

HARTFORD CLIMATE ACTION 2017 - 2018 REPORT







Hartford Climate Stewardship Initiative

Office of Sustainability 2018 Annual Report

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INTRODUCTION

Together with Mayor Luke Bronin, the Hartford's Climate Stewardship Initiative ("CSI") is pleased to present the 2018 annual report, featuring highlights of a busy year. This report summarizes the activities of the CSI, which includes the Climate Stewardship Council ("CSC") and the Mayor's Office of Sustainability ("the Office"), from April 2017 to December 2018.

Since May 2017, the Climate Stewardship Council met multiple times to review drafts of the Climate Action Plan ("CAP"). The CAP was ultimately approved by both the CSC and the

Planning and Zoning Commission in the fall of 2017. The City Council, in turn, adopted the CAP in January 2018. A celebration of the adoption, which was held at KNOX, featured Mayor Bronin, CSC Chair Sara Bronin, and Connecticut Green Bank President and CEO Bryan Garcia as speakers. Media coverage included WTIC and the Hartford Courant.



Mayor Bronin, CSC Chair Sara Bronin, the Office of Sustainability and the Climate Stewardship Council celebrate the adoption of the Climate Action Plan at KNOX.

PROGRESS

The Office of Sustainability has made extensive progress implementing CAP strategies in partnership with stakeholders across the community and within City operations. From building staffing capacity to raising program dollars and managing projects, we have helped shape a number of environmental initiatives in Hartford since May 2017.

Although we are refining the way that we track progress on the Climate Action Plan, we do have a global view of projects underway. This includes information on the number of actions by sustainability area. In addition, the number of stakeholders engaged on the CAP include more than 50 nonprofits, 20 City-related groups and individuals, and a variety of other public and private organizations, including educational institutions.

The Office also staffs the Energy Improvement District Board ("EID Board") and Advisory Commission on the Environment ("ACOTE"), and organized a series of stakeholder events,



including those listed below. A number of these activities are described in greater detail in subsequent sections.

Some of our activities included:

- Monthly EID Board and ACOTE meetings. The Office organizes these monthly Board and Commission meetings.
 - EID Board. The Office also organized a Request for Expression of Interest preproposal meeting, site visit and application review.
 - o ACOTE. The Office facilitated public interest sessions.
- **Monthly Energy Opportunities.** These monthly meetings organize City staff, energy vendors, and utilities to move energy projects and contracts forward.
- Climate Action Plan Press Event. The adoption of the Climate Action Plan was celebrated by Mayor Bronin, the CSC, and the Office.
- Renewable Energy Outreach. In 2017, the Office organized Solarize Hartford
 canvassing sessions and a community event. In 2018, we co-hosted the Solar for All
 kickoff, which celebrated a new Hartford PosiGen office and green jobs. The event
 featured Kerry O'Neill from the CT Green Bank, Mayor Bronin, CT DEEP Commissioner
 Klee, Karraine Moody from Habitat for Humanity, and Tom Neyhart from PosiGen.
- **Retain the Rain.** The Office hosted a Retain the Rain workshop, canvassing activities, and distribution events with Keney Park Sustainability Project, Our Piece of the Pie, and the Youth Service Corps.
- Sustainable CT Regional Launch. The Office helped organize Sustainable CT's regional launch of its municipal environmental certification program at the Hartford Public Library. CSC Chair Sara Bronin spoke, as did Sustainable CT's Alyssa Norwood. Several community organizations, such as Billings Forge Community Works, tabled.
- **CAP Outreach.** These meetings featured speakers from organizations across the city, and were held in partnership with grassroots organizations Bici Co, KNOX, and Keney Park Sustainability Project.
- Design Competition. With extra funds from CIRCA, the Office hosted a pop-up design competition to encourage the beautiful transformation of underused spaces in the city. More than 25 applications from residents, students, and nonprofits were received. Five community judges chose finalists, who pitched their ideas in front of an audience of about 50 people at the Trinity Liberal Arts Action Lab. A number of nonprofits and community partners were involved in the competition.

The following graphic details a high-level summary of progress made by stakeholders across the community towards completion of strategies outlined in the CAP. There are more than 80 strategies underway in each sustainability action area, as shown here:



STRATEGIES IN PROGRESS BY AREA FOOD WATER WASTE 10 LANDSCAPE TRANSPORTATION 13 18 19

Importantly, this work happens in partnership with many stakeholders.

Our partnership model is mapped in the graphic to the right. The Office of Sustainability's work knits together stakeholders and environmental efforts across the city and region.

In particular, we work with Boards and Commissions, City Council members, nonprofits and government agencies at all levels, vendors, foundations, and utilities.



NOTABLE SUCCESSES

Hartford has moved leaps and bounds ahead as the City embraces the goals and strategies presented in our recently adopted CAP. There have been a series of successful projects in all six sustainability action areas.



Energy

The Office works in three key areas related to energy:

- Supporting local boards and commissions to expand renewable energy capacity in the community.
- Organizing and implementing energy projects within City operations in partnership with other city departments and leadership.
- Evaluating and processing credits and incentives to offset energy costs.

In total, the Office helps the Department of Public Works review and manage 20 energy contracts that support ten projects related to the CAP. Areas of progress include: Building a framework for public-private partnerships, improving energy efficiency in buildings, and generating revenue through renewable energy credits.

Last fall, Hartford established an EID, which can be used to enter into contracts, to buy or lease energy facilities, to increase energy efficiency, and to make it easier and cheaper to do business in Hartford. The Board, which consists of nine voting members and five non-voting members, includes residents along with representatives from local businesses and Eversource.

After receiving input from various stakeholders including local and regional businesses and residents, the EID Board formally adopted the Hartford EID Comprehensive Plan in February 2018. The plan features the identification of strategies and sites for future projects, while also recognizing the importance of past successes and the City's existing context and infrastructure. A key feature is expanding access to renewable energy through a community-scale shared solar initiative.

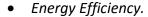
In June 2018, the Board issued a Request for Expression of Interest to launch development of projects related to the Comprehensive Plan. The EID Board also issued a Request for Expression of Interest, which encouraged potential project developers to submit related proposals. The Office organized a pre-proposal meeting for 14 vendors, a site visit to the landfill solar array with MIRA, and the review of ten applications.

Both the EID Board and the City have advocated for energy initiatives at the state level. This included support of legislation such as state shared solar bill SB 336.



On March 24th, Hartford also participated in a global sustainability initiative, Earth Hour. Earth Hour began in Sydney, Australia in 2007. Hartford's City Hall went dark from 8:30 pm - 9:30 pm in solidarity with millions around the globe to spark action and initiate conversations on the environment and public action.

Within the CAP's Energy section, a number of goals and milestones have been addressed. A few highlights include:



 Benchmarking. [Energy Goal 1: Improve Energy



The City of Hartford's Sustainability Coordinator, Shubhada Kambli, testifying at the March Energy and Technology hearing in support of SB 336.

Efficiency of Public Properties] Benchmarking is an energy efficiency best practice. The Office, in partnership with the Department of Public Works ("DPW"), is finalizing the implementation of an energy dashboard.

The dashboard represents a significant change in the way that data is collected, analyzed and communicated across departments and stakeholder groups. It is automatically populated with data from three utilities (Eversource, MDC and CNG). For the first time, information related to utility bill data, energy supply contracts, energy conservation measures, and building performance is in one place. WegoWise allows users to quickly identify buildings that are the most expensive and least efficient, enabling quick analyses that drive future investments.

This dashboard will also help reduce the load on City staff who respond to requests for information related to energy bills, and offer the team early detection of mission-critical issues with HVAC equipment. In addition, the City is now less reliant on vendors to gather data related to energy improvements in facilities. This is an enormous step in improving the transparency of data across departments and stakeholders, and increasing our staff's analytical power. Ultimately, this results in improved energy efficiency within city operations, reduced environmental footprint, and cost savings.

Streetlights. [Energy Goal 1: Improve Energy Efficiency of Public Properties]
 The City has received a \$5 million grant from CT DEEP to upgrade its streetlights to more energy-efficient, brighter, LEDs. The grant funds will be used to retrofit the City's streetlights, with any remaining funds going to improving park facilities.



Eversource will also be fixing its own lights in parallel, prioritizing the lights that need critical repair. The project team anticipates energy / cost savings and brighter neighborhoods.

- Schools. [Energy Goal 1: Improve Energy Efficiency of Public Properties]
 School energy efficiency efforts include a \$34,000 project that will allow the City to receive approximately \$100,000 in incentives. Work began at the Parkville school during Spring 2018. Eversource was able to coordinate directly with the contractor, allowing for the project to move along more quickly than expected.
- Energy Opportunities. [Energy Goal 1: Improve Energy Efficiency of Public Properties]
 A monthly meeting to evaluate energy opportunities includes the Office, DPW, Eversource, CNG, and vendors such as Colliers and Bridge Energy. The goal of the meeting is to check on progress related to current projects, and identify future potential projects. During FY18, many projects were put on hold as the result of the City's financial crisis. Now, however, a series of efforts, particularly related to

Across the City's portfolio of buildings, automated building systems and careful management of controls have been identified as key areas for future energy conservation measures.

Community energy retrofits. The City of Hartford works with the CT Green Bank on solar and energy efficiency outreach through the seasonal Solar for All campaign. This effort complements work already done by Development Services year-round to improve the efficiency, health and safety of local properties. This work is done through the Housing Preservation Loan Fund Program, and is designed to help low-to moderate-income homeowners make improvements related to windows, furnaces, hot water heaters and insulation. This summer, Mayor Bronin allocated \$200,000 to the City's Housing Preservation Loan Fund to ensure that residents continue to have access to affordable sources of funding for improvements.

Renewable Energy.

- Microgrid. [Energy Goal 5: Increase Energy Resiliency]
 Mayor Bronin, CT DEEP, Constellation, and Bloom Energy cut the ribbon on the Parkville microgrid in March 2017. The microgrid is powered by a fuel cell, which generates electricity for a school, senior center, library and public health clinic on a daily basis, plus a gas station and grocery store during power outages.
- Solarize Campaign. [Energy Goal 3: Increase Renewable Energy Use]
 The Office helped lead a solar energy campaign in partnership with Solarize CT,
 SmartPower and a vendor, C-TEC. Outreach included a letter from the Mayor to



lighting retrofits, are underway.

many families, community workshops, presenting on a community radio show, and canvassing plus several tabling events at area businesses, farmers markets, and public libraries.

Electric Vehicles. [Energy Goal 4: Encourage Clean Energy Vehicles]
 There has also been incredible progress on energy made outside of city operations. 777 Main Street, a mixed-use development in the heart of downtown,

became home to the largest cluster of charging stations in Connecticut.

In celebration of this accomplishment, the Electric Vehicle Club of Connecticut, Connecticut Fund for the Environment, and the Connecticut Electric Vehicle Coalition hosted a ribbon cutting and panel discussion of EV policy. Our Office helped cut the ribbon on the facility.



Visitors at 777 Main Street's ribbon cutting and Tesla "ride and drive". Photo Courtesy of Ray Shaw.

- Financial Mechanisms. There were two ways that the City was able to take advantage of state legislation to reduce energy operating costs and, more broadly, expand the use of renewables. We anticipate about \$670,000 in savings over the next 5 years. We can do this because of:
 - Virtual Net Metering. The City entered into a Virtual Net Metering contract in partnership with the Green Bank this year. The VNM credits are generated by a solar installation in Thompson, CT. The VNM credits will be purchased by the City, and will offset municipal electric costs. The credits should result in savings of approximately \$30,000 per year, for 20 years.
 - Renewable Energy Credits. The City was awarded renewable energy credits for the fuel cell at the Hartford Public Safety Complex. The credits will offset the City's energy costs by approximately \$104,000 each year for the duration of the fuel cell's contract term, which expires in 2020. The City currently pays \$30,750 monthly for power generated by the public safety complex fuel cell.



Food

Food access and hunger activism have long been a part of the City's mission for a healthier Hartford. The City's Advisory Commission on Food Policy, local nonprofits, and other community stakeholders have directly worked on these issues for decades and are dedicated to ensuring equitable, affordable access to nutritious food for all residents.

Healthy Foods at Schools. [Multiple Food Goals]

Hartford Public Schools has led efforts to improve student access to healthy and fresh foods yearround. In addition to hosting a series of school gardens, Hartford Public Schools also has an innovative partnership with KNOX, which enables local farmers to sell produce directly to schools. KNOX's award-winning incubator program aims to strengthen the local food system and economy while providing affordable local produce. This program was recently covered in the Hartford



KNOX's Incubator Farmer program is recognized at the 2018 Community Food Security Awards.

Courant. Kudos to Superintendent Torres-Rodriguez, her colleague Brunella Ibarrola, and Ron Pitz's team at KNOX for their efforts to make healthy meals a reality!

- EPA Technical Assistance Grant. [Food Goal 2: Ensure Access to Healthy Food]
 The Mayor's Office of Sustainability partnered with the Climate Stewardship Council and Hartford Food System to apply for the US Environmental Protection Agency's Local Foods, Local Places program. The proposal aimed to support ongoing discussions related to expanded, equitable retail food options such as food co-ops in the city. The application reached the second stage, but was not awarded.
- Trinity College Liberal Arts Action Lab. [Food Goal 4: Reduce Carbon Intensity of Food] The Office is working with the excellent Trinity Liberal Arts Action Lab team to support students from Capital Community College and Trinity as they work through research on healthy, low-cost local foods. The data will support a buy local campaign in the future.



Regional Cooperation. [Food Goal 3: Divert Food from the Waste Stream]
 Fair Foods, a Dorchester-based non-profit organization, brought more than two tons of surplus food from Boston's wholesalers to Bloomfield's Foodshare. They have collaborated since September 2017 when Kim Owens of Fair Foods visited the Hartford Advisory Commission on Food Policy to share information on their programs.

The dedicated staff and volunteers from Fair Foods made the deliveries on their days off, and Foodshare reported that they received a total of 5,154 pounds of fresh produce from Fair Foods in November, just in time for Thanksgiving meals.



Kim Owens of Fair Foods presents to Hartford's Advisory Commission on Food Policy in September 2017. Photo Courtesy of HACFP.

- Sustainability Working Group. [Food Goal 3: Divert Food from the Waste Stream]
 The Office's Sustainability Coordinator participates in the Hartford Advisory Commission on Food Policy's Sustainability Working Group. The group issued recommendations related food and waste, which were part of a larger set of recommendations by the commission related to environmental justice and local food security.
- Community Efforts. There are many community-related CAP projects, including:
 - Mobile Kitchen. [Food Goal 2: Ensure Access to Healthy Food]
 The Whole Cities Foundation (sponsored by Whole Foods) has given Keney Park Sustainability Project (KPSP) a grant for a mobile teaching kitchen. KPSP has purchased and rehabilitated a former school bus and has since started its first mobile programming in fall 2017. KPSP will offer healthy foods education and cooking demonstrations, with the goal of reducing rates of heart disease, diabetes, and obesity.
 - Swift Factory Renovation. [Food Goal 1: Cultivate Local Food Production]
 The 65,000 square-foot Swift Factory has long been a vacant and underutilized site. Community Solutions is transforming the site into a hub for the community, and a magnet for green jobs. The new development will host multiple services



including a food manufacturing space, commercial kitchen, health clinic, and other job development assistance. The \$34 million renovation is now under construction and is expected to be completed in December 2019.

Landscape

Home to the nation's first municipal park (Bushnell Park) and rose garden (Elizabeth Park) as well as the 693-acre Olmsted-designed Keney Park, Hartford has a rich history of magnificent green spaces. The CSC recognized Hartford's green spaces as essential urban infrastructure, providing a range of public health, economic and environmental benefits. In support of this work, the Office's Green Infrastructure Team and other CSI partners have initiated a number of related projects.

- Urban Tree Canopy. [Landscape Goal 1: Improve Tree Canopy Coverage]
 The Office's Green Infrastructure Assistant works closely with the Tree Advisory
 Commission and the City Forester to support conservation of the Urban Tree Canopy
 (UTC). A strong UTC is an EPA green infrastructure best management practice and is
 considered a critical part of Hartford's existing green infrastructure (GI). With more than
 560,000 trees in the city, just one dedicated tree warden, a volunteer commission, and a
 very limited budget, the City is faced with an extensive challenge as it relates to the UTC.
 Two related efforts led by the Office included:
 - Tree List. [Goal 1: Improve Tree Canopy Coverage]
 In partnership with the Tree Commission, the GI team has been working to develop a comprehensive list of trees appropriate for Hartford's climate and land cover. The tree list catalogs over 80 species by 20 different characteristics, with a section on stormwater benefits. Special considerations concerning pest risk have been added, as pests have become a critical issue for the City.
 - An approaching threat, the Asian Longhorned Beetle (ALB) has the potential to decimate nearly half of the city's trees, drastically affecting public health and safety in terms of Urban Heat Island effect, tree hazards, and loss of air and water quality services. As such, the list has been adjusted to reflect the caution needed for ALB host trees. This list will be critical for communicating planting recommendations to developers, residents, and city staff.
 - Tree Tags. In celebration of Earth Day and Arbor Day, the GI Assistant carried out an educational Tree Value Tag Activity, which was intended to communicate the value of trees to residents. The tagged trees were state champion trees, the largest trees of their species in the state.



Part of this work involved mapping and iTree valuation of 49 specimens across the city. The most impressive tree, a Bur Oak, was found to have provided over \$17,000 in services in its lifetime. The tree tag effort gained some traction on social media, and the story was also picked up by Fox61 news.

 Emerald Ash Borer. [Goal 5: Increase the Resiliency of Trees and Landscapes]
 In Hartford, Emerald Ash Borer was



City Forester Heather Dionne and GI Assistant Grace Yi with a tree tag.

first discovered at Keney Park in 2015. Today, dozens of infested ash trees have been scheduled for removal in the past year alone, and thousands more are at risk across the city. In order to combat the spread of the pest, the City Forester and the Connecticut Agricultural Experiment Station are working together to treat 60 ash trees in the city through a pilot program. An additional set of trees are also receiving treatment through resources such as the Parks Trust Fund.

Other Initiatives. Hartford's green spaces benefit from the efforts of local nonprofits and active parks' friends' groups. These partners are essential to ensuring that our urban landscape meets the needs of the community, and Hartford has benefited from their dedication and passion.

 Arbor Day. In celebration of Arbor Day, more than 60 volunteers, including employees from The Hartford, helped plant 37 trees on Irving Street. The Mayor, City Forester, CT DEEP State Forester, and KNOX's Director spoke about a continuing commitment to greening Hartford and being a Tree City USA community for the 24th year in a row.



The Hartford volunteers help plant 37 trees on Arbor Day.

Like Arbor Day celebrations of the past, The Hartford has worked with KNOX on Arbor Day for the last eight years and has donated more than \$200,000 to assist KNOX in environmental initiatives throughout the city, including the planting of 400 trees. This



year, Irving Street was chosen for planting based on community need and support from neighborhood homeowners to plant trees and shrubs in their yards.

Tree Inventory. KNOX
 received a grant to pilot a
 community street tree
 inventory in the South Green
 neighborhood. In June 2018,
 KNOX employees, City staff,
 and residents went out and
 collected data on hundreds
 of trees. The data will be
 used to scope planting and
 tree care efforts, and this
 pilot will also be used to
 inform future inventories.



KNOX staff prune trees during the street tree inventory.

- 10-Minute Walk to a Park. The Trust for Public Land (TPL), National Recreation and Park Association (NRPA), and Urban Land Institute (ULI) launched the 10-Minute Walk to a Park Campaign in fall 2017, and 134 mayors from around the world signed up to join the campaign. Hartford's participation in the campaign also allows it to apply for exclusive funding opportunities from the NRPA, such as planning and technical assistance grants.
- Design Competition. With extra funds from CIRCA, the Office hosted a pop-up design competition to encourage the beautiful transformation of underused spaces in the city. More than 25 applications from residents, students, and nonprofits were received. Five community judges chose finalists, who pitched their ideas in front of an audience of about 50 people at the Trinity Liberal Arts Action Lab. A number of nonprofits and community partners were involved in the competition, and the Office is grateful to have their support. More information is at https://hartfordclimate.org/design/
- Keney Park. There have been intensive efforts in one of our most historic parks, and CSC member Keney Park Sustainability Project



A Dream Green design competition flyer.



(KPSP) has helped bring about some innovative initiatives to the park. Currently, KPSP is working on a number of activities including: the expansion of a milling operation to create a regional wood materials utilization training site, the inclusion of energy efficiency upgrades at the Keney Clock Tower, and the removal of invasive species using goats as a form of biological control. KPSP collaborates with various partners to complete this work, including DEEP and the City of Hartford as well as students from UConn and Trinity College. These partnerships have led to incredible work in both the past and present. In collaboration with Park Watershed, these two nonprofits have worked to protect and conserve Gully Brook, a critical local water body found in the heart of Keney Park. Park Watershed has various other initiatives, including the Urban Bird Treaty, GI at UConn Law, and much more. Many thanks to these partners for their hard work!

- Trails and Parks Grants. The City received a federal \$2.5 million grant to support the development and maintenance of trails between the Connecticut Riverwalk and Windsor. The City, along with its partners Riverfront Recapture and the Capitol Region Council of Governments, will work to extend and connect existing trails between Hartford and Windsor. An additional bundle of local, state and federal grants totaling \$1.5 million will also support upgrades at Colt Park, which is on its way to becoming a designated national historic park. The City also received technical assistance from the National Park Service to conduct a feasibility study to determine if a trail can be placed along the north branch corridor.
- Low Mow. [Landscape Goal 2: Promote Meadows and Native Wildflower Fields] Have you noticed areas in our parks that have tall grasses? These are low mow zones, which are planted with meadow plants instead of traditional turf, saving valuable staff time and money on lawn maintenance while absorbing runoff and providing habitat for wildlife. To help inform residents and visitors about these designated low mow areas, the Department of Public Works and Office of Sustainability are working together to design signs noting their tremendous benefits to our environment, our budget and our health.

Transportation

Accessible by boat, bus, car, rail, planes, and much more, Hartford has always had rich history intertwined with multi-modal transportation. However, since the inception of the Climate Stewardship Initiative, Hartford has made progress in adapting its historic urban landscape to promote and encourage an accessible, safe, and thriving environment in our city. This past year showed that the CSI continues to demonstrate a commitment to and success at creating and supporting safe and sustainable transportation alternatives for its residents.



Bikeshare. [Transportation Goal 1: Increase Walking and Biking]
 In June 2018, Hartford welcomed a fleet of 300 LimeBikes into the city. In a city where 25% of residents lack access to cars, the response to this dockless bikeshare system was both immediate and positive. There were 5,000 bike rides within the first week of the release, a remarkable feat in a city that sees tens of thousands of trips by car every day. LimeBike, the hosting company, also launched Lime



Local youth ride LimeBikes downtown during the first week of service.

Access, a program that lets low-income riders purchase 100 rides for \$5, increasing equitable, affordable access to transportation.

Bike Plan. [Transportation Goal 1: Increase Walking and Biking]
 Development Services, with support from staff across the city, is finalizing a Bike Plan.
 This complements the City's Complete Streets efforts, which make our streets safer for walkers and bikers. A series of public meetings have helped inform the effort. Materials from the meetings can be found here: https://t.co/m14HCp0Zrr.

Through this plan, the City aims to develop a network for bike travel, identifying appropriate places for bike boulevards, protected bike lanes, bike lanes, sharrows, and paths. Attendees gave great feedback about particular locations that need bike amenities, and about how Hartford can better connect to regional trails like the East Coast Greenway and trails in Windsor.

Recognition. [Transportation Goal 1: Increase Walking and Biking]
 Led by the efforts of the iQuilt Partnership, an urban design nonprofit, Hartford has been

designated a "Silver Walk Friendly Community" in recognition of its efforts to expand public safety and other opportunities for pedestrians. Hartford is the only city in Connecticut to receive the designation, primarily because of its "robust engineering and policy practices" that shape and support walkability in the city. This complements Hartford's award as a bronze Bicycle Friendly Community in 2016.



Mayor Bronin and local advocates celebrate the City's designation as a Silver Walk Friendly Community.



- Commuter Rail. [Transportation Goal 2: Increase Transit Use]
 In June 2018, Connecticut launched the highly-anticipated Hartford Line, which connects
 Hartford residents to Springfield, MA and New Haven, CT. This new transit effort is a
 result of a partnership among the CT Department of Transportation, CTrail, and Amtrak,
 and the rail has shown extraordinary success, with nearly 22,000 rides in the first
 weekend of its operations. Much like the success of CTFastrak, the demand on the
 Hartford Line has exceeded expectations, and the DOT predicts that the commuter rail
 will divert 1.5 million car trips per year. This dramatic shift in mode of transportation will
 contribute to safer roads, lowering traffic congestion and reducing air pollution from
 avoided car emissions.
- Public Engagement. Along with project implementation, there have been active efforts to
 engage and educate the community. This work has been led by the dedication of local
 nonprofits and city commissions.
 - Monthly Rides. The Parks and Recreation Advisory Commission and the City of Hartford's Department of Development Services have collaborated to host a monthly series of public bike rides in various parks across the City.
 - Bike Safety Courses. BiCi Co and Transport Hartford, two programs hosted by the Center for Latino Progress, engage in educational outreach, with bike safety courses for younger generations and an upcoming transportation summit for professionals.
 - Walktober. Not only are Hartford residents passionate about bikes, but we are
 also committed to being walkable. The iQuilt Partnership hosted Walktober, a
 series of guided walks in Hartford. Partners such as the Bushnell Park Foundation,
 Friends of Colt Park, and urban foresters from the City and DEEP all came together
 to share their wealth of historical knowledge with residents and visitors.

Waste

A beautiful city with historic treasures at every corner, Hartford takes pride in its community and urban landscape. Waste, litter and blight are among the areas where there is incredible community engagement and action. Local residents and community groups along with City staff and other partners have worked tirelessly to keep Hartford clean and beautiful.

Clean Hartford. [Waste Goal 4: Eradicate Litter and Blight]
 The City's Parks and Recreation Advisory Commission (PRAC) started a "Clean Hartford" initiative, which is intended to improve the condition of our City's parks and public spaces



through volunteer cleanups and community education. Through this initiative, PRAC has coordinated a series of Anti-Litter Meetings, which have involved discussion between neighborhood leaders, youth, city staff, nonprofits, and other local stakeholders. The campaign aims to use education to change littering behaviors and instill a sense of community pride. Promotional material is being designed by Hartford's Youth Service Corps members and the nonprofit Our Piece of the Pie.

Community Action. [Waste Goal 4: Eradicate Litter and Blight]
 In parallel with the Clean Hartford Campaign, there have been a series of dedicated cleanups led by community groups. In celebration of Earth Week, the neighborhoods of

Albany Ave. and Frog
Hollow had volunteers
come out in full force,
with KNOX generously
providing tools, bags,
gloves, and other
materials. Frog Hollow
continues to host these
cleanups as a fun
competition and cook-out
every month. The Friends
of Colt Park also
continues to hold monthly
cleanups as well.



Upper Albany Neighborhood residents discuss community topics, including planning a volunteer cleanup during Earth Week.

- Composting. [Waste Goal 1: Divert Organic Refuse from the Waste Stream]
 The City's Advisory Commission on Food Policy has a sustainability working group, which largely focuses on reducing or repurposing food waste. One of the ideas of the working group included having composting services available at events, and this idea came to fruition at the Sustainable CT launch event in Hartford. Blue Earth Compost, a local business that has recaptured more than 2 million pounds of food waste, provided composting services at this event.
- Recycling. [Waste Goal 2: Promote Recycling and Reuse in the Public Sector] There have been a number of successes related to recycling. For instance, the Office contributed to a successful grant application of 40 recycling bins from the Coca-Cola Foundation. The Office also secured a \$17,000 grant for nonprofit Vecinos Unidos to create green jobs related to recycling outreach. Vecinos is employing between 10 12 bilingual workers during the grant term. The canvassers will work in Frog Hollow, a predominantly Spanish speaking neighborhood, with a 70% Hispanic population.
- Waste-to-Energy. [Waste Goal 5: Increase the Resiliency of Waste Facilities]
 The large materials and solid waste facility located within Hartford could be headed for an



upgrade. Sacyr Rooney, a private firm, was selected by DEEP to update and improve the existing facility.

Blight Remediation. [Waste Goal 4: Eradicate Blight and Litter]
 The City's Blight Remediation team, led by Director Laura Settlemyer, hosted a Blight
 Town Hall with Mayor Bronin in October 2018. At that meeting, the City announced that
 it had worked with property owners to help get more than 140 properties fixed up. To
 facilitate the remediation of properties, Director Settlemyer updated the blight
 ordinance to support cooperative property owners. In partnership with the Mayor's
 Community Engagement team, there has been blight-related outreach through the
 Bloomberg Love Your Block grant award.

Water

The City of Hartford received a grant from the Connecticut Institute for Resilience and Climate Adaptation (CIRCA) to support a Green Infrastructure staff person for 18 months. The Green Infrastructure Assistant has been charged with helping Hartford respond to existing water quality issues and other public health concerns, while also proactively strategizing for the future.

There are several key projects led by our Green Infrastructure Assistant, and these include a residential rainwater management project, development of two analytical tools, research support for new policies, and educational outreach. Additional projects are discussed in the landscape section.

Retain the Rain. [Multiple Water Goals]
 With funding from CIRCA, the Office launched a residential stormwater management pilot project called Retain the Rain (RtR). This program consisted of two phases: disconnecting downspouts and providing rain barrels.

For the first phase of the program, outreach occurred through organizations working in the North Hartford Promise Zone ("NHPZ") as well as through the neighborhood community groups. Reaching more than 200 residents through presentations at neighborhood meetings, a climate action session, and the Office's RtR workshop, the Green Infrastructure Assistant encouraged residents to disconnect gutter downspouts from the combined sewer and redirect the rainwater to gardens and lawns. A win for residents, MDC, and the environment, the project garnered interest across the city and helped reestablish a rain barrel program.







Residents enjoy their new rain barrels, distributed during the second phase of Retain the Rain.

The first phase of the program allowed the Office to have a better understanding of the needs of residents, whose homes were found to be more suitable for rain barrels instead of downspout disconnections. As a result, in the second phase of the program, the Office partnered with the local water utility, the Metropolitan District (MDC), to offer 200 free, high-quality rain barrels to residents valued at \$100 each.

The second phase also included the help of Mayor Bronin's Youth Service Corps (YSC), who helped canvass, table, and distribute over 80 rain barrels this fall. The Youth Service Corps connects Hartford's young people to part-time, yearlong employment. Our Piece of the Pie, a local nonprofit, helps oversee the Youth Services Corps. More information on Retain the Rain can be found at www.hartfordclimate.org/retaintherain.

Analytical Tools. To get a sense of both the scope of stormwater management issues and
the potential for green infrastructure to benefit the city, the Green Infrastructure
Assistant created a runoff analysis tool to provide calculations and conservative
estimates of stormwater diversion and baseline conditions. The tool considers Hartford's
existing land cover and soil types, and allows for calculations based on existing weather



history or individual storm events. This tool can be utilized for individual sites as well. Data and formulas have been drawn from various sources such as the US Department of Agriculture's Natural Resources Conservation Service, US Geological Survey, the City of Hartford, and the Metropolitan District (MDC). Further notes on this tool can be found in the appendices. In addition, the Office worked with a group of students at the University of California at Berkeley to a develop cost-benefit analysis tool to help City staff and others evaluate future project costs for green infrastructure work.

Equity

This year, equity impacts were made in these ways:

(1) By raising funds for - and working with – local grassroots organizations such as Vecinos Unidos and Keney Park Sustainability Project.

> In this way, we can help build the capacity of grassroots efforts led by people of color dedicated to improving the wellbeing of residents and the quality of our local environment.



Herb Virgo, Executive Director of Keney Park Sustainability Project, shows Retain the Rain workshop attendees his edible rain gardens.

(2) By hosting inclusive meetings that intentionally involve inviting and celebrating organizations and individuals of diverse backgrounds and perspectives. This also included organizing residential outreach programs such as Retain the Rain and the EcoDesign Challenge.

In this way, we are able to build a conversation that layers the perspectives of all community members.

The Office also staffs and participates in the Advisory Commission on the Environment (ACOTE), which is the local body that informs grassroots efforts related to environmental justice. Recently, ACOTE has worked to realign its mission with the implementation of the Climate Action Plan.





KNOX, with the Department of Public Works and the Office of Sustainability, engage local youth to inventory trees.



Residents and stakeholders connect at the City's Energy and Transportation Climate Action Meeting held at the Center for Latino Progress.

POLICY/LEGISLATIVE ACHIEVEMENTS

The Planning and Zoning Commission, of which the CSC is a working group, has helped enact innovative policies to help achieve the overarching CAP goals.

• Stormwater Management. Thanks to an innovative set of new zoning provisions approved by the City of Hartford Planning and Zoning Commission in consultation with the green infrastructure team at the Office, green infrastructure practices will now be incorporated into new developments disturbing more than 5,000 square feet. The goal of these changes is to manage one inch of precipitation on the lot, without discharging any stormwater runoff into the public drainage system.

This approach was recommended by the Environmental Protection Agency in its Next Steps Memo for Hartford, which was issued after the "Green and Complete Streets" workshop in 2017. As part of the permitting process, applicants will be required to show how they plan to manage the one-inch storm on-site or at another location, or they can opt to pay into a newly-created green infrastructure fund supporting the implementation of stormwater best management practices around the city. Fees have been set at \$3 per gallon, except in the federally-designated Promise Zone, where they will be \$1.50 per gallon. These new provisions are intended to help achieve stormwater goals on a consistent, incremental basis. The City has since received its first payment into this fund, which will allow future green infrastructure projects, including tree planting, to move forward.

Removal of Parking Minimums. On December 12, 2017, the Planning and Zoning
Commission voted to approve a measure that completed eliminated minimum parking
requirements citywide, making Hartford the first major American city in the country to



do so. Eliminating parking minimums can provide economic benefits by freeing up space for other uses and reducing development costs for providing parking that may not be needed.

It can also reduce impervious surfaces in the city, allowing for more stormwater capture and infiltration. Importantly, it has been nearly two years since the city instituted the lifting of its parking minimums for downtown and for retail and service uses citywide, and there have not been any negative reports to date.



P&Z Commissioners discuss a landmark zoning revision, which completely eliminated parking minimums citywide.

KNOWLEDGE BUILDING, NETWORK AND AWARDS

To build knowledge and encourage the sharing of information, the CSI and the Office have hosted or co-sponsored various events, forums, and workshops.

 Climate Action Meetings. Three Climate Action Meetings were hosted in partnership with BiCi Co, KNOX, Keney Park Sustainability Project, and Blue Earth Compost, respectively. In addition to the hosts of each meeting, presenters included: DPW, CTrides, Chispa, CT Green Bank, PosiGen Solar, LimeBike, CDM Smith / MDC, Riverfront Recapture, and the Hartford School Garden Committee. Each of the meetings focused on an aspect of the CAP, including: Energy/Transportation, Landscape/Water, and Food/Waste. On average, we had 20 residents participating in each meeting.

Our audiences were very engaged, created terrific connections among themselves and the City, and offered excellent feedback for future meetings. We circulated a survey at our second meeting, to get a sense of what went well, and how to improve for the future. Responses were very positive overall, with one respondent noting: "I learned so much about all the different climate action projects. It was exciting to hear about the good work being done, and what we have to look forward to and work for!"

Boards and Commissions. The Office participates in - and catalyzes - the environmental
work of organizations across the city and region. The groups we support range from
colleges and universities to boards and commissions. Shubhada Kambli, the Office's



Coordinator, staffs two local Boards and sits on the new statewide nonprofit Sustainable CT. As a representative of the City and Mayor Bronin, she contributes to conversations that shape environmental work in municipalities across the state. The Green Infrastructure Assistant also participates in two local Commissions and the Complete Streets working group.

- Sustainable CT Silver Certification. The City of Hartford was among the pioneering cities and towns that joined Sustainable CT, a new statewide initiative to support environmental progress in Connecticut's cities and municipalities. More than 40 people turned out for the launch event (co-hosted by the City and Sustainable CT) held at the Hartford Public Library's Center for Contemporary Culture on January 16. Professor Sara Bronin, Chair of Hartford Climate Stewardship Council, welcomed attendees. With Hartford's brand-new CAP, the City of Hartford had already made significant progress towards many environmental goals outlined by the Sustainable CT program. As a result, Hartford is one of only five towns that have received Silver status, the highest certification offered in the program's inaugural year. Many thanks to all of our partners, whose amazing work was highlighted in the application.
- Regional Sustainability Award. The Central Regional Council of Governments awarded Hartford the 2018 Regional Sustainability Award, in recognition of efforts related to the Climate Stewardship Initiative.
- National Networks. The Office participates in multiple national networks. This allows for
 us to share information across the country on Hartford's progress, and also, gather
 information and lessons learned from other communities and organizations active and
 effective in sustainability-related issues. These networks are organized by American
 Council for an Energy-Efficient Economy, Rocky Mountain Institute and Northeast Energy
 Efficiency Partnerships (NEEP). The Office's Sustainability Coordinator spoke at a NEEP
 regional gathering for local energy leaders.
- We're Still In. Mayor Bronin signed the We're Still In pledge, joining 280 other cities and counties across the nation committed to climate action.
- Other Communications. Some additional community outreach work that our Office did
 included a number of presentations to local college and university student groups about
 the CAP, and participation as a judge in the Sustainable Business Case competition hosted
 at UConn. Additional outreach and communications work are done through our website
 and social media. We regularly post to our blog on events that we host or support, and
 also send out regular newsletters summarizing recent milestones.



CAPACITY BUILDING AND FUNDING

The CSI has drafted numerous letters of support backing applications for sustainabilityrelated grants/programs submitted both by the City of Hartford and a number of local organizations. Previous letters of support include, among others:

Grants.

The Office of Sustainability is generously supported by a number of organizations, including:

- The Hartford Foundation for Public Giving and Partners for Places. Funding from the Foundation allowed the City to establish a full-time sustainability coordinator position, thus supporting the adoption and implementation of a CAP addressing energy, land use, transportation, waste, and water.
- CIRCA. A Connecticut Institute for Resilience and Climate Adaptation grant supported a full-time green infrastructure staff position as well as funds for a residential stormwater pilot program and other educational initiatives.
- Eversource. Grants through the Bright Ideas program administered by Eversource supported two skilled paid interns.
- CT DEEP. The City was awarded a \$17,130 grant from the CT Department of Energy and Environmental Protection. This grant will create a strong partnership among CT DEEP, the City of Hartford and a local grassroots nonprofit called Vecinos Unidos, which is based in the Spanish-speaking Frog Hollow neighborhood. Another grant application, for the Urban Waters program, was also written in partnership with the Keney Park Sustainability Project. Together, these partnerships strengthen the fabric of the local environmental community.
- National Fish and Wildlife Foundation (NFWF). Through the Long Island Sound Futures Fund, NFWF awarded the City of Hartford and the Mayor's Office of Sustainability almost \$180,000 to scale up our Retain the Rain program. Retain the Rain, which began in partnership with MDC, will be scaled up in 2019 through this new \$178,000 grant for additional residential outreach. This work will save residents money, capture stormwater, and help prevent local flooding. The project will also support funding for Keney Park Sustainability Project to train 14 youth from the Mayor's Youth Service Corps and Our Piece of the Pie. Senator Richard Blumenthal co-hosted an event at Keney Park Sustainability Project to announce the grant.

These opportunities helped contribute to the development of new partnerships that support implementation of the CAP. Additional support from the Department of Energy allowed for staff to participate in the Better Buildings conference in both 2017 and 2018.

ADMINISTRATIVE MATTERS



Website: The CSI worked with an intern to update the website, which is www.hartfordclimate.org.

Budget: The total amount of funding is \$350,000 for two years. The funding periods are expected to be completed by Spring 2019.

Leadership: The Chair of the Planning & Zoning Commission, Sara C. Bronin, chairs the CSI. Tom Swarr is a CSC and EID Project Lead on energy issues. Other CSI members are encouraged to lead (and do lead!) specific projects as they arise.

Staff: Shubhada Kambli is the Sustainability Coordinator, and lead for the Office. She is joined by Grace Yi, Green Infrastructure Assistant. The Office has also had a series of interns and volunteers. Interns have joined CSI efforts from institutions such as: The University of Connecticut, Trinity College, and Central Connecticut State University.

CONCLUSION

Last year, in the Spring of 2017, the City of Hartford established a full-time sustainability coordinator position to assist in the development, adoption, and implementation of a CAP addressing energy, land use, transportation, waste, and water. After a year of hard work, there have been several notable successes. The CAP has officially been adopted by City Council, the City's 100% grant-funded Office has expanded to include additional staff and interns, and the collective efforts of our community partners have helped make measurable progress on nearly 90 CAP strategies. Importantly, Hartford has been recognized for both regional and statewide excellence.

Ultimately, through this work, the Climate Stewardship Initiative has helped position Hartford for economic growth through targeted initiatives that promote environmental stewardship, community health, and jobs for our residents. Congratulations and many thanks to the Climate Stewardship Initiative, Hartford's coalition of incredible advocates, and here is to many more years of success to come!

ABOUT US

The CSC is a working group of the City of Hartford Planning & Zoning Commission, and the advisory body for the CSI. The CSI is an inclusive, community-wide effort led by Mayor Luke Bronin through the Office. Together, we aim to advance the city's economy, improve public health, and promote social equity while becoming a global leader in environmental stewardship.

The CSI brings together citizen associations, nonprofit institutions, government agencies, and private businesses from the Hartford region. The group includes representatives from Hartford



2000, as well as the chairs of five city commissions (ex officio). It frequently employs the efforts of students and professors from institutions of higher learning both within and outside the region. The full roster of participants can be found on the "Who Are We?" page at www.hartford.gov/climate.

To augment this momentum for the CAP, the Climate Stewardship Council realized that it would need the assistance of dedicated staff. It therefore supported a successful grant application to Partners for Places and the Hartford Foundation for Public Giving, resulting in full funding for a Sustainability Coordinator for the City of Hartford for nearly two years. As of May 1, 2017, Mayor Bronin filled the Sustainability Coordinator position with Shubhada Kambli, who leads Hartford's Sustainability Office and is the driving force behind organizing the community outreach and additional research efforts that involve the implementation of Hartford's CAP. The Sustainability Coordinator also oversees the Green Infrastructure Assistant (also fully grant-funded by the Connecticut Institute for Resilience and Climate Adaptation), who focuses on innovative projects related to stormwater management and green space.

After having met monthly for an 18-month period, the Climate Stewardship Council is now an advisory body. It convenes an annual meeting each year with the goal of exchanging information and ideas regarding sustainability at the local, regional, and state levels — with the primary focus being the advancement of Hartford's objective to become a national model for urban sustainability. Meetings are held at the University of Connecticut - School of Law, and CSI activities have been supported by the UConn Service Learning Program, the UConn Center for Energy & Environmental Law, and the Thomas F. Gallivan, Jr., Memorial Fund.

OFFICE OF SUSTAINABILITY TEAM

Sustainability Coordinator Shubhada Kambli



For the past ten years, Shubhada Kambli has led results-driven climate change and neighborhood revitalization programs at the local, state and federal levels across the country. She specializes in creating strong educational outreach and conservation training programs for diverse audiences. She has also built multiple successful, data-driven initiatives in New England, the Midwest, and the Southern United States. Educated at Wesleyan, Tufts, and Harvard, Shubhada has advanced academic training in environmental health, design, and policy.

Green Infrastructure Assistant Grace Yi





Grace Yi is a recent graduate with a passion for sustainability and public policy. Through her past internships and academic work, she has developed experience collecting and manipulating geospatial information, observing and examining connections between the environment and its residents, as well as recognizing and resolving the issues vulnerable populations may face. Grace holds a B.S. in Environmental Science with minors in Geography and City and Regional Planning from the University of North Carolina at Chapel Hill.

Graduate Intern Kartik Dubey



Kartik Dubey is pursuing his MBA from University of Connecticut, with a specialization in Business Analytics and Finance. Kartik has a Bachelor of Engineering from Devi Ahilya University, India, with a specialization in Electronics & Instrumentation. After graduation, he worked at Larsen & Toubro as an Engineering Manager. At L&T, he led planning and procurement for a \$75 million Waste Water Treatment Project and looks forward to applying his skills and experience to energy projects in Hartford.

Undergraduate Intern Wanjiku Gatheru



Wanjiku (Wawa) Gatheru is a third-year student majoring in Environmental Studies with a minor in Sustainable Community Food Systems at the University of Connecticut. Passionate about creating a more inclusive environmental movement, Wawa believes in the support and uplifting of culturally-competent, community-based sustainability solutions. At UConn, she serves as the student body VP, intern at the Office of Environmental Policy, and co-founder of the UCAFE initiative, the first ever food pantry project on campus.

ACKNOWLEDGEMENTS

The Office of Sustainability is deeply grateful for the contributions and support of city staff, colleagues from local, state and federal government, dedicated resident volunteers, Hartford boards and commissions, and the support of multiple funders.



Our work is made possible by the leadership of Mayor Bronin, Chief of Staff Thea Montanez, Climate Stewardship Chair Sara Bronin, city staff, and organizations across the community. These organizations, many of which participated in the Climate Stewardship Council, include:

Foundations and Sponsors

- Hartford Foundation for Public Giving
- Partners for Places: Funders' Network for Smart Growth and Livable Cities
- State of CT Department of Energy and Environmental Protection (DEEP)
- The Connecticut Institute for Resilience and Climate Adaptation (CIRCA)
- The Nature Conservancy
- US Department of Energy

Local Governance, Boards and Commissions

- Advisory Commission on the Environment (ACOTE)
- City of Hartford Advisory Commission on Food Policy
- City of Hartford Parks and Recreation Advisory Commission (PRAC)
- City of Hartford Planning and Zoning Commission
- City of Hartford Tree Advisory Commission
- Energy Improvement District Board
- Hartford City Council
- Hartford Public Schools Board of Education

Utilities

- CT Natural Gas (CNG)
- Eversource
- The Metropolitan District (MDC)

Government Agencies, Nonprofits and Institutions

- Capitol Region Council of Governments (CRCOG)
- C TEC Solar
- Chispa CT
- Clean Water Action/Clean Water Fund
- Community Solutions
- CT Agricultural Experiment Station (CAES)
- CT Chapter of the American Planning Association (CCAPA)
- CT Electric Vehicle Coalition
- CT Fund for the Environment (CFE)
- CTrides: A Service of the CT Department of Transportation
- CT Roundtable on Climate and Jobs
- ECSU Institute of Sustainable Energy



- Electric Vehicle Club of CT, Formerly Westport Electric Car Club
- Environmental Defense Fund (EDF)
- Fair Foods Boston
- Faith Congregational Church
- Foodshare
- Friends of Parks Groups
- Hartford2000
- Hartford Consortium for Higher Education
- Hartford Food System
- Hartford Youth Service Corps
- Hartford Public Library (HPL)
- iQuilt Partnership Inc
- Keney Park Sustainability Project (KPSP)
- KNOX, Inc
- MetroHartford Alliance
- National Park Service (NPS)
- Neighborhood Revitalization Zone's (NRZ)
- Our Piece of the Pie (OPP)
- Park Watershed
- Rhode Island School of Design (RISD)
- Riverfront Recapture
- Sheldon Oak
- SmartPower
- Solarize CT
- Sustainable CT
- Transport Hartford Academy at the Center for Latino Progress (CLP)
- Trinity College
- Trinity College Liberal Arts Action Lab (LAAL)
- University of California, Berkeley (UC Berkeley
- University of CT (UConn Storrs, Hartford and Business)
- UConn Center for Land Use Education and Research (CLEAR)
- UConn Climate Corps
- UConn Law School
- UConn Nonpoint Education for Municipal Officials (NEMO)
- University of Hartford (UHART)
- Vecinos Unidos
- Yale School of Forestry and Environmental Studies (F&ES)

City Departments

• Central Grants Administration



- Community Engagement
- Department of Development Services (DDS)
- Department of Families, Children, Youth and Recreation (DFCYR)
- Department of Public Works (DPW)
- Finance Department
- Hartford Public Schools
- Hartford Redevelopment Agency
- Metro Hartford Innovation Services (MHIS)
- Office of Corporation Counsel
- Office of Management, Budgets and Grants (OMB)
- Office of the Mayor
- Procurement Services Unit
- Town Clerk

Businesses

- 777 Main St
- BlueEarth Compost
- Bridge Energy Services
- Colliers International
- CT Green Bank
- Crop One Holdings San Jose Based
- Fitzgerald and Halliday, Inc (FHI)
- LimeBike
- PosiGen Solar Energy and Energy Efficiency
- The Hartford
- Travelers
- Voices of Women of Color (VOWOC)

