OFFICIAL NOTICE AND AGENDA

of a meeting of a City Board, Commission, Department Committee, Agency, Corporation, Quasi-Municipal Corporation, or Sub-unit thereof.

Meeting:	**SUSTAINABILITY, ENERGY AND ENVIRONMENT COMMITTEE**
Members:	John Kroll (C), Carol Lukens, Scott Charette, Jay Coldwell, Mary Kluz, Ashley Lange, Jesse Kearns
Location:	Board Room of Wausau City Hall, 407 Grant Street.
Date/Time:	**Thursday, March 2, 2023 at 5:00 p.m.**

1. Welcome and introductions
2. Public comment
3. Approve minutes of February 02, 2023 meeting
4. Updates: Greenhouse Gas Resolution and Sustainability Award
5. Discussion and Possible Action: Earth Day Tree Planting April 22nd at 10th Street Park
6. Discussion: UniverCity Year Program: ByFusion plastic waste repurposing technology
7. Discussion: Municipal Role in Food Systems Resilience
8. Next meeting date April 6
9. Adjourn

It is likely that members of, and a quorum of the Council and/or members of other committees of the Common Council of the City of Wausau will be in attendance at the abovementioned meeting to gather information. **No action will be taken by any such groups.**

Questions regarding this agenda may be directed to the City Planning Office @ (715) 261-6760.

This Notice was posted at City Hall and emailed to the Media on 02/27/2023
Any person wishing to offer public comment may email City Clerk Kaitlyn Bernarde at clerk@ci.wausau.wi.us with "SEEC comment" in the subject line prior to the meeting start. All public comment, either by email or in person, will be limited to items on the agenda at this time. The messages related to agenda items received prior to the start of the meeting will be provided to the Chair.

Other Distribution: Media, Alderpersons, Mayor, City Departments

City of Wausau **Sustainability, Energy and Environment Committee**

MINUTES

FEBRUARY 2, 2023

Members Present: John Kroll, Carol Lukens, Jay Coldwell, Mary Kluz, Ashley Lange

Others Present: Brad Lenz, Andrew Lynch

In compliance with Chapter 19, Wisconsin Statues, notice of this meeting was posted and transmitted to the Wausau Daily Herald in the proper manner.

1. Welcome and Introductions

2. Public Comment

Public comment was received from Joel Lewis 807 Turner St Wausau via email.

3. Approve minutes of December 01, 2022 meeting

Coldwell/Lukens made a motion/second to approve the minutes of December 1, 2022. The motion carried unanimously.

4. Update on Wisconsin Local Government Climate Coalition (WLGCC) membership

Lynch shared that the City was now a member of the WLGCC and listed as such on their website. While there had been some questions at the Public Health and Safety Committee and City Council about the nature of the group, staff was able to provide adequate answers and it passed City Council unanimously. On the third of February, Lenz and Lynch have an onboarding call with WLGCC and hope to get a better idea of what kind of technical assistance will be available and when.

5. Discussion: Nomination for Sustainability Award

The nomination form was updated for 2023 and posted to the website. Kroll discussed nominating the Good News Project and Lange offered to contact them and assist with the application. The group discussed taking the deadline off the application and just fielding nominations year-round. Lynch will send out a link to members for the form on the website.

6. Discussion: Energy Efficiency and Conservation Block Grant (EECBG) timeline and allowable activities

This item was moved up in the order by Chair Kroll. Lenz and Lynch discussed the grant options. Dept of Energy has set up a voucher system for smaller communities like Wausau that will require less paperwork and oversight. This voucher will allow communities to receive technical assistance or purchase particular items. Staff will return at subsequent meetings with more information as it is posted by the Dept of Energy.

7. Discussion and Possible Action: Greenhouse Gas Resolution

Lynch stated that after compiling the draft from the discussion at the last meeting there were some changes to the wording of the 'Be It Resolved' section that he wanted the committee to look at it again. In particular, the goal of 100% clean energy profile by 2050. Until the City can learn what their baseline energy use is currently, it is difficult to assign a more ambitious goal. However, it is felt that this goal in the resolution is very wide and given the time, likely attainable. Coldwell suggested pursing a more ambitious goal of 40% by 2030 which would be in line with Federal standards. Lynch noted that the goal may eventually be adopted as that but as of now he would be unable to say how the City could attain 40% by 2030. Kluz also noted that greenhouse gases were not explicitly called out in this section. She suggested amending the first bullet point to read "…and greenhouse gas emissions in City government….". Kroll suggested removing the word 'profile' from the second bullet point. This would make the goal more ambitious in that it would incorporate all of the City energy use and not just the profile of energy from the power utility. These two edits were agreed upon by the committee.

Motion by Kluz. Second by Lange. Approve of the Greenhouse Gas Resolution with discussed edits and send to the Public Health and Safety Committee.

Approved unanimously.

8. Discussion: Food Systems Resilience and the Municipal Role

Kluz started the discussion by noting her work with farmers and how the pandemic stressed the food systems in this country. She and other committee members have an interest on this topic. Kluz found a document published by Johns Hopkins that defined and explored food systems resilience and how to support it. Coldwell noted that it could be tied into the Environmental Justice resolution and work at the local and state level. Kroll noted this was the beginning of the discussion and there are some local resources we can bring in to educate the committee. Lynch will reach out to the Marathon County Health Department to see if anyone on staff is still working on this issue. Kluz will reach out to someone at USDA for more information.

9. Next meeting date:

March 2 at 5pm

10. Adjourn

Motion/Second by Kluz/Coldwell. Motion passed unanimously. Meeting adjourned at 7pm.

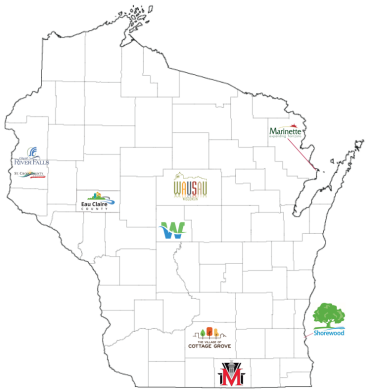
UniverCity Year program partners with nine communities in 2023

Posted on February 15, 2023 (https://univercity.wisc.edu/2023/02/15/univercity-year-program-partners-with-nine-communities-in-2023/)

In a record-setting cohort, University of Wisconsin-Madison's UniverCity Year program is partnering with nine communities across Wisconsin during the 2022 to 2025 academic years and leveraging university resources to move forward their goals.

UniverCity Year (https://univercity.wisc.edu/ucy-snapshot/) (UCY) is the hallmark program of UniverCity Alliance (https://univercity.wisc.edu/) – an initiative that connects local governments across Wisconsin with resources at the university. During the three-year program, students and faculty work with communities toward locally-identified goals.

"Communities are hungry to get fresh ideas and a jump-start on project ideas they have," UniverCity Alliance Managing Director Gavin Luter said. "UW-Madison is a unique partner for these communities because we hopefully are perceived to be a neutral third party whose only interest is to help the communities improve."



UCY is partnering with nine communities from 2022-25. Credit: Shannon McManus.

The nine communities include the villages of Cottage Grove and Shorewood; the cities of Marinette, Milton, River Falls, and Wausau; and Eau Claire, St. Croix, and Wood counties.

"We're excited to partner with the UW system and tap into the innovative minds of our next generation of leaders," said Jason Stroud, assistant city administrator for the city of River Falls, said. "The resources provided by UniverCity Year will be invaluable in developing creative solutions to the complex challenges we face as a local government."

Through 2025, these partners will work with UCY staff to identify projects and partner with UW–Madison faculty as their students complete tangible deliverables that can be implemented into Wisconsin communities.

"I am thrilled to work with UniverCity Year on some of Wausau's strategic challenges," Mayor Katie Rosenberg said. "Smaller cities like Wausau typically run very lean and it doesn't take much to disrupt longer term planning and positioning initiatives, so we're excited to work with eager students on projects that will have lasting impacts on both our internal staff and our residents, business owners, and visitors."

The communities applied to UCY to address a range of issues, including public health, sustainability, social support services, electric vehicles, historic preservation, and equity.

"Working with UniverCity Year will elevate our health priorities and bring additional capacity to this important public health work," said Kristie Egge, supervisor of strategic initiatives for the Wood County Health Department. "It will allow students to get real-life experience working on initiatives to improve the health of rural Wisconsin residents."

City of Milton Mayor Anissa Welch said she believes partnering with UCY will solidify the city's commitment to creating a caring, thriving, and equitable community for all.

"The partnership will allow the city to leverage projects that align with our strategic plan and lead to not only stronger community engagement with the city but also fortifying connections with other foundational organizations throughout Milton," Welch said.

While each community has unique needs, the UCY program has seen an increase in requests around child care issues, EMS recruitment and retention, affordable housing, program effectiveness, and environmental sustainability.

In the wake of the pandemic, Luter said communities have learned that the typical ways of doing business no longer holds.

"This is a huge moment for our local communities across Wisconsin as they come out of the pandemic," Luter said. "The UniverCity Year program is here to help these communities rethink their standard ways of doing things."

'New and innovative solutions'

Since its first partnership in 2016, 20 communities have partnered with UCY. The new cohort brings the total to 29 communities, with 15 counties and 14 cities, towns, and villages participating.

The program illustrates the Wisconsin Idea in action, fostering active engagement between UW–Madison and Wisconsin local governments.

"UniverCity Year can be a program that brings these on-the-ground issues directly to faculty and students," Luter said. "This helps us continue to stay relevant across the state, while also improving how we train students in applying their fields to public issues."

UCY takes community-based scholarship and teaching to the next level by responding directly to community needs with university resources. Communities shape the deliverables that will meet their needs, and students receive a high-impact learning experience.

Community leaders are excited to work with students, both to consider new ideas and to contribute to their high-impact learning experiences.

City of Marinette Mayor Steve Genisot said the community hopes the process will bring "new and innovative solutions to the many projects we are working on," while St. Croix County Justice Services Director Phil Galli said working with UCY will bring a "fresh perspective" to challenges facing the community, like increasing access to housing and treatment options for justice-involved individuals.

"I am eager to begin the partnership with UW through the UniverCity Year program," added Cottage Grove Village Administrator Matt Giese. "Through our partnership, we will be able to provide experience, resources, and new connections for the UW students and bring innovations to staff and our residents alike."

After the projects are identified, UCY staff will match them with faculty members and instructors who will incorporate the work into their courses or find other ways to get UW-Madison faculty, staff, and students working on these projects. UCY also provides support to participating faculty by facilitating meetings with the community and providing funding opportunities.

Students will present their recommendations to the community, however, the partnership does not end there. UCY staff will continue working with the communities to evaluate the feasibility of student recommendations and report on outcomes.

"The Village of Shorewood as an organization appreciates the lessons and progress that can be made from collaboration," Village President Ann McCullough McKaig said. "This program will allow us to partner with talented, capable student groups on high impact projects that the Village Board has prioritized to be reviewed. We're looking forward to the partnership and are excited for the work to start!"

By the end of the partnership, Eau Claire County Administrator Kathryn Schauf said she hopes the UCY experience "highlights what we can accomplish as we partner with diverse partners to solve problems."

"We hope that the community will gain additional insight into the benefits of the UW system and the meaningful outreach that it can have to communities such as ours," added Norb Kirk, finance director for Eau Claire County. "We believe that the completion of the projects we have outlined will enhance the citizens of the county and be an example of how communities can partner with the UW System for the betterment of both parties."

Posted in Community (https://univercity.wisc.edu/category/community/) | Tagged City of Marinette (https://univercity.wisc.edu/tag/city-of-marinette/), City of Milton (https://univercity.wisc.edu/tag/city-of-milton/), City of River Falls (https://univercity.wisc.edu/tag/city-of-river-falls/), City of Wausau (https://univercity.wisc.edu/tag/city-of-wausau/), Eau Claire County (https://univercity.wisc.edu/tag/eau-claire-county/), St. Croix County (https://univercity.wisc.edu/tag/st-croix-county/), UniverCity Year (https://univercity.wisc.edu/tag/univercity-year/), Village of Cottage Grove (https://univercity.wisc.edu/tag/village-of-cottage-grove/), Village of Shorewood (https://univercity.wisc.edu/tag/village-of-shorewood/), Wood County (https://univercity.wisc.edu/tag/wood-county/)

« At Board of Regents, Chancellor Mnookin offers her vision for UW–Madison (https://univercity.wisc.edu/2023/02/10/at-board-of-regents-chancellor-mnookin-offers-her-vision-for-uw-madison/)

Wausau, Wood County governments selected for student consultant program »

PROJECT DESCRIPTION FORM

Complete this form for each proposed project.
E-mail completed forms to gavin@cows.org by November 1, 2022

Project Title	ByBlock Fusion – Reforming Plastic Waste	
Project Sponsor Authorizes project, provides resources, removes obstacles	*Name*	Andrew Lynch
	Email address	Andrew.lynch@ci.wausau.wi.us
	Phone number	715-261-6686
	Communication preference	Email
Project Lead Main point of contact for faculty and students.	*Name*	Chris Piotrowski
	Email address	chris.piotrowski@byfusion.com
	Phone number	
	Communication preference	Email
Oversight Committee Who else from the community or your local government should be involved?	*Name*	Sustainability, Energy and Environment Cmte
	Meeting schedule	3rd Thursday. Every month as needed.
Project Description What questions need answering? What goals need to be achieved? Why do this now? What has already been tried?	ByFusion (https://www.byfusion.com/) has had discussions with the City about implementing their technology that reuses industrial and residential plastic waste Wausau serves as a hub for the area and the North Central region and could have access to a large volume of plastic waste. The idea is intriguing but the technology and market are yet unproven on a large scale. The City would need to have several questions answered before proceeding: • Is this process best suited in the Wausau area for an industrial or residential plastic recycling waste? Which would be best to implement first? What kind of scale would be necessary? • Location. Is this something best located in an industrial park or the landfill? Who are the partners locally and in the northern Wisconsin area? What are the utility requirements for operation? How can the system be design to produce a product that is as close to Carbon Neutral as possible? • Can local uses be identified for the end product? What are the risks to local government? Finding alternative uses for plastic waste can help local businesses and promote further recycling and conservation practices.	

	Goals: Determine the feasibility of this process and how a local government may best utilize it and inform the residents and businesses of the benefits. Note: Project Lead could be either Chris or Andrew. This may depend on the type of project being done and availability.
Final Deliverable(s) What should students produce? Report? Video? Spreadsheet? Presentation?	Final deliverables should include a report and presentation to the oversight committee. Include whatever materials the students feel would be relevant to the discussion and decision.
Project Implementation What would successful implementation of this project look like in the community?	The successful implementation of the project would provide the City a map of how to proceed with utilizing this technology.
Project Budget How much could the community allocate to project implementation?	
Data What information can the community share with students? What information should students collect?	City staff sit on the Solid Waste Resources Board which provides access to the administration of the landfill. Business Campus tenants that produce plastic waste can be identified. Any GIS mapping files can be provided. Contacts with our residential waste hauler can be provided.

UNDERSTANDING FOOD SYSTEM RESILIENCE

This section will help you to:

- Describe food system resilience and how it differs from sustainability and stability
- Frame food system resilience as a determinant of a well-functioning food system
- Understand the difference between shocks and stressors and how they can both affect food system functioning
- Explain and recognize characteristics of more resilient food systems

This section provides the fundamentals of food system resilience. Even if you are well-versed in food system resilience concepts, we recommend that you read this section so you are familiar with how we define food system resilience for this guide.

We define food system resilience as "the capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate, and accessible food to all, in the face of various and even unforeseen disturbances."[1] To help better understand this definition, we break it apart—exploring first what we mean by food system and resilience and then how the two concepts merge for food system resilience.

FOOD SYSTEM

A **food system** is "all the activities and resources that go into producing, distributing, and consuming food, the drivers and outcomes of those processes, and all the relationships and feedback loops between system components."[2] A food system can be very complicated; within a jurisdiction, it may be overseen by multiple government departments, and both depend on and impact the functioning of other systems—such as transportation, energy, or health.

The food system framework **(Figure 3)** highlights the multiple external influences on a food system and the interconnections between different elements.[3] You will notice that the arrows go in multiple directions. For example, consumer behavior is influenced by food environments, but it also influences food environments. The external drivers at the top of the figure, to varying degrees, are impacting the food system and can cause disruptions to the food system.

Food systems serve multiple purposes and different groups may prioritize different goals for food system functioning. In

DISASTER JUSTICE

Some disruptions are referred to as **disasters**. The United Nations Office of Disaster Risk Reduction defines a disaster as "a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts."[4] Many also argue that disasters are rooted in social problems, that disasters disproportionally affect disadvantaged communities because of structural inequities, and that disaster preparedness and response efforts perpetuate these oppressive systems. **Disaster justice** has emerged as a concept that "blends the ongoing struggles for environmental, climate, ecological, language and social justice with demands for improvement of disaster preparedness and response mechanisms."[5] To learn more about how to support community-led disaster justice efforts, see the Praxis Project's Moving from Disaster Preparedness to Disaster Justice: Centering Community & Racial Justice for a Transformed Future.

this guide, a key goal is having a food system that supports **food security**, with a particular focus on ensuring food security for communities that experience the greatest inequities. According to the Food and Agriculture Organization of the United Nations (defined during the 1996 World Food Summit), "**Food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."[6]

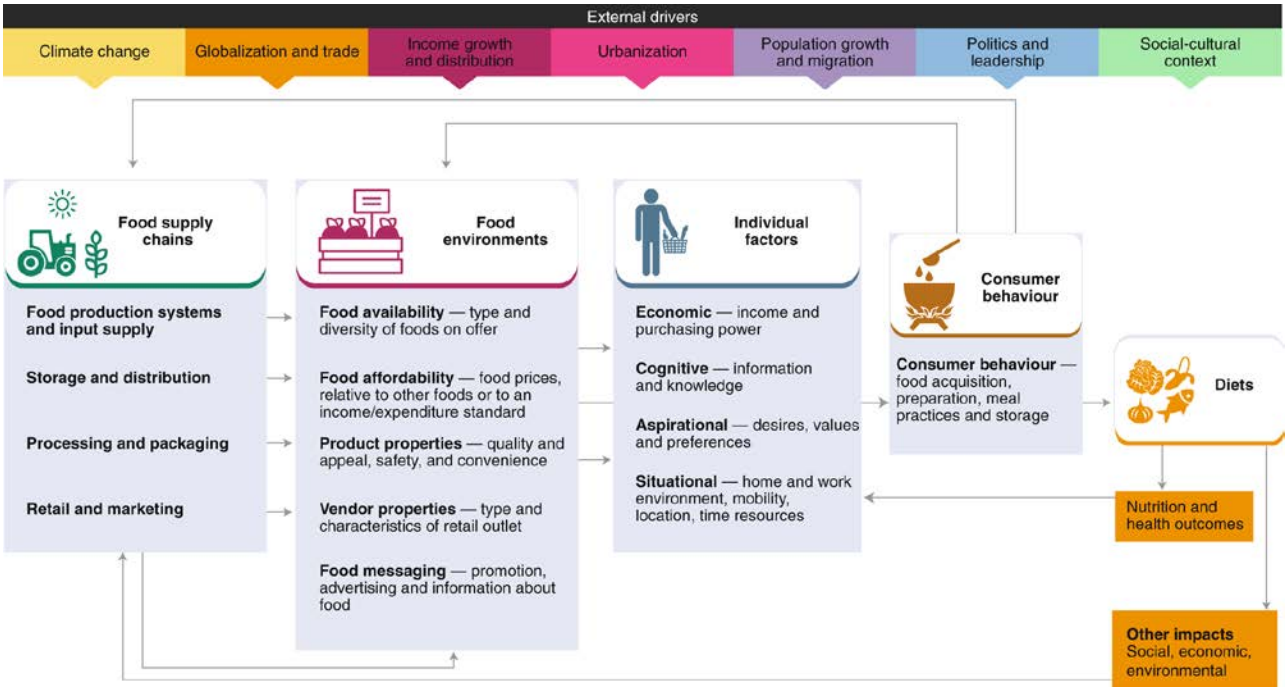
Food security is multifaceted and has several dimensions. In this guide, food security includes:

- **Food Accessibility:** Food is accessible if it is both economically and physically accessible to all parts of the population.[7]
- **Food Availability:** Food is available if it is physically present and available to consume in a given location.[7]
- **Food Acceptability:** Food is considered acceptable if it is religiously and culturally appropriate for the person eating it, nutritionally adequate, and safe to eat.[7]

These components of food security can be used to frame a food system's ability to continue functioning and support food security during and after a disruption. Later modules provide examples and suggestions for how to understand the components of food security in food system resilience planning.

While this guide focuses on food accessibility, availability, and acceptability, other considerations like food agency—the ability of actors to make their own food choices[8] —may also be important to consider when thinking about food security and food system functioning.

Figure 3. *Food System Framework. Source: Fanzo, Haddad, McLaren et al. 2020.* The Food Systems Dashboard is a new tool to inform better policy. *Nature Food. Used with permission.*



A NOTE ON THE TERM, "RESILIENCE"

When this guide uses the term, resilience or suggests actions to build resilience, it often has an implied positive value. This does not mean that resilience is about strengthening and preserving systems that are broken, oppressive, or unjust. It also does not mean that communities and individuals should constantly be asked or forced to be resilient, often from disruptions to which they contributed little. The positive connotation of resilience is used in this guide because we believe that by investing in collaborative and forward-thinking planning, food system resilience work can help build more equitable, just, and prepared food systems rather than preserving what is harmful.

RESILIENCE

The Stockholm Resilience Centre defines **resilience** as "the capacity of a system, be it an individual, a forest, a city or an economy, to deal with change and continue to develop."[9] Building resilience is not about preventing a disruption to a system or making something "fail-safe," but making sure that it is "safe to fail"[10] —meaning that although a failure or disruption in the system occurs, it is contained and minimized and presents opportunities for learning.

Resilience assumes disruptions will occur. Disruptions can be natural or human-made, and they are commonly described as either shocks or stressors.

- **A shock** is a sudden disturbance to a system.[11] In an urban food system, for example, this might be a flood or civil demonstration that prohibits trucks from distributing food to grocery stores.
- **A stressor** is a gradual eroding of a system.[11] In the food system, examples of this are increasing average temperatures from climate change altering the growing seasons in a region, or high levels of food insecurity.

Resilience is sometimes used interchangeably with other terms such as sustainability and stability. They are distinct but not mutually exclusive. These three concepts can all be considered goals of a food system. For example, while often it is desired to have a resilient and sustainable system, a minor amount of instability can sometimes increase resilience if it promotes adaptation or transformation that ultimately makes the system stronger.[12]

Figure 4 provides side-by-side definitions for each concept along with descriptions of the goals or outcomes of each and an example of what it looks like within a food system.

Figure 4. *Definitions and Goals of Sustainability, Stability and Resilience within Systems*

	SUSTAINABILITY	STABILITY	RESILIENCE
DEFINITION	"The ability to meet the needs of the present without compromising the ability of future generations to meet their own needs"[13]	"The ability to return to an equilibrium state after a temporary disturbance"[14]	"The capacity to deal with change and continue to develop"[9]
GOALS	Balancing present and future needs, preventing and mitigating resource or capacity loss, & preventing future disruptions	Maintaining equilibrium, minimizing disruption, & robustness	Learning, adapting, transforming, & persisting despite challenges
EXAMPLE	Some vegetable growers have switched from conventional to organic practices to improve soil health and improve the ability of the land to keep producing food for generations to come.	A farmer who uses greenhouses for growing vegetables can keep temperatures inside the greenhouse stable and production at the same level, even in the case of electrical outages because they have a backup generator.	When COVID-19 containment measures closed restaurants, a farmer who had supplied food to restaurants adapted to distribute food to community members through community-supported agriculture (CSA). Because of the new business generated through the CSA, the farmer was able to expand their operations post-pandemic.

FOOD SYSTEM RESILIENCE

Food system resilience applies resilience thinking to a food system. It is "the capacity over time of a food system and its units at multiple levels, to provide sufficient, appropriate, and accessible food to all, in the face of various and even unforeseen disturbances."[1]

One way to think about food system resilience is to ask four key questions:[15]

1. **Resilience of What?**
   - What are the things or systems that you are trying to make more resilient? What are the boundaries of the food system you are trying to make more resilient, and what other systems are intersecting with that food system?
   - Example: City X is interested in making the local food system, more specifically the food system within the city boundaries, more resilient. City X will have to consider regional, national, and international supply chains as it imports a considerable amount of its food.
2. **Resilience to What?**
   - What natural or human-made disasters may impact the food system? Are you concerned with "stressors" or "shocks," or both?
   - Example: City X is interested in taking an all-hazards approach, meaning it is concerned about multiple different hazards that are expected and unknown. Because of its geographic location, and climate change, City X is particularly concerned about extreme coastal weather events and sea level rise.
3. **Resilience for What Purpose?**
   - What are the goals in building food system resilience? How can the goals help promote emergency response efforts and long-term systems transformations?
   - Example: City X wants to make sure that the food system is prepared for the next disruptive event, but it also wants to make the current and future food systems more equitable and just.
4. **Resilience for Whom?**
   - How does resilience work promote procedural, distributional, structural, and intergenerational equity?
   - Example: City X wants to work collaboratively with the communities that are most at risk of food system disruptions to build a more equitable, just food system. It wants to collaborate in all stages of the process, share in the leadership, and build community capacity to respond to future disruptions.

Figure 5 shows the resilience timeline for a food system. The food system starts at a baseline level of functioning prior to a disruption. After a disruption, the system must respond and recover over time. A more resilient food system maintains a higher level of functionality during the disruption and immediately after a disaster. It also recovers more quickly and ideally ends with a higher level of food system functioning ("bouncing back better").

We can use a hypothetical city and the COVID-19 pandemic as a way to better understand this timeline. Before the start of the COVID-19 pandemic, City X had a moderately well-functioning food system. Food was generally accessible and available, but 12 percent of the population of City X was considered food insecure. A substantial proportion of the actors

EQUITY CHECK

Consider the following questions for your local food system:

- What would bouncing back better look like?
- What pre-existing inequities could you target with food system resilience work?

You don't have to know the answers to these questions yet, but they can help you consider how to prioritize equity. The next module digs deeper into equity concerns.

in the food system felt that they had access to food and that the food was acceptable. There were, however, many who felt that the food system was unequal and unjust. You will see that the straight line in the middle of the left side of the diagram represents baseline food system functioning.

When COVID-19 was declared by the World Health Organization a global pandemic in March 2020, this was a shock to City X's food system. Food insecurity rates rose drastically in City X, with many newly food insecure households. You will see in the middle panel that the shock reduced the level of food system functioning. Over time, City X's food system started to recover and food system functioning improved. The recovery did not stop at the initial state of food system functioning but improved beyond where it started. The food system learned, adapted, and transformed into one that functions better than before the shock.

Many characteristics or "attributes" of resilient systems have been identified in research and practice.[17] **Table 2** provides some attributes commonly linked with resilient urban systems and examples of how they could be demonstrated in a food system. The equity attributes were added by the Community of Practice members. Given the complexity of food systems, these attributes can show up in many ways and in some cases can support each other, while in other cases they can even act at cross-purposes. In later modules, you will revisit these attributes and develop strategies aimed at strengthening them.

Figure 5. *Food System Resilience Timeline. Adapted from The Resilience of America's Urban Food Systems: Evidence from Five Cities* [16] *and Food system resilience: Defining the concept* [1]

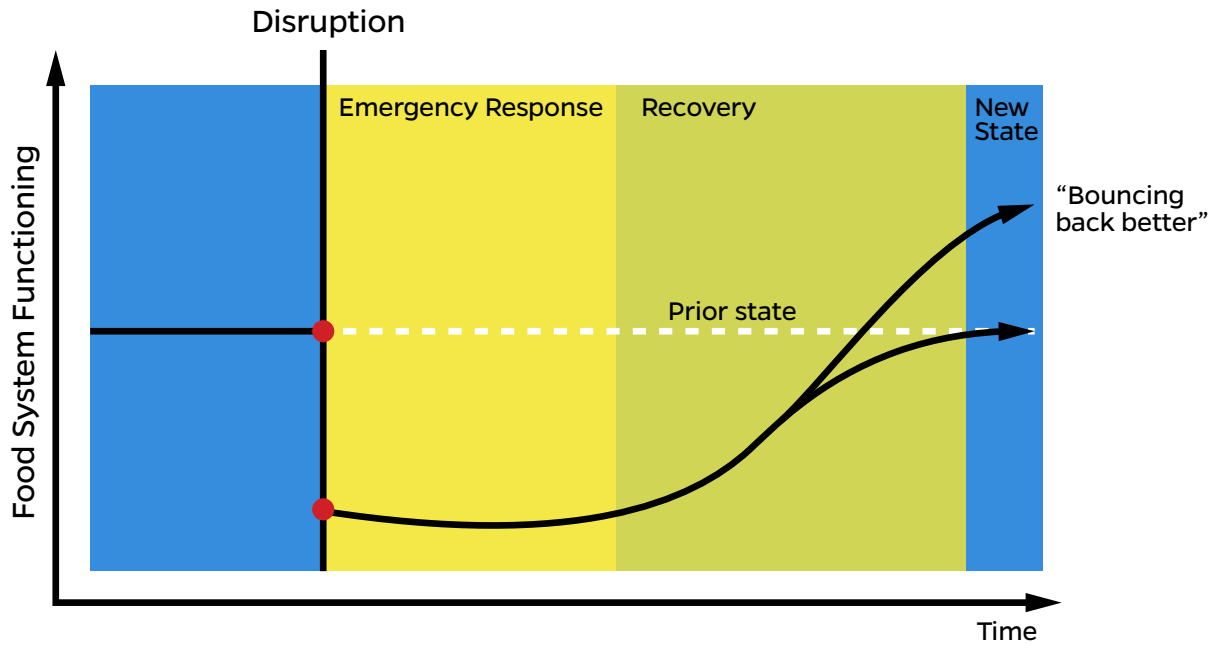


Table 2. *Food System Resilience Attributes, Descriptions, and Examples*

Attribute	Description (in food system context)	Food System Example
Diversity	A variety of food system elements that can serve a similar purpose	A variety of food retail options, such as farmers markets, independent grocers, and supermarkets
Redundancy	Multiple or duplicative food system elements that can serve the same purpose	Neighborhoods with more than one grocery store in walking distance
Connectivity	Multiple food system elements that connect and communicate with one another	Regular communication between food banks and emergency response actors during a crisis
Capital Reserves (social, financial, natural, political)	Available "backup" resources that can be used during a disruptive event	Strong community networks (social), reserve funds (financial), arable soil (natural), state government support (political)
Flexibility	The ability to make modifications to food system elements during disruptive events when needed	Government providing waivers to operate school meal programs outside of normal hours
Preparedness	A plan in place for how to ensure food access, availability, and acceptability during a disruptive event	Food included in emergency management protocol; Formation of an Emergency Food Working Group
Procedural Equity	Establish "transparent, fair, and inclusive" food system resilience planning, implementation, and evaluation processes[18]	Local government food system resilience planning work is done in partnership and co-owned by community partners, and community members are compensated for their engagement in the process
Distributional Equity	Ensure the benefits and burdens of your food system resilience planning are equitably distributed[18]	Food system resilience actions prioritize resources to communities that experience the greatest inequities, disproportionate impacts, and have the greatest unmet needs
Structural Equity	Uproot long-term, embedded structures that perpetuate inequitable food system and resilience outcomes[18]	Local government offers unrestricted grants to projects supporting communities most impacted by food-related injustices[19]
Intergenerational Equity	Actions taken today conserve resources for future generations[20]	Youth are included in the development, implementation, and evaluation of food system resilience actions

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