



Welcome!

Accelerating Climate Resilience Speaker Series

The Future of Local Food Systems: How Rural and Urban Farms are Changing with the Climate



Kerry Murphy, RDN
Health and Wellness Coordinator
City of Salem Health Department



Kannan Thiruvengadam
Executive Director
Eastie Farm



Kelly Coleman
Deputy Director
Community Involved in Sustaining Agriculture (CISA)

Zoom Logistics

- Please enter questions in the chat box
- To use the chat, click on the “chat” icon at the bottom of your screen, type in your question, and hit enter.
- Remain on mute

We reserve the right to expel anyone at any point should they disrupt the meeting for any reason. Similarly, we may need to end the meeting early and will follow-up with participants.

Accelerating Climate Resilience Speaker Series

Conversations with experts and practitioners from across the country who can speak to the ways they are perceiving and advancing resilience.

Past events include conversations about the effects of sea level rise on municipal budgets, climate resilience and racial justice, building social resilience through art, and empowering youth movements on climate.





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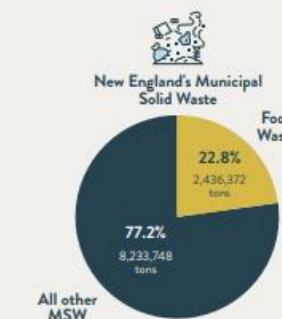


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FIGURE 1: New England's Food System



Food Waste → The largest single material in waste stream

Sources: Waste characterization studies from each state from different years. Values for New Hampshire were approximated.

Estimated Consumption
32 billion pounds

Food Insecure*

| | |
|----|----------|
| MA | >590,000 |
| CT | >346,000 |
| NH | >74,000 |
| ME | >124,000 |
| RI | >88,000 |
| VT | >50,000 |

*AVERAGE: 2019-2021

Source: Alisha Coleman-Jensen, et al., September 2022, [Household Food Security in the United States in 2021](#), USDA Economic Research Service, report #309.



Stores

| | |
|------------|----------------|
| Employment | 204,711 |
| Sales | \$50.0 billion |

Farms

| | |
|------------|---------------|
| Employment | 115,514 |
| Sales | \$2.6 billion |



Fisheries

| | |
|------------|---------------|
| Employment | 11,558 |
| Sales | \$1.4 billion |



Manufacturing

| | |
|------------|----------------|
| Employment | 52,979 |
| Sales | \$21.8 billion |



Distribution

| | |
|------------|----------------|
| Employment | 53,778 |
| Sales | \$76.2 billion |

Restaurants

| | |
|------------|----------------|
| Employment | 560,737 |
| Sales | \$37.6 billion |

Totals
>993,000 jobs
>\$190,000,000,000 sales

Source: Volume 3: Economic Impact of New England's Food System



Sources: WBUR; Boston Globe

Climate resilience is about successfully coping with and managing the impacts of climate change while preventing those impacts from growing worse.

- Union of Concerned Scientists



MACK PARK FARM

SALEM, MA



SOLAR

- Solar panels on shed purchased with a MAPC ACR grant in 2022
 - Powers walk-in cooler, lights, fan, tools
 - Always a surplus of electricity
 - 16,000 pounds of CO2 emissions saved
 - Equal to 18,000 miles driven on sunshine
- Solar-powered greenhouse purchased with MDAR Urban Ag grant in 2025



WATER CATCHMENT

- Irrigation pond
- Rain barrels
- Gutter system off of shed roof
- Drip irrigation
- ~3000 gallons & adding more!





COMPOST

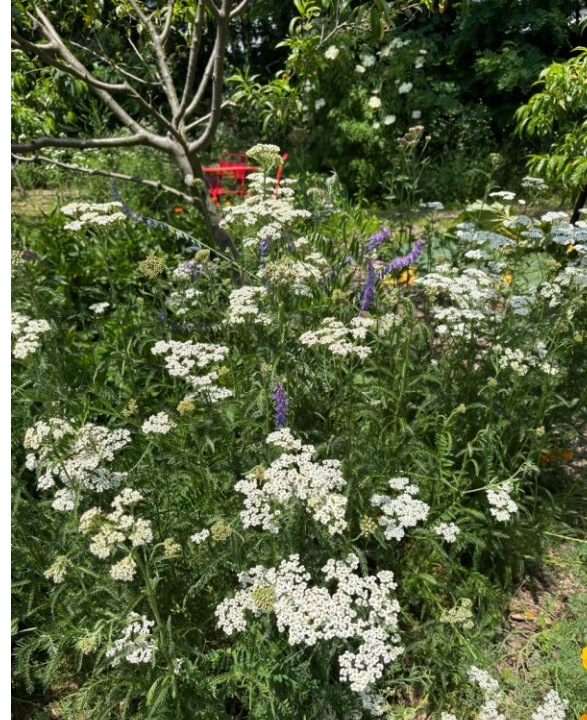
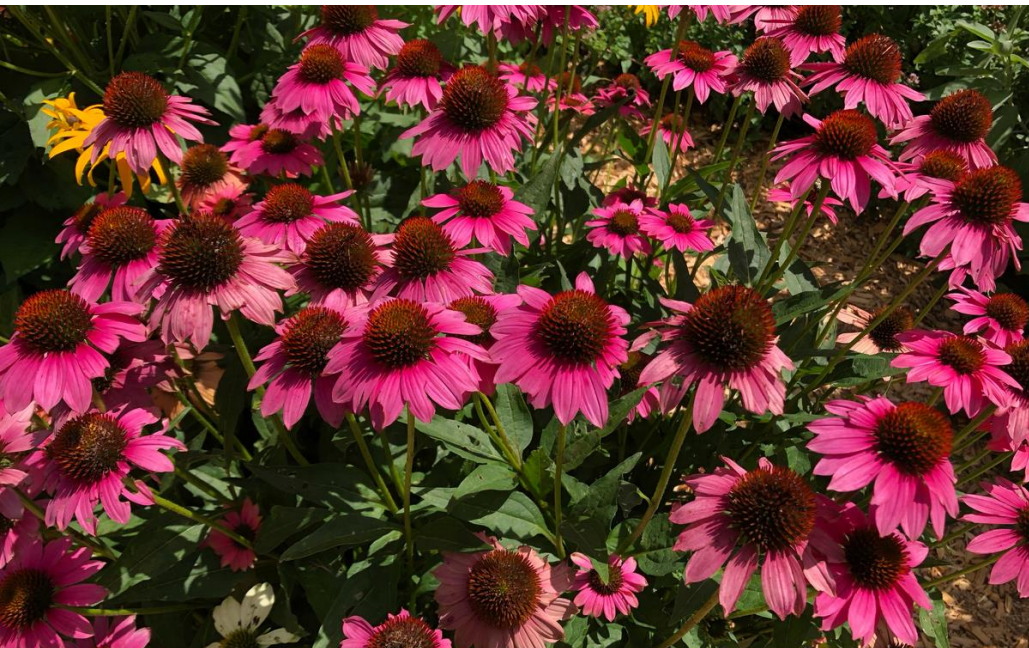


- Two 3-bay systems for plant matter, leaves
- Two commercial tumblers for edible plant matter
 - Rodent prevention



FOOD FOREST

- Six “guilds” planted with fruit trees, perennial herbs, berry bushes, native pollinators
- Uses permaculture practices to reduce water and maintenance needs
- Open to public picking





NEW FOR 2026: BEES!



- Two hives purchased with MDAR Urban Ag grant
- First hives to be approved for a public park in Salem





FOR MORE INFO:

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[FACEBOOK.COM/MACKPARKFARM](https://www.facebook.com/mackparkfarm)

[INSTAGRAM.COM/MACKPARKFARM](https://www.instagram.com/mackparkfarm)

COMING SOON!: [MACKPARKFARM.COM](https://www.mackparkfarm.com)

Eastie Farm







Left: A 40-foot drill rig fits snugly into 6 Chelsea Terrace as it creates the first of three 455-foot-deep geothermal wells that will cleanly heat and cool the greenhouse (2021).

Right: A group of students tours 6 Chelsea Terrace after the construction of the greenhouse. So much has changed that only the billboard in the background is recognizable (2022). This redevelopment was supported in part by the City of Boston (GrowBoston) and the State of Massachusetts (EEA and MDAR).

All-year comfort for people and plants (fossil-free)



Geothermal HVAC system is clean and green - fossil fuel free



Powered by 100% green electricity

City of Boston's Community Choice Electricity

Optional Green 100

\$0.13858 /kWh
(November 2021-January 2023)

.93% increase

\$0.13987 /kWh
(February 2023-December 2023)

Renewable energy
100%

Total Charges for Electricity

Supplier (BILLING FOR CITY OF BOSTON CCE)
Meter 7642469

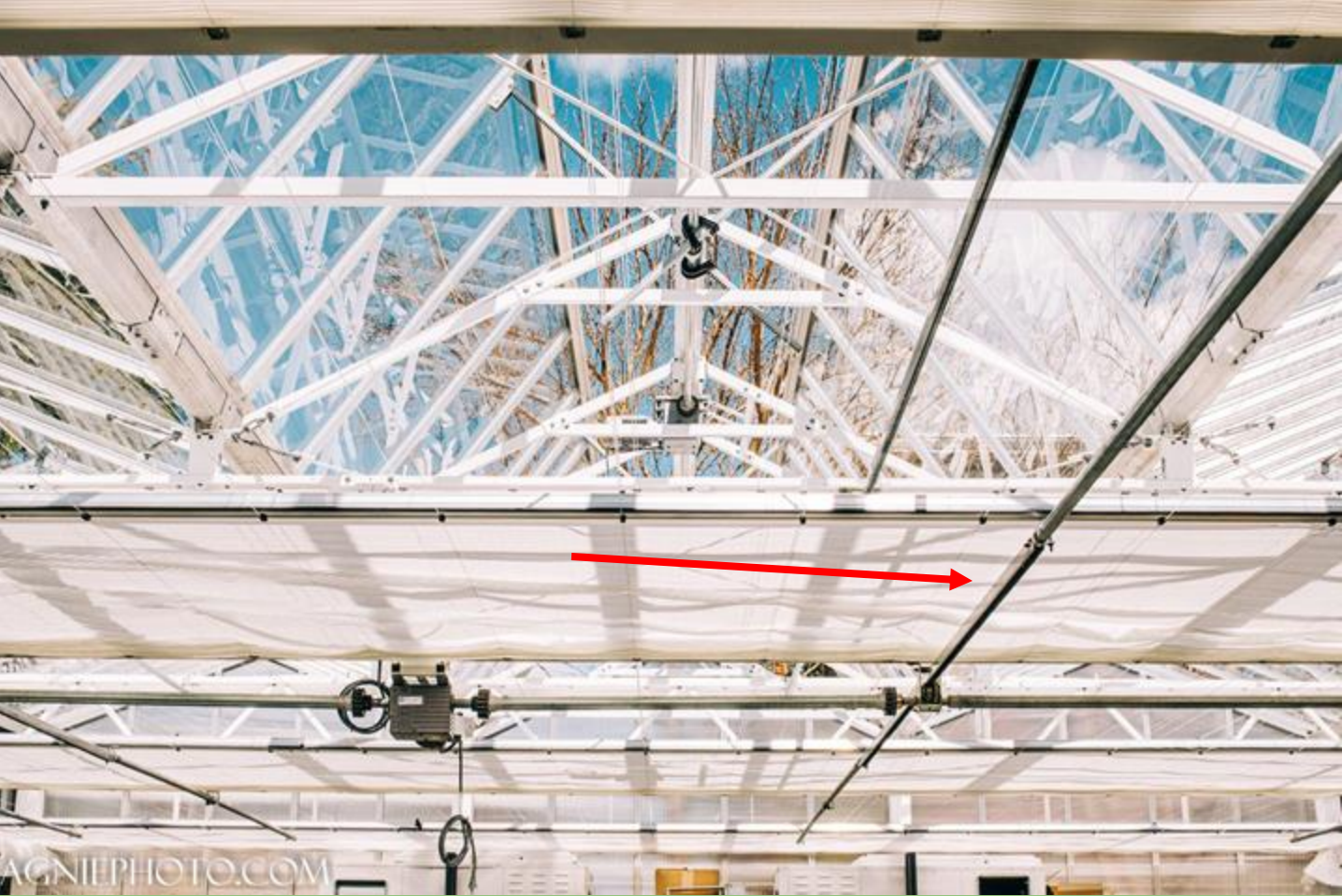
| | | |
|----------------------------|-------------------|----------|
| Generation Service Charge | 2332 kWh X .13858 | \$323.17 |
| Subtotal Supplier Services | | \$323.17 |

We are now able to showcase this program CCE to everyone who visits our greenhouse and to all surrounding neighbors.

Some people have convertible roof corvettes but we have a convertible roof Greenhouse

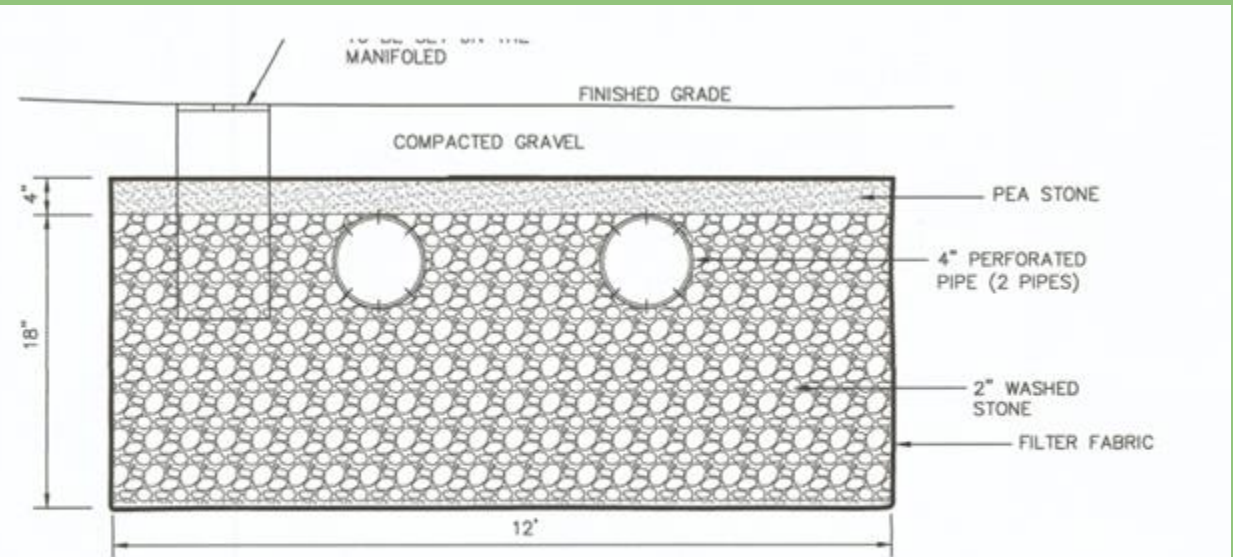
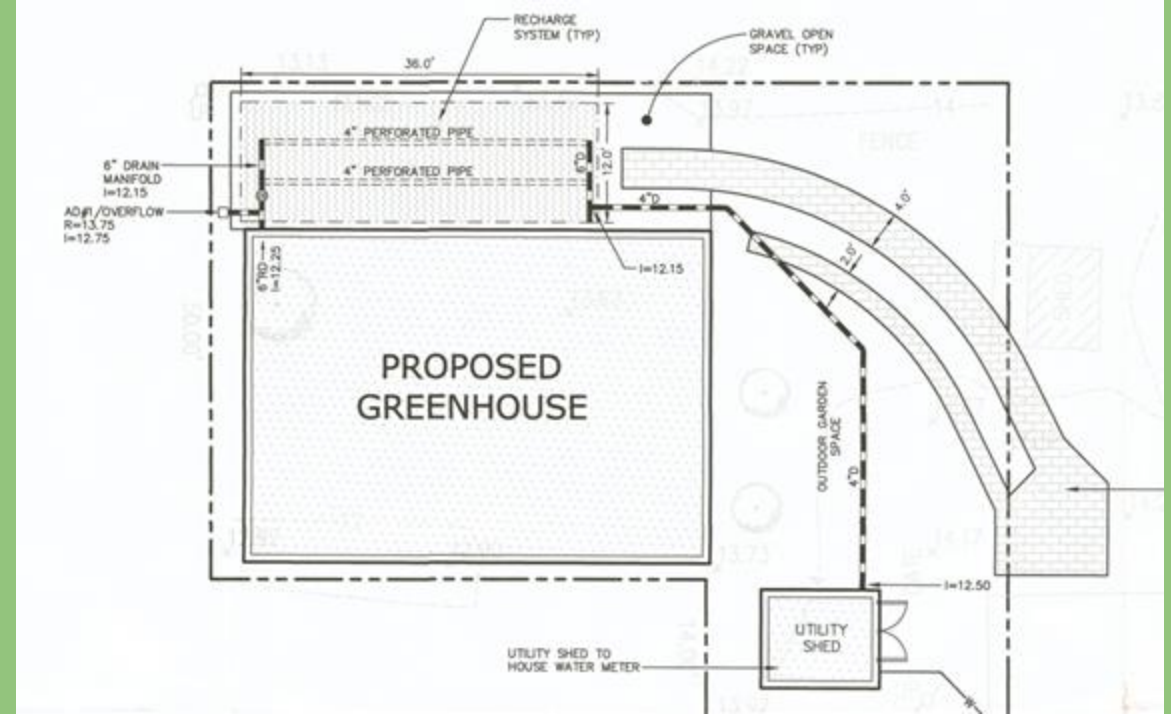


Retractable energy curtain and ground insulation retain heat on colder days



Rainwater catchment system conserves groundwater and builds thermal mass





RECHARGE SYSTEM

Seedlings, saplings, and produce grown locally



Community Gathering



Food Distribution



Adult Education & Team Building



Tree Planting and Care



AGNIERPHOTO.COM

Learning & Applying Science



Find Local Food and Farms Near You



Local Farms, Food Security and Adapting to Climate Change



What climate change risks are rural and urban farmers facing?

- Increased temperatures, prolonged heat waves and drought events
- Increased humidity and more rainfall over shorter periods of time
- Warmer winters – sounds nice but not always for farmers

What this means for farmers:

- New and/or stronger weeds, pests, and diseases
- Increased flood risk in flood prone areas
- Increased equipment costs from adaptation and mitigation practice implementation
- Increased labor requirements from adaptation and mitigation practice implementation
- And these are in addition to the many risks farmers already face.....

How are farmers adapting and mitigating?

- Observing changes and looking for solutions
- Talking with each other, attending workshops, going online, experimenting, taking risks
- Building climate-controlled spaces like greenhouses and indoor farms
- Changing crops and/or trying new varieties of crops that handle extremes better
- Upgrading post-harvest processing and storage facilities
- Learning how to protect themselves and farm crews from heat, pests, wildfire smoke, weather events
- Changing soil management practices to protect soils from the damaging effects of torrential rainfall, drought, tillage, and others
- And on top of all that, writing and managing grants to help pay for it all.....

What can towns, planners, and consumers in the metro area do to support MA farms and increase food security?

- Towns and consumers can support MA ag through local food purchasing, protecting farmland, establishing community gardens, visiting farm stands and farmers markets, identifying and addressing food deserts, working with organizations like FINE, Good Food Purchasing Agreement
- Include farms and food distribution in your emergency response planning
- State and Federal programs and policies that support markets for farmers, help fund implementation climate-sound practices, address farm viability, and disaster assistance
- Check in with your "local" Buy Local!

Massachusetts Coalition for **Local Food** and **Farms**

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Enter Your City / Town

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www.localfoodma.org



Questions?

Accelerating Climate Resilience Speaker Series

Thanks for joining!



Please join us on Tuesday, May 12th from 12-1:30pm for
*The Future of Local Food Systems:
The Intersection of Climate Change and Food Access*

Stay tuned for more climate resilience webinars in the coming months!

