2019
SUSTAINABILITY PROGRESS REPORT

PRESENTED TO CITY COUNCIL
FEBRUARY 5, 2020

PREPARED BY THE ECONOMIC AND
SUSTAINABLE DEVELOPMENT DEPARTMENT

**2019
REPORT**

CITY OF
BLOOMINGTON
ECONOMIC AND SUSTAINABLE DEVELOPMENT

How did Bloomington meet its short and long-term sustainability goals in City operations and the community in 2019?

Introduction

City Council approved the Sustainability Action Plan on October 2018, after the review of twenty past City plans, including the Comprehensive Plan, and city staff and substantial public input.

2019 represents the first full year of implementation of this strategic plan. Achievement of the goals of the Sustainability Action Plan has required the collaboration of all City departments as well as our community's continued substantial commitment towards becoming a more sustainable Bloomington.

2019 City Sustainability & Climate Leadership

Global Recognition

Carbon Disclosure Project (Leadership Level)

In 2019, Carbon Disclosure Project (CDP), an international non-profit that runs the global environmental disclosure system, recognized the City of Bloomington as a top city for demonstrating climate leadership**.**

According to CDP, the City of Bloomington has demonstrated best practice standards across adaptation and mitigation, has set ambitious but realistic goals and has made progress towards achieving those goals. The City of Bloomington has strategic, holistic plans in place to ensure its actions taken will reduce climate impacts to and vulnerabilities of the citizens, businesses and organizations residing in Bloomington.

Global Covenant of Mayors

In 2019, Mayor Hamilton joined Global Covenant of Mayors, the global alliance for city climate leadership. This covenant is built on the commitment of over 10,000 cities and local governments and requires yearly reporting to the Carbon Disclosure Project and implementation of emissions reduction and adaptation actions.

National Recognition

ICLEI Milestone Achievement Award for GHG Emissions Management

The City of Bloomington was recognized by the non-profit Local Governments for Sustainability (ICLEI) for following a systematic approach for analyzing baseline greenhouse gas emissions.

EPA Green Power Partner

In 2019, the City of Bloomington was recognized by the Environmental Protection Agency for voluntarily increasing the City of Bloomington's green power use to advance the development renewable electricity sources.

State Recognition
IDEM Governor's Award
Greening the Government

The Indiana Department Environmental Management's awarded the Greening the Government Award to the City of Bloomington September 2019. This award recognizes agencies within local, county, or state government who pursue improvements in the environmental performance within their own operation

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2019 Sustainability Action Plan Progress Report- Summary Table

(see Sustainability Action Plan Executive Summary document in appendix as reference)

Chapter Topic	Subtopic	2019 Actions Achieved (21)	2019 Actions in Progress (10)	2019 Actions Not Met (23)	2020 Focus
Climate Mitigation & Adaptation	**Climate Mitigation** **(On target)**	1.1.a. GHG Community Emissions (p. 4) 8.1.a. GHG Operations Emissions (p. 20) 8.11.b. Green Team meetings (p. 24)	1.1.b. Community renewable energy goal (p. 4) 8.1.b. City operations renewable energy goal (p. 20)	8.11.c. Employee training (p. 24) 8.11.d. Social equity trainings (p. 24)	1.1.h. Create resources for businesses and non-profits to reduce emissions (p. 4)
	Climate Adaptation **(On target)**		1.2.a. (2020) Climate Vulnerability Assessment (p. 5)		1.2.a. Climate Vulnerability Assessment (p. 5)
Built Environment	**Sustainable Building Practices** **(Significant Progress)**	2.2.a. Sustainable Development Incentive (p. 6)		2.2.b. Building certification education program (p. 6)	2.2.a. Track utilization of sustainable development incentive (p.6)
	Adaptive Reuse **(On target)**				2.2.c. Develop list of sustainable building projects (p. 6)
Energy	**Energy Conservation & Efficiency** **(Target Not Met)**	2.1.a. Monroe County Energy Challenge 2019 work plan (p. 5)	8.2.a Reporting building energy use (p. 20) 8.2.b. Develop implementation plan (p. 20) 8.3.a. Report fleet fuel usage (p. 20)		2.1.b. Establish a consistent methodology for community energy use (p. 5)

Renewable Energy **(Target Met)**	1.1.c. Implement Solarize Bloomington (p. 4) 1.1.f. Green Power Community (2020 goal, p.4)		1.1.d. Solsmart designation (p. 4)	Continue to implement Solarize Bloomington 2020
Transportation	**Bicycle Mobility** **(Significant Progress)**	3.2.a. Bicycle Friendly Businesses (p. 8). 3.3.a. UReport for safety (p. 8)		3.2.b. Bike share program (p. 8) 3.2.c. car share programs (p. 8)	3.3.c. Implement intersection improvements (p. 8)
	Pedestrian Mobility **(On Target)**				3.4.b. Focus infrastructure investments based on Walk Scores
	Electric Vehicles **(On Target)**	8.4.a. (2023) Begin testing alternative vehicles (p. 21)			Install charging stations at new Trades District and 4th Street Garages
	Public Transit Accessibility **(Significant Progress)**	3.6.b. Determine needed route improvements (p. 10)		3.1.a. Establish Urban Village Centers (p. 7) 3.1.b. Incorporate electric vehicle charging stations (p. 7) 3.6.c. how to user guides for first time transit (p. 10)	Incorporate sustainable building requirements, including transit accessibility in large-scale development projects
Local Food & Agriculture	**Local Food Access** **(Significant Progress)**	4.1.a. Food access survey (p. 11)	4.1.b. Food system asset map (p. 11)	4.1.c. coordinate community efforts around access (p.11) 4.1.d. Quarterly Healthy Food Fairs (p.11)	Develop food system web resources based on community survey (4.1.a., p. 11)

	Local Food Availability **(Target Not Met)**		4.2.a. Establish baseline for food gardens 4.2.d. (2020) add 39 garden beds (p. 12)	4.2.b. Develop garden consultation program (p. 12)	4.2.a. Finish baseline for food gardens
	Local Food Production **(On Target)**	4.3.a. Baseline for total food purchases (p.13) 4.3.b. Hire local food coordinator (p.13) 4.3.c. hold quarterly community meetings (p.13)			Continue implementation of Value Chain (Local Food, 4.3.b.) Coordinator grant project
Waste	**Waste Reduction** **(Significant Progress)**	5.1.b. Hoosier to Hoosier community sale (p. 14)		5.1.a. Conduct a waste characterization (p. 14)	Track data on waste generation and composition
	Waste Recovery **(Target Not Met)**	8.6.c. expand composting facilities (p. 22)		8.6.a. Conduct waste audits (p. 22) 8.6.b. Quarterly reporting for waste generation (p. 22)	Reduce recycling contamination across community and composting participation in City Operations
	Special Materials **(Target Not Met)**			8.7.a. Establishing compliance for sustainable purchasing policy (p. 22)	Revise City operations sustainability purchasing and green events policy
Water	**Water Conservation** **(Significant Progress)**	6.1.c. (2020) advanced metering infrastructure (p. 15)		6.1.a. Enhanced public education campaign (p.15) 8.5.a. Establish water use baseline- City Operations (p. 21) 8.5.b. Develop quarterly reporting (p.21) 8.5.c. UReport water leaks (p.21)	Track water use data with installed metering infrastructure to establish water use baseline

Stormwater Management **(Significant Progress)**		6.4.a. Establish baseline for green infrastructure (p.16)	6.5.a. Expand educational programs (p.17) 6.5.b. Inventory infrastructure improvements (p.17)	2020 Residential Stormwater Grants
Water Quality **(Target Met)**	6.2.b. (2023) receive Clean Water Act 319 grants (p.15) 6.6.a. Grease and sewer inspections (p.17)			6.2.b. Development of a watershed management plan
Greenspace Conservation **(On Target)**	7.1.a. Smart growth principles in land use (p.18)			Greenspace preservation in City site plans
Ecosystem Health **Habitat Restoration** **(On Target)**				Continue Parks & Recreation habitat restoration initiatives
Invasive Management **(On Target)**			7.2.a. Mapping invasive species (p.19)	Public parks volunteer invasive removal programs
Native Species Planting **(On Target)**				Increase native plantings in public parks

Climate Mitigation and Adaptation (SAP Chapter 1)-

SAP Vision: Bloomington will minimize the generation of GHG emissions from all sources, toward an end goal of carbon neutrality, and will prepare for climate change.

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Climate Mitigation & Adaptation	**Climate Mitigation** **(On Target)**	1.1.a. GHG Community Emissions (p. 4) 8.1.a. GHG Operations Emissions (p. 20) 8.11.b. Green Team meetings (p. 24)	1.1.b. Community renewable energy goal (p. 4) 8.1.b. City operations renewable energy goal (p. 20)	8.11.c. Employee training (p. 24) 8.11.d. Social equity trainings (p. 24)	1.1.h. Create resources for businesses and non-profits to reduce emissions (p. 4)
	Climate Adaptation **(On Target)**		1.2.a. (2020) Climate Vulnerability Assessment (p. 5)		1.2.a. Climate Vulnerability Assessment (p. 5)

Climate Mitigation and Adaptation Challenge-

Heat impacts-

- Bloomington currently experiences slightly more than a month of extreme heat events annually. By the 2050s, Bloomington can expect about three months of extreme heat events, on average. The frequency of high heat nights will increase from 25 per year on average to between 57 and 69 nights. A greater frequency of high heat nights will result in an increase in incidents of emergency room visits, due to heat related health impacts. High heat impacts will affect Bloomington uniformly across the city, although areas with greater urban canopy cover will be more resilient to heating effects.

Increased precipitation-

- The number of extreme precipitation events per decade will increase by three events under a medium emissions scenario. However, climate models project that the amount of rainfall per storm will increase. As a result, developed areas that are adjacent to existing floodplains could easily become more susceptible to flooding because the floodplain expands with heavier rainfalls. Seventy-three percent of the land within the overlapping boundaries of Bloomington's floodplain and city borders is developed, making Bloomington more vulnerable to flooding impacts.

(from Environmental Resilience Institute's Hoosier Resilience Index)

What actions did the City of Bloomington take in 2019 to decrease emissions and assist the community in preparing for climate change?

SAP Climate Mitigation and Adaptation Objectives:

1. Minimize generation of emissions from the built environment, energy, and transportation systems (see page 8-13 for more information)
2. Prepare for the impact of climate change by improving resiliency of local food, waste, water, and natural ecosystems (see page 14-20 for more information)

2019 Sustainability Action Plan Achievement: 2018 Greenhouse Gas Inventory

1.1.a. Establish a consistent methodology for measuring and reporting community greenhouse gas emissions

One of the first actions recommended by the 2018 Bloomington Sustainability Action Plan was to develop a greenhouse gas inventory in alignment with the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) standard. Bloomington has applied this standard in developing its 2018 Greenhouse Gas Inventory and to accurately evaluate progress in reducing emissions over time.

The inventory developed with support from the non-profit ICLEI (Local Governments for Sustainability) and Indiana University's Environmental Resilience Institute and met the ICLEI Milestone Achievement Award for Greenhouse Gas Emissions Management. The findings indicate that the majority of Bloomington's emissions are attributed to its energy, transportation, and waste sectors, for more information see: bloomington.in.gov/sustainability/2018-greenhouse-gas-inventory/

2020 Implementation:

1.2.a. Create a climate vulnerability assessment and action plan

The Economic and Sustainable Development Department has selected the firm Pale Blue Dot to conduct Bloomington's first climate vulnerability assessment and action plan (CVA). The project kicked off in January 2020 and will provide a detailed review of the anticipated climate related risks to people, infrastructure, and natural resources in Bloomington and Monroe County. The assessment will also consider the potential impacts to the local energy, economic, and food systems due to a changing climate.

The CVA will detail how climate change is affecting Bloomington now, identify current and future climate vulnerabilities, and how those vulnerabilities will change in coming decades. The plan will also recommend strategies for the City and community to prepare for and adapt to local climate change effects and reduce carbon emissions. Economic and Sustainable Development will be leading this initiative for 10 months, to be complete by the end of 2020.

Built Environment (SAP Chapter 2)-

SAP Vision- Bloomington will foster and support sustainable building practices that reduce environmental, social, and economic costs.

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Built Environment	**Sustainable Building Practices** **(Significant Progress)**	2.2.a. Sustainable Development Incentive (p. 6)		2.2.b. Building certification education program (p. 6)	2.2.a. Track utilization of sustainable development incentive (p.6)
	Adaptive Reuse **(On target)**				2.2.c. Develop list of sustainable building projects (p. 6)

Built Environment Challenge:

Over 60% of the measured greenhouse gas emissions that Bloomington produced in 2018 are related to the consumption of electricity and natural gas (2018 GHG Report). The combustion of these fuels provides grid-supplied energy and gas used for lighting, heating, cooling and refrigeration across the community. Bloomington's building stock represents a mix of residential, commercial, industrial and government buildings which operate at varying levels of efficiency.

Bloomington is growing. If Bloomington's growth rate increases by 1% annually and continues to have a stable student population, household size, and a vacancy rate, the City would need an additional 2,236 housing units or an average construction pace of 203 units per year to accommodate the projected 90,000 residents (Indiana Uplands Housing Study, 2019). Across existing renter and owner-occupied structures, 1984 is the median structure construction date. To meet the City's emissions reduction goals, sustainable building practices, adaptive reuse, and utilization of infill opportunities must be implemented at every opportunity to reduce the overall impact of existing structures, new construction, and redevelopment projects.

How did Bloomington foster and support sustainable building practices in 2019?

Objectives:

- Promote sustainable building practices for new construction
- Foster adaptive reuse to rehabilitate and restore existing structures

2019 Sustainable Building Success Stories

- **Sustainable Building Practices-**
  - Following the Green Building Ordinance, Switchyard Park Pavilion and the Cascades Club House have applied for LEED Silver certification in 2019. Indiana University also added Ray E. Cramer Marching Hundred Hall and Hodge Hall to its portfolio of LEED Gold buildings. Green buildings help reduce carbon, water, energy and waste and produce on average 34 percent lower, consumed 25 percent less energy, and 11 percent less water (USGBC).

- **Adaptive Reuse-**
  - Indiana Landmarks honored the City of Bloomington with the award for "Outstanding Restoration or Rehabilitation Outside of Marion County" for the former Showers factory building known as The Mill.

2019 Sustainability Action Plan Achievement:
Unified Development Ordinance- Sustainable Development Incentives (Goal 2.2.a.)

2.2.a. Update the Sustainable Development Incentive program

City Council finalized the Unified Development Ordinance (UDO) draft in December 2019 to promote the orderly, responsible, and sustainable development and redevelopment of the areas within the City. The UDO's strategies align with the Comprehensive Plan and incorporate principles from the Transportation Plan, Sustainability Action Plan, and subarea plans, including the downtown vision and in-fill strategy plans. The City provides development standards bonuses as an incentive to encourage the use of sustainable development practices across Bloomington.

2020 Implementation

In 2020, the City will track utilization of sustainable development incentive program by developers after UDO Update process is fully complete.

Energy (SAP Chapter 2)-

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Energy	**Energy Conservation & Efficiency** **(Target Not Met)**	2.1.a. MCEC 2019 work plan (p. 5)	8.2.a Reporting building energy use (p. 20) 8.2.b. Develop implementation plan (p. 20) 8.3.a. Report fleet fuel usage (p. 20)		2.1.b. Establish a consistent methodology for community energy use (p. 5)
	Renewable Energy **(Target Met)**	1.1.c. Implement Solarize Bloomington (p. 4) 1.1.f. Green Power Community (2020 p.4)		1.1.d. Solsmart designation (p. 4)	Support Solarize Bloomington 2020

Energy Challenge-

States have varying energy-related emissions depending on the fuel energy mix utilized to generate power. Indiana has one of the most carbon intensive energy supplies due to its reliance on coal and natural gas to generate electricity. This results in very high per capita carbon emissions. According to the Energy Information Administration in 2016, Indiana was #9 in the country for emissions emitted per person.

Coal is still the primary energy source for power generation, both in Indiana and Bloomington. Across the state in 2018, Duke Energy Indiana, Bloomington's utility, generated electricity from a mix of coal (62%), natural gas (37%), hydro (0.6%), and solar (0.3%). Over the last year, there has been an increase in the number of customers with residential solar installations across Bloomington and Monroe County.

How did Bloomington reduce energy use in 2019?

Objectives-

- Increase energy efficiency
- Increase generation of renewable energy

2019 Sustainability Action Plan Achievement:

1.1.c. Implement Solarize Bloomington with the Solar Indiana Renewable Energy Network (SIREN) and aid residential low-cost solar installations

In the past three years, over 250 residential homes have installed solar through the Solarize Bloomington group purchasing agreement. The hours invested by Solar Indiana Renewable Energy Network volunteers was instrumental to this achievement.

The number of signed contracts increased from 48 in 2018 to 63 in 2019, with a total of 610 kW under contract for installation by Whole Sun Designs in 2019 up from the 401 kW installed in 2018 (see table below). Across the region in 2019 Whole Sun Designs installed over 3,000 panels equaling over 1 mW (1000 kW) in increased renewable power generation capacity. Monroe County now has over 600 solar owners both through Solarize Bloomington and independent installations. Another successful SIREN program, Solar for All a program for low-income residents, grew the of systems installed from four installs in 2018 to eleven installations in 2019 for 42 kW installed in total.

	2019 Solarize Bloomington	2018 Solarize Bloomington
# of contracted installations	63	48
Average size of installation (in kW)	9.1	-
Total contracted installations (in kW)	609	401
Solar for All- # of installations	11	4
Solar for All- average size of installation (in kW)	3.8	-

City of Bloomington Solar Power Generation

In 2018, the Environmental Protection Agency recognized the City of Bloomington as an EPA Green Power Partner for the City's solar electricity generation at its facilities. The City now has solar at 32 locations across its facilities with the 2019 addition of installations at the Mill and at the Dillman water treatment plant.

There was 2.4 Gwh generated in 2019 and the panels have generated 4.2 Gwh since installation, the equivalent of 1.2 million lbs. of coal unburned. To see live generation figures, visit bloomington.in.gov/sustainability/solarize

2020 Implementation

As part of the Climate Vulnerability Assessment (1.2.a), the City of Bloomington Economic and Sustainable Development Department will be conducting a Renewables Potential Study to meet Sustainability Action Plan goals 1.1.b. and 8.1.b. This will advance the goal to create a community renewable energy goal and a renewable energy goal for City operations. The study will inform decisions about any future renewable energy projects sited at City facilities by providing further information, recommendations, and potential policies to advance renewable energy potential.

Success of current active efforts to create a methodology to track municipal building energy use and community wide energy use will be contingent on the selection of appropriate software and allocation of staff time.

Transportation (SAP Chapter 3)

Vision: All Bloomington citizens have access to safe, affordable, and low-carbon transportation options that support healthy, active lifestyles.

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Transportation	**Bicycle Mobility** **(Significant Progress)**	3.2.a. Bicycle Friendly Businesses (p. 8) 3.3.a. UReport for safety (p. 8)		3.2.b. Bike share program (p.8), 3.2.c. car share programs (p. 8)	3.3.c. Implement intersection improvements (p. 8)
	Pedestrian Mobility **(On Target)**				3.4.b. Focus infrastructure investments based on Walk Scores
	Electric Vehicles **(On Target)**	8.4.a. (2023) Begin testing alternative vehicles (p. 21)			Install charging stations at new garages
	Public Transit Accessibility **(Significant Progress)**	3.6.b. Determine needed route improvements (p. 10)		3.1.a. Establish Urban Village Centers (p.7) 3.1.b. Incorporate electric vehicle charging stations (p. 7) 3.6.c. how to user guides for first time transit (p. 21)	Incorporate sustainable building requirements, including transit accessibility in large-scale development projects

Transportation Challenges:

Bloomington has been an American League of Cities Bicycle Friendly Community Gold Rating rated community since 2014, as well as a Bronze-Level Walk Friendly Community. The City continues to exceed the state averages for the percentage of its population that walks, bicycles, or takes transit to work. Participation in the Bicycle Friendly Business program increased in 2019 to three businesses in Bloomington receiving the designation (3.2.a).

However, limited access to alternative transportation options in areas across Bloomington presents a sustainability challenge. Walk Score, which calculates walkability to amenities, rates Bloomington as having an average Walk Score of 41 out of 100, a Transit Score of 28, and a Bike Score of 57. Bloomington is still car dependent overall with the downtown area considered very walkable, but other areas further from the core relying primarily on single occupancy

vehicle transportation. The 2018 Monroe County Travel to Work data supports that strong dependence on automobile travel with 73% of Monroe County residents traveling to work alone.

Infrastructure investments, behavior change, and incentives for alternative transportation utilization may be necessary to shift the mode split towards less carbon intensive modes of transport. Specific recommendations for strategic improvements in the multi-modal transportation network can be found in the 2019 Transportation Plan- Multi-Modal Transportation Section and the upcoming Transportation Demand Management Study.

How did Bloomington increase access to safe, affordable, and low carbon transportation options in 2019?

Objectives

- Improve bicycle and pedestrian mobility
- Increase infrastructure for electric vehicles
- Increase public transit ridership and accessibility

2019 Sustainability Action Plan Achievements:

8.4.a. Begin testing alternative fuel/electric buses

Bloomington was the only Indiana city to win a Low-No Emissions grant in the fiscal year 2019. The Federal Transit Administration (FTA) fully funded the Bloomington Public Transportation Corporation (BPTC)'s request for a federal Low or No Emission (Low-No) Grant in the amount of $284,799 to complete the funding of the transit agency's second battery-electric bus. BPTC is combining the Low-No grant award with a previously awarded Indiana Department of Transportation (INDOT) grant of $515,000, along with local funds, to purchase one battery-electric vehicle and charging infrastructure. The second fully electric bus will be delivered and fully operational in 2020.

3.6.b. Determine needed route improvements

Bloomington Transit (BT) carries over 3 million passengers annually and BTaccess paratransit service provides about 35,000 passenger trips a year. Indiana University's Campus Bus Service also carries three million annual passengers. In an encouraging trend, 2019 Bloomington Transit ridership increased from 3.1 million to 3.15 million passenger trips.

The BT route optimization study achieves Sustainability Action Plan goal 3.6.c. of determining needed route improvements. The study presents an opportunity to take a fresh look at Bloomington's existing transit services and assess how well they align with the mobility needs of the changing region. Understanding the existing and future markets for transit service is a fundamental part of identifying service gaps and opportunities to make better use of existing resources.

2020 Implementation

Focus in 2020 will be on the long-term Sustainability Action Plan Goal to increase the miles of bicycle facilities, including those recommended in the 2019 Transportation Plan. Bicentennial Bond projects to add greenways and trails to the city's transportation infrastructure, including a bike lane on Seventh Street, a bicycle pedestrian trail in Lower Cascades

Park, and a hiking trail at Griffy Lake, will all provide connections to existing trail networks. Other upcoming capital infrastructure projects include 1.5 miles added to the Jackson Creek Trail, South Sare Road Path Repair and crosswalk improvements. Learn more at Bloomington.in.gov/engineering/projects.

2019 Goal Not Met:

Goal 3.2.c. to create a campaign to encourage use of car share programs in lieu of automobile ownership through marketing and incentives was not met, though a beta ZipCar trial was launched at Bryan Park. This goal will be revisited after the Transportation Demand Management Plan recommendations are finalized.

Local Food and Agriculture (SAP Chapter 4)

Vision: All City residents have access to healthy, affordable, sustainable, and locally produced food.

Topic	Subtopic	2019 Actions Goals Achieved	In Progress	Not Met	2020 Focus
Local Food & Agriculture	**Local Food Access** **(Significant Progress)**	4.1.a. Food access survey (p. 11)	4.1.b. Food system asset map (p. 11)	4.1.c. coordinate community efforts around access (p.11) 4.1.d. Quarterly Healthy Food Fairs (p.11)	Develop food system web resources based on community survey (p. 11)
	Local Food Availability **(Target Not Met)**		4.2.a. Establish baseline for food gardens (p. 12) 4.2.d. (2020) add 39 garden beds (p. 12)	4.2.b. Develop garden consultation program (p. 12)	4.2.a. Finish establishing baseline for food garden
	Local Food Production **(On Target)**	4.3.a. Baseline for total food purchases (p.13) 4.3.b. Hire local food coordinator (p.13) 4.3.c. hold community meeting (p.13)			Continue implementation of Value Chain (Local Food) Coordinator grant project

Local Food Challenges:

Indiana imports more than 90% of the food consumed and processed in Indiana from other states, reducing the resiliency of Indiana's local food systems. Data collected from the 2017 Agricultural Census shows that an average family in Monroe County spends $3 annually per capita on food directly from farmers while households spend $6,373 annually on food expenditures. This represents a small proportion of all food purchases within Bloomington and Monroe County.

At the same time, many in Bloomington lack access to healthy, affordable, and sustainable food. Hoosier Hills Food Bank distributed 4.2 million total pounds of food and 1.2 million pounds of fresh produce to partner organizations serving Monroe and surrounding counties in 2017. Last year, the Monroe County Community School Corporation implemented a free meal program for Arlington Elementary, Fairview Elementary, Highland Park Elementary, Templeton Elementary, and Bloomington Graduation Schools. Through this Community Assistance Program, the district can serve breakfast and lunch to high poverty schools at no cost to all enrolled students without collecting household applications. Expansion of fresh local food is essential for improving health outcomes, as well as improving community sustainability.

How did Bloomington increase access to healthy, affordable, sustainable, and locally produced food in 2019?

Objectives

- Increase access and availability to local food
- Increase local food production

2019 Sustainability Action Plan Achievement

4.3.b. Hire a local full-time value chain coordinator for the City of Bloomington to assist with initiatives to create economic opportunities for farmers and gardeners.

4.3.c. Host a community meeting with institutional buyers and local growers to identify challenges.

In 2019, the City of Bloomington became a partner in a statewide USDA Local Food Promotion Program grant. The overall project goal is to develop regional supply chains that better connect Indiana farms with institutional food buyers like schools, universities, hospitals, workplaces, restaurants, and grocery stores. In April 2019, the City's Economic & Sustainable Development Department hired a new Local Food Coordinator to lead this effort.

Since April 2019, Bloomington's Local Food Coordinator has contacted more than 200 buyers and farmers in Monroe and surrounding counties about this project. Farmer outreach utilized contact information from the Bloomington Farmers' Market and the local NRCS office, notices in the Market Beet, Herald Times, and online, attendance at the Indiana Horticulture Congress summer conference, as well as outreach at farmers' market and directly to farmers known in the region. Project work to date has focused on conducting a food system needs assessment, reaching out to area businesses and farms about their interest in local sourcing & sales.

2020 Implementation

The Economic and Sustainable Development Department and the Bloomington Food Policy Council developed a community survey designed to evaluate changes in healthy food access over time to fulfill goal 4.1.a. In January 2020, four thousand homes in city limits received a food access survey to measure issues with access to healthy food. Citizens are responding to the survey until spring 2020 and results will be published on the city website.

Waste (SAP Chapter 5)

Vision: Bloomington will be a zero-waste community.

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Waste	**Waste Reduction** **(Significant Progress)**	5.1.b. Hoosier to Hoosier community sale (p. 14)		5.1.a. Conduct a waste characterization (p. 14)	Track waste generation and composition
	Waste Recovery **(Target Not Met)**	8.6.c. expand composting facilities (p. 22)		8.6.a. Conduct waste audits (p. 22) 8.6.b. Quarterly reporting for waste generation (p. 22)	Continue improving recycling participation across community and composting participation in City Operations
	Special Materials **(Target Not Met)**			8.7.a. Establishing compliance for sustainable purchasing policy (p. 22)	Revise sustainability purchasing and green events policy for City Operations

Challenges:

There have been significant structural changes in the recycling marketplace that have affected the waste recovery system including changes in the recycling stream, lighter materials, new contamination standards, and reduced commodity prices. Citizen education must improve so that citizens know what to throw and ensure that items are empty, clean, and dry. If residents include contaminated or non-recyclable materials in the recycling stream, those materials have no market value after transport to the transfer center, must be disposed of at an additional cost. While the City picks up at single family residences, the transition to zero waste will require increased waste reduction, recovery, and diversion across all residence types.

How did Bloomington move closer to becoming a zero-waste community in 2019?

Objectives

- Improve waste reduction
- Waste recovery through recycling and composting
- Improve special materials diversion

2019 Sustainability Action Plan Achievement

5.1.b. Provide community support for the annual Hoosier to Hoosier Community Sale

For the past 10 years, the annual Hoosier to Hoosier sale has collected donated items from Indiana University dorms at move out to be resold to students and the community later in the summer. The items that do not sell at the sale are donated by organizers to nonprofits to divert materials away from being landfilled.

This program has only been possible through a partnership between volunteers, Sustain IU, City of Bloomington, the Warehouse and the Cutters soccer team. Volunteers collect donations, sort and clean items, set up for the sale day, work the sale event floor, operate cash registers, serve as parking assistants, and clean up after the sale. Over the course of the last 10 years, more than 400 tons of items being kept out of landfills and resold because of this initiative. This year, volunteers will independently operate the sale at the Monroe County Fairgrounds.

2020 Implementation

High levels contamination in the City Sanitation recycling route continue to be a challenge. When residents put items in the recycling that are not acceptable, empty, dry, or clean, it threatens the resale value of the materials. Sanitation sent over 15,000 letters to property owners in 2019 to reduce contamination. In 2020, Sanitation is continuing to leave notes and stickers on recycling bins that do not meet standards for pick up. Given that most of Bloomington's waste is picked up by private haulers, 2020 will require continued waste education and reduction measures to improve recycling and composting rates communitywide.

The City is continuing a partnership with Green Camino (Earthkeepers) at city facilities to increase composting within city buildings. All leftover yard waste from City of Bloomington parks is sent to Good Earth for composting. Composting of yard waste increased from 45 tons in 2018 to 53 tons in 2019.

Water (SAP Chapter 6)

Vision: Bloomington will maintain a safe, sufficient, and clean water supply

Topic	Subtopic	Total 2019 Actions Achieved	In Progress	Not Met	2020 Focus
Water	**Water Conservation** **(Significant Progress)**	6.1.c. (2020) advanced metering infrastructure (p. 15)		6.1.a. Enhanced public education campaign (p.15) 8.5.a. Establish water use baseline- City Operations (p. 21) 8.5.b. Develop quarterly reporting (p.21), 8.5.c. UReport water leaks (p.21)	Track water use data with installed metering infrastructure to establish water use baseline
	Stormwater Management **(Significant Progress)**		6.4.a. Establish baseline for green infrastructure (p.16)	6.5.a. Expand educational programs (p.17) 6.5.b. Inventory infrastructure improvements (p.17)	2020 Residential Stormwater Grants
	Water Quality **(Target Met)**	6.2.b. (2023) receive Clean Water Act 319 grants (p.15) 6.6.a. Grease and sewer inspections (p.17)			6.2.b. Development of a watershed management plan

Water Challenges:

Bloomington relies on Lake Monroe as its primary source of drinking water. Lake Monroe is the largest man-made water body in the state and is used for a variety of purposes aside from drinking water, including flood control and recreational purposes. Operating a water utility to treat drinking water and wastewater requires an immense amount of electricity and represents about 60 percent of the emissions associated with City of Bloomington operations. Continuing to invest in efficiency improvements will reduce emissions related to water treatment.

There are also potential climate impacts on the operation of City of Bloomington Utilities, as increasing water temperatures can lead to increased algal growth. This algal growth can reduce drinking water quality and require further treatment to meet water quality standards. Furthermore, increasing heavy rain events can lead to erosion and reduced water quality. Given that sediment is the number one water quality pollutant by volume in Indiana, this presents a challenge. Watershed management, water conservation measures, and increasing green infrastructure features will help address these challenges.

How did Bloomington maintain a safe, sufficient, and clean water supply in 2019?

Objectives:

- Increase water conservation
- Improve stormwater management
- Improve water quality (see yearly Utilities Water Quality Reports

2019 Sustainability Action Plan Achievement-

6.2.a. Pursue Clean Water Act 319 grants for efforts to clean and protect Bloomington area watersheds

The Friends of Lake Monroe received a federal Clean Water Act 319 grant to hire a watershed coordinator and develop a watershed management plan for Lake Monroe. Friends of Lake Monroe received $119,525 from the State of Indiana with matching funds coming from Monroe County Stormwater Board, City of Bloomington and Sassafras Audubon Society.

Friends of Lake Monroe will work on developing education and outreach initiatives and management plan for the Lake Monroe watershed, as well as gathering information about the lake, the watershed, and local stakeholder concerns.

2020 Implementation

City of Bloomington Utilities is offering $70,000 in residential stormwater grants in 2020. The grants will assist owners of single-family residential property with environmentally friendly drainage projects such as rain gardens, bioswales, and detention pond maintenance.

Funding for the program comes from the stormwater fee increase approved by City Council in 2018. Nearly one quarter of the revenue generated by this fee increase funds eco-friendly upgrades, including green infrastructure improvements in City projects along with the residential grants. Together, these projects will contribute to improved stormwater management in the whole community. In 2019, Utilities funded 11 projects ranging from $500 to $5,000 for initiatives such as rain gardens, dry creek beds, and ditch stabilization projects.

Ecosystem Health (SAP Chapter 7)

Vision: Bloomington will preserve and restore healthy and vibrant ecosystems.

Topic	Subtopic	2019 Actions Achieved	In Progress	Not Met	2020 Focus
Ecosystem Health	**Greenspace Conservation** **(On Target)**	7.1.a. Smart growth principles in land use (p.18)			Greenspace preservation in site plans
	Habitat Restoration **(On Target)**				Continue Parks & Recreation habitat restoration initiatives
	Invasive Management **(On Target)**			7.2.a. Mapping invasive species	Parks invasive removal programs
	Native Species Planting **(On Target)**				Increase native plantings in public parks

Ecosystem Health Challenge:

City of Bloomington Parks and Recreation, a Gold Medal Award winner for excellence in the field of Parks and Recreation Management, manages a significant amount of acreage across 32 parks. The vegetation management crew manages vegetation on over 2,000 acres of City properties and now the new 57-acre Switchyard Park. Parks and Recreation crew also manages the public tree inventory which have nearly doubled in the last thirty years to 19,000 public trees. Proactively maintaining and installing native plantings, as well treating sites to reduce invasive species, represents a continuing challenge. Climate change threatens the resilience of Bloomington's ecosystems. Continued efforts to increase conservation of greenspace, increasing habitat restoration, reducing the prevalence of invasive plantings, and increasing native plantings will help build ecological resilience.

How did Bloomington preserve and restore healthy and vibrant ecosystems in 2019?

Objectives:

- Increase greenspace conservation
- Increase habitat restoration
- Reduce invasive plants
- Increase native species planting

2019 Sustainability Action Plan Achievement-

Switchyard Park

Switchyard Park represents an important conservation of public land with an increase to public greenspace inventory by 57 acres. Switchyard Park, a former railyard, opened in late 2019 and features 356,934 sq. ft. of native plant restoration, more than 600 trees, 100,000 sq. ft. of additional native plants, and 2,000 tree seedlings. The park also features electric vehicle charging infrastructure and the soon to be certified LEED Silver pavilion. The largest park in City history, the park also features other environmentally beneficial features such as the community gardens, as well substantial environmental mitigation of the site and the daylighting of Clear Creek.

2020 Implementation

Bicentennial Bond Projects will continue implementation in 2020, including a hiking trail around Griffy Lake and tree plantings. The 2019 Urban Forestry Report is a maintenance and planting plan for future years and recommend 1,428 large-growing tree plantings. That recommendation aligns with the City's 2018 Bicentennial Bond commitment to plant or replace 1,400 trees. The inventory will also prove instructive for future planting decisions- of the 22% of Bloomington's total area described as "plantable," 532 acres are designated as "High" and "Very High" priority areas for tree planting in order to minimize potential climate impacts and reduce urban heat island effects and flooding damage.