation of low-carbon fuel standards at the federal and state levels.	Policy	Significant pending leg										
											Pursue strategies at the local & state levels to reduce the climate forcing & air quality impacts from black carbon sources such as diesel engines & wood stoves. Prioritize reducing diesel particulate matter on projects near sensitive populations & that advance environmental justice such as brownfields and Superfund remediation.	Regulatory	MA is leader										

Sector	Extreme Heat	Drought	Disaster	Flood & Precip	Community Health	Jobs & Economy	Social Equity	Local Environ. Quality	Action	Action Type	Springfield Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP		Recs	
													Environ	Comm		
Obj: Reduce the total energy use of all buildings (built before ___) by ___%.																
											Establish long-term partnerships to coordinate equitable access to energy-efficiency resources, incentives, assistance, financing, outreach, education, & other tools to residents & businesses. Support neighborhood efforts, including ecodistricts, to improve energy performance of buildings.	Outreach / Education, Regulatory	Mass Save--recognized as exemplary and many communit groups working on this; city role?			
											Require energy performance ratings for all homes so that owners, tenants, and prospective buyers can make informed decisions about energy costs and carbon emissions.	Policy	City is a certified Green Community so all building complied with stretch code and requires HERS rater			
											Continue and expand efforts to promote green jobs that support greenhouse gas emissions reduction goals.	Pilot Program	REB, State, Working Cities?			
											Implement energy performance tracking and annual reporting program for commercial buildings and explore options for multifamily buildings. Support improved access to utility data for building owners and managers seeking to improve energy and water performance.	Pilot Program	Rebuild Springfield Plan cites energy efficiency goals regarding funding, advocacy, and increasing public awareness about funding opportunities linked to ee investment.	Rebuild Springfield Plan		

							✓	Develop tools to finance energy efficiency and renewable energy retrofits for municipal, commercial and residential buildings that have low barriers to entry and limited risk for local government.	Pilot Program	As a certified Green Community, Springfield is eligible for competitive Green Communities funds; // PVPC ONF strategies: Retrofit municipal buildings for energy efficiency; Create clean energy financing districts	<i>Rebuild Springfield Plan // Our Next Future 2014</i>		Support state legislature to enable local programs for clean energy financing (aka Property Assessed Clean Energy [PACE]) programs to set up a revolving loan fund that can pay for energy efficiency retrofits or renewable energy systems. Partner with an Energy Service Company (ESCO) with assistance from various agency programs to retrofit municipal buildings.	
							✓	✓	Help homeowners & rental property owners participate in efficiency energy retrofit programs, with a distribution that reflects the current percentage of low- and moderate- income home ownership and income rentals in the City. Establish minimum standards for housing.	Incentives	Mass Save is available to all and no cost for ow income; City approaches all projects with goal of LEED Silver certification	<i>Rebuild Springfield Plan</i>		
							✓	✓	Review the zoning code to identify impediments to and potential incentives for the construction and retrofit of green buildings.	PVPC ONF strategy: Adopt solar & wind zoning	<i>Our Next Future 2014</i>		Adopt local bylaws for solar and wind zoning to streamline permitting for renewable energy sources and promote passive solar access in citing of new buildings	
Obj: Achieve zero net carbon emissions in all new buildings & homes.														
								✓	Establish minimum energy performance targets for new construction and major renovations.	Regulatory	"Building Stretch Code" mandates higher levels of energy efficiency for new construction // PVPC ONF strategy: Encourage sustainable design with green building codes	<i>Rebuild Springfield Plan // Our Next Future 2014</i>		Adopt green building codes to encourage the development of renewable energy and energy-efficient buildings.
								✓	Review the zoning code to identify impediments to and potential incentives for the construction and retrofit of green buildings. Encourage "net-zero" energy buildings	Incentives, Regulatory	City adopted the Stretch code; PVPC ONF strategy: Encourage sustainable design with green building codes	<i>Our Next Future 2014</i>		Adopt green building codes to encourage the development of renewable energy and energy-efficient buildings.
Obj: Supply ___% of all energy used in buildings from renewable sources by ___.														
								✓	Collaborate with local utilities, customers, stakeholders, to reduce the carbon content in the city's electricity mix by ___% per year.	Outreach / Education, Policy	PVPC ONF strategies: Adopt the "solarize Mass" program; Generate more clean energy, greener power	<i>Our Next Future 2014</i>		Support legislative efforts to accelerate the Renewable Portfolio Standard (RPS): HD2157/SD1632 <i>An Act relative to solar power & the green economy</i> (sponsored by Rep. Mark/Sen. Eldridge) & HD2103/SD1372 <i>An Act to increase the RPS & Ensure Compliance with the GWSA</i> (ponsored by Rep. Khan & Sen Pacheco). Support legislative efforts to Modernize the Electric Grid, HD1497/SD.1371, Rep. Benson/Sen. Pacheco - Modernize electric grid, prioritize local clean energy over expensive transmission, & enact new consumer protections. Support Comprehensive Energy Legislation: SD2049, Sen. Pacheco - Expands RPS, solar, offshore wind, storage, grid modernization, climate adaptation, and sets binding 2030 and 2040 climate targets // Seek assistance from PVPC to join the Mass Dept of ER Solarize Mass Program, which will assist homeowners in purchasing pv solar systems by reducing costs through bulk purchasing, tax incentives, & rebates. Partner with SWSC, other local utilities to reduce the carbon intensity of electricity supply by investing solar, wind, and hydro. Develop a quantifiable & implementable goal. (see Objective above)
								✓	✓	Mitigate potential cost burdens to low-income households principally through efficiency measures that reduce energy use and cost.	Outreach / Education, Pilot Program	MassSave;PVPC ONF strategies: Adopt the "solarize Mass" program; Achieve Greater Energy Efficiency	<i>Our Next Future 2014</i>	Seek assistance from PVPC to join the Mass Dept of ER Solarize Mass Program, which will assist homeowners in purchasing pv solar systems by reducing costs through bulk purchasing, tax incentives, & rebates. Partner with PVPC to assist homeowners with completing energy assessments thoug the Mass Save program, and in making recommended ee improvements such as insulation, air sealing, boiler & hot water heater replacements
									Motivate & assist households & businesses throughout the community to install solar. Revisit City solar access policy & regulations, recognizing changing conditions due to the proliferation of residential rooftop solar energy systems. Establish a target megawatt goal of installed solar photovoltaic capacity within the City.	Incentives, Policy, Regulatory, Outreach / Education	PVPC ONF strategies: Adopt solar & wind zoning; Adopt the "solarize Mass" program	<i>Our Next Future 2014</i>	Partner with PVPC to draft & adopt local bylaws for solar & wind zoning to streamline permitting for renweable energy sources & promote passive solar access in citing of new buildings. Seek assistance from PVPC to join the Mass Dept of ER Solarize Mass Program, which will assist homeowners in purchasing pv solar systems by reducing costs through bulk purchasing, tax incentives, & rebates	
								✓	✓	Support the development of community solar projects that benefit all residents, particularly communities of color & low-income populations.	Policy	PVPC ONF strategies: Adopt the "solarize Mass" program	<i>Our Next Future 2014</i>	Seek assistance from PVPC to join the Mass Dept of ER Solarize Mass Program, which will assist homeowners in purchasing pv solar systems by reducing costs through bulk purchasing, tax incentives, & rebates // Support legislation to ensure equitable solar access for all : HD3418/SD841 <i>An Act relative to solar power in environmental justice & urban communities</i> (Rep. Holmes & Sen. Chang-Diaz). This legislation ensures fair compensation to low-income solar and to community shared solar net metering with a minimum threshold of low-moderate income customers, incentivizes projects that expand access to communities facing barriers, and directs the Department of Energy Resources to address barriers like income, housing type and language in their program design.
								✓	Participate in statewide policy discussions to expand the market in MA for renewable energy, including solar, wind, geothermal, biogas & biomass, & remove barriers to widespread participation in rewable energy programs like community solar.	Policy			Support Community Empowerment legislation: HD74/SD1294, Rep. Haddad/Sen. Cyr - Enable municipalities to contract directly with renewable energy projects. Support legislative efforts to accelerate the Renewable Portfolio Standard (RPS): HD2157/SD1632 <i>An Act relative to solar power & the green economy</i> (sponsored by Rep. Mark/Sen. Eldridge) & HD2103/SD1372 <i>An Act to increase the RPS & Ensure Compliance with the GWSA</i> (ponsored by Rep. Khan & Sen Pacheco). Support legislative efforts to Modernize the Electric Grid, HD1497/SD.1371, Rep. Benson/Sen. Pacheco - Modernize electric grid, prioritize local clean energy over expensive transmission, & enact new consumer protections. Support Comprehensive Energy Legislation: SD2049, Sen. Pacheco - Expands RPS, solar, offshore wind, storage, grid modernization, climate adaptation, and sets binding 2030 and 2040 climate targets	

Sector	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);"> Extreme Heat Drought Disaster Flooding & Precip Community Health Jobs & Economy Social Equity Local Environment Quality </div> <div style="text-align: center;">Action</div> </div>							Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs
Consumption & Waste	Obj: Reduce consumption-related emissions by encouraging sustainable consumption & supporting Springfield businesses in minimizing the carbon intensity of their supply chains.											
						✓	Develop a sustainable consumption strategy to prioritize local government activities to support a shift to lower-carbon consumption patterns.	Policy				
						✓	Develop a campaign to connect residents to information & resources to get the things they need. Key strategies: A) Buy Smart (plan before purchasing, buy local, give gifts of experience, purchase durable goods). B) Reuse. C) Borrow, share, & rent items. D). Fix & maintain.	Pilot Program	CISA Buy Local program for food is a model			
					✓	✓	Promote rehabilitation, adaptive reuse and energy and safety-related upgrades of buildings to conserve natural and historic resources, reduce waste, and improve public safety.	Policy	Identified as a strategy in PVPC ONF: Support Adaptive Reuse & Infill Development. p185	<i>Our Next Future 2014</i>		
					✓	✓	Develop performance metrics. A) Partner with Mass DEP to identify metrics to analyze & track the carbon intensity of the goods & services produced locally (Hampden County or Pioneer Valley). B) Explore tools, strategies, & performance measures to quantify economic, equity, & environmental benefits of services that displace the need for new goods through reuse, repair, & sharing. C). Work with Mass DEP on inventorying consumption-based carbon emissions for Hampden County/Pioneer Valley.					
	Obj: Reduce food scraps sent to landfills by ___% by ___.											
						✓	Prevent food waste by: A) Encouraging strategies that reduce the volume of food waste generated such as proper food storage & meal planning. B)Expand or establish a City-wide composting system. Consider implementing mandatory commercial & voluntary residential food scrap collection. C) Ensure low-income populations & communities of color are not disproportionately burdened by localized impacts such as odor or truck trips.	Incentives, Regulatory	PVPC ONF strategies: Increase large-scale composting opportunities; create more residential composting			Develop new & expand existing large-scale composting of food waste generated by retail food stores, businesses, and institutions. Support and/or establish waste source separation programs and hauling routes. Strengthen the composting market with greater incentives (i.e., landfill tipping fees) to divert organic wastes to composting and develop stronger consumer demand for finished compost products. Expand residential composting bythrough the sales of in-home and outdoor bins. Widely distribute easy-to-understand information about thow to compost at home, and make available in multiple languages.
	Obj: Reduce per capita solid waste by ___% by ___ year.											
						✓	Prevent solid waste through increasing awareness of and participation in targeted waste-prevention practices, & research & encourage strategies for reducing use of paper, plastics, & other materials.	Outreach / Education	City adopted single stream recycling			
					✓	✓	Promote alternatives to tradtional building demolition such as relocation, deconstruction, & salvage, including identifying & removing barriers & disincentives.	Incentives				
Obj: Recover ___% (90?) of all waste generated.												
					✓	Develop a program to provide technical assistance & resources to at least 500 businesses per year to improve waster prevention & toxics reduction practices & to meet a requirement to recycle paper, metal, & glass. Prioritize & customize technical assistance to benefit under-served & under-represented business owners.	Pilot Program					
				✓	✓	Review & update the City recycling plan, incorporating a focus on reducing the upstream impacts of the materials & goods produced & consumed locally. When developing recovery programs, consider the full lifecycle to identify the best end-of-life options for materials, particularly those with high impacts. Identify options to reduce waste & increase recovery from residential, multifamily, and commercial sectors.	Policy, Pilot Program					

												Promote recycling & composting through a directed campaign. Customize communications & engagement strategies for audiences including large families, residents with limited English proficiency, renters, & landlords to ensure that they have equitable access to information & services.	Outreach / Education				
--	--	--	--	--	--	--	--	--	--	--	--	--	----------------------	--	--	--	--

Sector	Environ		Comm		Action	Action Type	Springfield Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs		
	Extreme Heat	Drought	Disaster	Flooding & Precip							Community Health	Jobs & Economy
Food & Agriculture	Obj: Reduce the consumption of carbon-intensive foods & support a community-based food system.											
							Include healthful, low-carbon food choices & food waste in public & business outreach efforts. Work with partners to encourage plant-based diets, including Meatless Monday campaigns (as commercial animal products have highest rates of carbon emissions per calorie).	Outreach / Education	Partnership Mass in Motion?			
							Create collaborative partnerships with community-based organizations & affinity groups, including low-income populations & communities of color, to: A) Promote healthier, low-carbon diets. B) Encourage local food production. C) Support affordability & access to healthier foods through neighborhood food buying clubs & co-ops. D). Reduce food waste.	Policy, Outreach / Education	City Food Policy Council is funded through TCI to expand school gardens and is working to get more local food in schools PVPC ONF strategies: Provide Access to sources of healthy food; Expand access to healthy food for low-income residents; Connect Farmers with landowners //	<i>Our Next Future 2014</i>	Partner with PVPC, PVTA, and community-based orgs to provide free or reduced-fare bus passes to low-income riders for trips to community garden plots, farmers' markets, and other community food sources. Identify community partners to expand the number of low-income CSA models to increase access to fresh food in low-income areas by improving access for seniors, increasing the use of SNAP for CSA membership payment, & similar efforts. Actively participate in Hampden County pilot project collaboration with the New Entry Sustainable Farming Project & partners.	
							Integrate sustainable food system issues that affect climate change into land-use planning processes &, where practical, incorporate quantitative goals & metrics.	Policy	Incorporated urban ag goal into OSRP Section 9 (7 Yr Action Plan) Goal #5: "Envision, Promote, & Create programs & projects that further healthy living in a modern City by creating safe access to our recreational facilities & collaborating to further urban agriculture initiatives. Objective: Collaborate to further access to healthy & affordable food option via community gardens, & static or mobile farmers markets. Objective: Identify vacant land to be used to the development of urban agriculture plots while decreasing blight and crime. Objective: Implementation of the City of Springfield's bicycle & pedestrian masterplan. Objective: Promote the development of unique projects identified in the open space survey." p 45 // PVPC ONF strategy: Encourage Urban Agriculture		Partner with PVPC to Support urban agriculture, including livestock ordinances, GIS mapping of available parcels, & foster partnerships among property owners and businesses to develop and expand community gardens and commercial urban agriculture projects. Incorporate measurable goals & metrics. How many farmers markets? How many acres urban ag? What type of urban ag projects will be promoted? Who will be targeted to spearhead these projects? How much food produced, and for whom?	
							Develop policy & equitably provide programmatic resources to: A) Increase the production & consumption of home-grown & locally sourced food by supporting farmers markets & community supported agriculture. B) Create policies & practices to encourage the purchase of healthy, low-carbon & minimally processed foods for public meetings, events, & facilities. C) Expand opportunities for food production & neighborhood-scale distribution including community gardens, especially for low-income populations & communities of color. D) Increase the use of public & private land & rooftops for growing food. E) Increase the planting of fruit trees in appropriate locations. F). Leverage the purchasing power of public & private institutions to source low-carbon & local foods including County jails.	Policy, Outreach / Education	PVPC ONF strategies: Grow school gardens; Connect Farmers with landowners; provide zoning and regulatory assistance; More local food purchases by schools and other institutional meal providers; retail best practices for healthy food // Community Garden Ordinance (General Legislation, Chap 154) // Garden the Community partnership	<i>Our Next Future 2014 // Scaling Up Local Food (CISA)</i>	Partner with PVPC to: Support retail policies & practices, such as in-store display requirements & signage that promote healthy food. Work to implement these at all levels of government and community, such as health locally grown snacks at public meetings; Support, incentivize, and facilitate purchases of local food for lunches by schools, as well as elder care facilities, senior meals programs (i.e., Meals on Wheels). PVPC can facilitate developing contract requirements and incentives to increase private contractor purchases of local foods and services; Assess how local zoning & other regulations may help or hinder residents' access to healthy food, & develop solutions to fix the issues identified. This may include easing restrictions on vegetable gardens & livestock in residential districts, facilitating adoption of right to farm bylaws, and similar actions. Actively participate in Hampden County pilot project collaboration with the New Entry Sustainable Farming Project & partners. Support on-site vegetable gardens at schools, day care facilities, and other similar entities. Incentivize institutional meal providers, such as schools, colleges/universities, hospitals, day-cares, and senior meal programs to buy products from local farmers. Support the implementation of CISA's food system infrastructure report, Scaling Up Local Food.	
							Equitably promote educational opportunities for residents to gain skills organic gardening, fruit production, food preservation and cooking, and affordable, healthy eating. Provide culturally sensitive & relevant program options.	Policy, Outreach / Education	PVPC ONF strategies: Grow school gardens; Connect Farmers with landowners; provide zoning and regulatory assistance; // Garden the Community partnership		Actively participate in Hampden County pilot project collaboration with the New Entry Sustainable Farming Project & partners. Support on-site vegetable gardens at schools, day care facilities, and other similar entities.	

Sector	Environmental Co-Benefit / Community Co-Benefit								Action	Action Type	Springfield/Regional Action (Existing)	Source (Plan or Other)	Level of Change from Existing to BMP	Recs	
	Extreme Heat	Drought	Disaster	Flooding & Precip	Community Health	Jobs & Economy	Social Equity	Local Air/Water Quality							
Green Infrastructure & Carbon Sequestration	Obj: Sequester carbon through increased green infrastructure (GI) & natural areas by: reducing impervious area by ___ acres; Expanding urban canopy cover to ___% of the City with a minimum of ___% of each residential neighborhood and ___% of commercial and industrial areas.														
	✓	✓	✓	✓	✓	✓	✓	✓	Continue tree planting & expand tree preservation & maintenance programs & incentives. A) Prioritize low-canopy neighborhoods & neighborhoods with populations at higher risk of adverse outcomes of UHI effects. B) Explore options for public & private partnerships to help reduce or share the cost of tree planting & maintenance.	Policy, Pilot Program	ReGreen Springfield and City Parks and Rec have robust tree planting program				
	✓	✓	✓	✓	✓	✓	✓	✓	In each municipal roadway capital improvement project, Evaluate the feasibility of incorporating increased canopy cover & green stormwater systems	Policy	PVPC ONF: Strategy to work with DPWs & MassDOT to adopt Green Streets policies in road construction/re-construction projects	Our Next Future 2014		Adopt Green Streets design standards in road construction/re-construction projects	
	✓	✓	✓	✓	✓	✓	✓	✓	Revisit urban canopy targets: A) Consider goals for carbon sequestration, resiliency to climate change impacts, and equitable distribution of tree-related benefits across the City. B) Address tree age, species diversity, & tree distribution, in addition to expanding overall canopy coverage. Encourage native & climate resilient trees. Monitor tree canopy changes due to development, including infill areas, & determine if policy & rule changes are needed.	Policy	ReGreen Springfield				
	✓	✓	✓	✓	✓	✓	✓	✓	Protect & enhance local natural resources that provide multiple benefits including carbon capture; reduction of flood, stormwater, & UHI impacts; cooling & purification of air & water; and improvement of public health & biodiversity. These include water bodies, flood plains, healthy soils, natural areas, vegetated areas and corridors, as well as green elements of the built environment such as green streets and green roofs.	Policy	Conservation Commission recommends "that all remaining wetland areas be preserved through public acquisition or control." // OSRP Section 8 Goal 2: "Adequately & consistently manage open space & recreation lands to reduce public safety hazards, increase opportunities for interacting with the outdoors & maximize protection for the city's natural resources...Objective: To implement BMPs & LID methods related to stormwater quality improvements & comply with NPDES regulations." OSRP Section 9 Goal #1: Acquisition... Goal: To provide additional OS in areas which demonstrate greatest need. Action Steps: 1. Identify & acquire small parcels to create neighborhood parks & playgrounds in areas with high number of children and limited open space. Objective: To protect water resources via acquisition of open space. Action Steps: 1. Acquire the Camerota Property, approx. 11 acres of OS located on the north shore of Five Mile Pond (Parks.) 2. Acquire the property at 148 Temby St. (Conservation). 3. Acquire marginal lots via the tax title process. (Conservation, Parks) 4. Acquire parcels that are contiguous with currently owned parcels, would contribute to a wildlife corridor or greenway, are wetlands or are listed as NHESP Priority Habitat. (Conservation). p 47. // PVPC ONF strategy: Create Critical lands acquisition programs & funds		OSRP 2015-2022 pg. 40 // Our Next Future 2014		Establish Critical Lands Acquisition Program & Funds to help protect critical lands such as water supply areas, farmlands, and open space / recreation areas
	✓	✓	✓	✓	✓	✓	✓	✓	Evaluate & pursue stable, innovative funding sources, financing strategies, & incentives to accelerate & sustain GI implementation & maintenance (e.g., capital dollars, carbon credits)		PVPC ONF strategy: Create Stormwater Utilities	Our Next Future 2014		Adopt stormwater utilities, with fees assessed based on amounts of impervious surfaces. Revenues can be used to fund stormwater projects.	
✓	✓	✓	✓	✓	✓	✓	✓	Promote and require urban design & redevelopment approaches that incorporate natural systems & GI into site improvements, rights of way, green corridors, & other infrastructure facilities. Consider adopting ecoroof targets in land use plans.	Regulatory	PVPC ONF strategy: "Create GI Zoning incentives"; Strategy to work with DPWs & MassDOT to adopt Green Streets policies in road construction/re-construction projects; promote citizen-built rain gardens	Our Next Future 2014		Adopt Green Streets design standards as policy, establish GI zoning incentives. Collaborate with PVPC & EPA to conduct rain garden workshops that result in constructed facilities (at Springfield Technical HS?)		

CA Co-ben: the action will reduce GHG at their source, not mitigate or uptake existing GHG, with exception of creating sizeable tracts of open space / wetlands. R Co-ben: An action will create environmental or social resilience to stressors caused or exacerbated by a changing climate.
 Kresge ranking: A) Aggressive Exposure Reduction B) Creative Use of Existing Reg C) Mainstream CA into existing decision-making processes D) Neighborhood-scale Capacity Building E) Systematic Monitoring and evaluation processes F) Comprehensive CA-informed planning processes

			CRB I	CRB E	CRB S	Actions/Strategies													May 12 Session Topic plus
			Kresge	R Co-Ben	CA Co-Ben	ReBuild	Bike/Ped	OSRP	HazMit	CDBG	AI	Res Outr	Stakeholder	City Survey	Total				
	1	Continue and expand efforts to develop and promote green jobs that support greenhouse gas emissions reduction goals.	D	1	1	1	0	0	0	1	0	1	1		6	CONFIDENCE			
	1	Develop & use a transparent & inclusive decision-making framework designed to achieve climate, equity, safety, health, & prosperity goals when making major infrastructure, transportation, land use, community development, and project development plan & investment decisions. Consider existing systems, like STARS & MOSIAC, as models.	F	1	1	0	0	0	0	0	0	1		1	4	CONFIDENCE			
	1	Increase number of homeowners and renters with flood insurance	D	1	0	0	0	0	1	0	0	1			3	CONFIDENCE			
	1	Develop a campaign to connect residents to information & resources to get the things they need. Key strategies: A) Buy Smart (plan before purchasing, buy local, give gifts of experience, purchase durable goods). B) Reuse. C) Borrow, share, & rent items. D). Fix & maintain.	D	1	1	0	0	0	0	0	0	1	1		4	CONFIDENCE			
	1	Explore & develop innovative, participatory research strategies & partnerships with public utilities, businesses, & diverse community organizations to protect & enhance natural systems & GI, reduce impervious area, & provide information on the human health & ecological well-being benefits of such actions.	F	1	1	0	0	0	0	0	0		1		3	CONFIDENCE			
	1	Develop an outreach plan for vulnerable populations to educate them about designated cooling centers in neighborhoods with particularly vulnerable populations	A	1	0	0	0	0	0	0	0	1	1		3	CONFIDENCE			
	1	Improve public education about the risks of developing in certain areas	C	1	0	0	0	0	0	0	0				1	CONFIDENCE			
1	1	Incorporate fiscal impact analysis into development review, ensuring inclusion of costs related to climate change impacts.	C	1	0	0	0	0	0	0	0		1		2	CONFIDENCE			
1	1	Develop a program to provide technical assistance & resources to at least 500 businesses per year to improve waster prevention & toxics reduction practices & to meet a requirement to recycle paper, metal, & glass. Prioritize & customize technical assistance to benefit under-served & under-represented business owners.	B	1	1	0	0	0	0	0	0		1		3	CONFIDENCE			

			Actions/Strategies	Kresge	R. Co-Ben	CA Co-Ben	ReBuild	Bike/Ped	OSRP	HazMit	CDBG	AI	Res Outr	Stakeholder	City Survey	Total	May 12 Session Topic plus
CRB I	CRB E	CRB S															
	1		Promote and require urban design & redevelopment approaches that incorporate natural systems & GI into site improvements, rights of way, green corridors, & other infrastructure facilities. Consider adopting ecoroof targets in land use plans and consider integrating economic, social, and ecological (ecosystem services) in decision-making, prioritizing areas with history of under-investment..	B	1	1	0	0	1	0	0	0	1	1	1	6	GREEN INFRA.
1	1		Include incorporating green stormwater mgmt as an objective in Complete Streets Policy & projects	B	1	0	0	1	0	0	0			1	3	GREEN INFRA.	
1	1		In each municipal roadway capital improvement project, Evaluate the feasibility of incorporating increased canopy cover & green stormwater systems	B	1	1		0	0	0	0	1		1	4	GREEN INFRA.	
	1	1	Include reducing Urban Heat Island (UHI) as an objective in Complete Streets Policy & projects	B	1	0	0	1	0	0	0				2	GREEN INFRA.	
	1		Evaluate & pursue stable, innovative funding sources, financing strategies, & incentives to accelerate & sustain GI implementation & maintenance (e.g., capital dollars, carbon credits, stormwater utility)	C	1	1	0	0	0	0	0				2	GREEN INFRA.	
1	1		Develop a municipal stormwater design manual that illustrates context-appropriate green infrastructure	F	1	0	0	0	0	0	0		1		2	GREEN INFRA.	
1		1	Establish long-term partnerships to coordinate equitable access to energy-efficiency resources, incentives, assistance, financing, outreach, education, & other tools to residents & businesses. Support neighborhood efforts, including ecodistricts, to improve energy performance of buildings.	D	1	1	1	0	0	0	0	1	1	1	6	MS	
		1	Help homeowners & rental property owners participate in efficiency energy retrofit programs, with a distribution that reflects the current percentage of low- and moderate-income home ownership and income rentals in the City.	D	1	1	1	0	0	0	0	1	1	1	6	MS	
		1	Require energy performance ratings for all homes so that owners, tenants, and prospective buyers can make informed decisions about energy costs and carbon emissions. (DOE funded DOER to launch 'HomeMPG' but this did not take off...)	B	1	1	0	0	0	0	0				2	MS	
		1	Mitigate potential cost burdens to low-income households principally through efficiency measures that reduce energy use and cost.	D	1	1	0	0	0	0	0	1	1		4	MS DONE, but...	
	1		Implement energy performance tracking and annual reporting program for commercial buildings and explore options for multifamily buildings.	E	0	1	0	0	0	0	0		0		1	MS BUILD	

			Actions/Strategies											May 12 Session Topic plus		
CRB I	CRB E	CRB S		Kresge	R Co Ben	CA Co Ben	ReBuild	Bike/Ped	OSRP	HazMit	CDBG	AI	Res Outr Stakeholder	City Survey	Total	
		1	Support the development of community solar projects that benefit all residents, particularly communities of color & low-income populations.	D	1	1	0	0	0	0	0	1	1	4	SOLAR	
		1	Participate in statewide policy discussions to expand the market in MA for renewable energy, including solar, wind, geothermal, biogas & biomass, & remove barriers to widespread participation in renewable energy programs like community solar.	C	0	1	1	0	0	1	0	1	4	SOLAR		
		1	Motivate & assist households & businesses throughout the community to install solar. Revisit City solar access policy & regulations, recognizing changing conditions due to the proliferation of residential rooftop solar energy systems. Establish a target megawatt goal of installed solar photovoltaic capacity within the City.	B	0	1	0	0	0	0	0	1	1	3	SOLAR	
		1	Develop & implement a campaign to decrease single occupancy vehicle commutes by a quantifiable amount. A) Communicate with commuters regarding alternative commuter options such as transit, biking, or walking. Provide information on safe routes to work. B) Assist major employers in developing an alternative commute program.	F	1	1	1	1	0	0	0	1	1	1	7	TRANSPORATION
		1	Adopt mode share targets that are consistent across City bureaus & plans that respond to differing community needs & conditions in Springfield's different neighborhoods. (City DPW--how to enforce?)	C	1	1	1	0	0	0	0	1	4	TRANSPORATION		
1			Establish a stable funding source adequate to maintain the existing transportation system & to invest in transportation capital projects & programs that reduce carbon emissions & improve equity.	B	1	1	1	0	0	0	0	1	1	5	TRANSPORATION	
		1	Reduce per capita vehicle miles traveled by ___% by ___.	A	1	1	0	0	0	0	0	2	TRANSPORATION			
		1	Support adoption of a road usage & fuel efficiency charge as a long-term replacement for declining gas tax revenue.	B	1	1	0	0	0	0	0	2	TRANSPORATION			
		1	Work with regional transit to refine the regional travel demand model to improve projections of vehicle demand and non-auto mode share. Use forecasting tools and methodologies that identify investments that minimize carbon emissions.	C	0	1	0	0	0	0	0	1	TRANSPORATION			
		1	Include estimates of carbon emissions in evaluations of major planning scenarios, Comprehensive Plan, and other City plan decisions. Partner with regional transit & regional jurisdictions to develop modeling tools for evaluating emissions impacts of land use & transportation decisions & monitoring carbon emissions.	C	0	1	0	0	0	0	0	1	TRANSPORATION			

			Actions/Strategies	Kresge	R Co Ben	CA Co Ben	ReBuild	Bike/Ped	OSRP	HazMit	CDBG	AI	Res Outr	Stakeholder	City Survey	Total	May 12 Session Topic plus	
CRB I	CRB E	CRB S																
1			Update the City's Electric Vehicle Strategy, with the initial goal of adding ___ electric vehicles and plug-in hybrids, and evaluate opportunities to: increase the number of public access fast chargers, address barriers to garage-free homes, install charging infrastructure integrated into streetlights, increase use of electric vehicles in car sharing programs, and support use of electric bikes and buses. (City DPW notes aging electric infrastructure could be a barrier)	A	0	1	0	0	0	0	0						1	TRANSPORATION
1	1		Continue tree planting & expand tree preservation & maintenance programs & incentives. A) Prioritize low-canopy neighborhoods & neighborhoods with populations at higher risk of adverse outcomes of UHI effects. B) Explore options for public & private partnerships to help reduce or share the cost of tree planting & maintenance.		1	1	0	0	1	1	0	0	1				5	URBAN FOREST
1			Revisit urban canopy targets: A) Consider goals for carbon sequestration, resiliency to climate change impacts, and equitable distribution of tree-related benefits across the City. B) Address tree age, species diversity, & tree distribution, in addition to expanding overall canopy coverage. Encourage native & climate resilient trees. Monitor tree canopy changes due to development, including infill areas, & determine if policy & rule changes are needed.	A	1	1	0	0	1	0	0	0	1				4	URBAN FOREST
1	1		Prioritize municipal tree planting in heat-vulnerable locations	A	1	0	0	0	1	0	0	0	1				3	URBAN FOREST
1	1		Map areas prone to Urban Heat Island (UHI) & conduct pilot programs in those areas to reduce heat	A	1	0	0	0	0	0	0	0	1				2	URBAN FOREST
1	1		Offer incentives to residents and developers to plant & protect trees	C	1	0	0	0	0	0	0	0	1				2	URBAN FOREST
1			Advocate for the adoption and implementation of low-carbon fuel standards at the federal and state levels.	C	0	1	1	0	0	0	0	0			1		3	ADV
		1	Evaluate development incentives to see if they encourage development in particularly vulnerable areas.	C	1	0	0	0	0	0	0	0					1	BUILD
1		1	Promote rehabilitation, adaptive reuse and energy and safety-related upgrades of buildings to conserve natural and historic resources, reduce waste, and improve public safety.	B	0	1	1	0	0	0	0	1	1	1	1		6	BUILD
		1	Review the zoning code to identify impediments to and potential incentives for the construction and retrofit of green buildings.	B	0	1	0	0	0	0	0	1	1				3	BUILD
1			Promote alternatives to traditional building demolition such as relocation, deconstruction, & salvage, including identifying & removing barriers & disincentives.	B	0	1	0	0	0	0	0	1	1				3	BUILD WASTE

			Actions/Strategies											May 12 Session			
CRB I	CRB E	CRB S		Kresge	R Co Ben	CA Co Ben	ReBuild	Bike/Ped	OSRP	HazMit	CDBG	AI	Res Outr	Stakeholder	City Survey	Total	Topic plus
1			Adopt a city-wide policy promoting water recycling for nonpotable uses	B	1	1	0	0	0	0	0					2	GI WATER
1			Implement a water impact fee that reflects each property's consumption	B	1	1	0	0	0	0	0					2	GI WATER
1			Mandate rainwater harvesting for all new commercial construction	B	1	1	0	0	0	0	0					2	GI WATER
1			Enact a water conservation / waste ordinance to restrict the type of landscaping on new developments and public properties	B	1	1	0	0	0	0	0					2	GI WATER
1			Mandate grey-water ready residential development	B	1	1	0	0	0	0	0					2	GI WATER