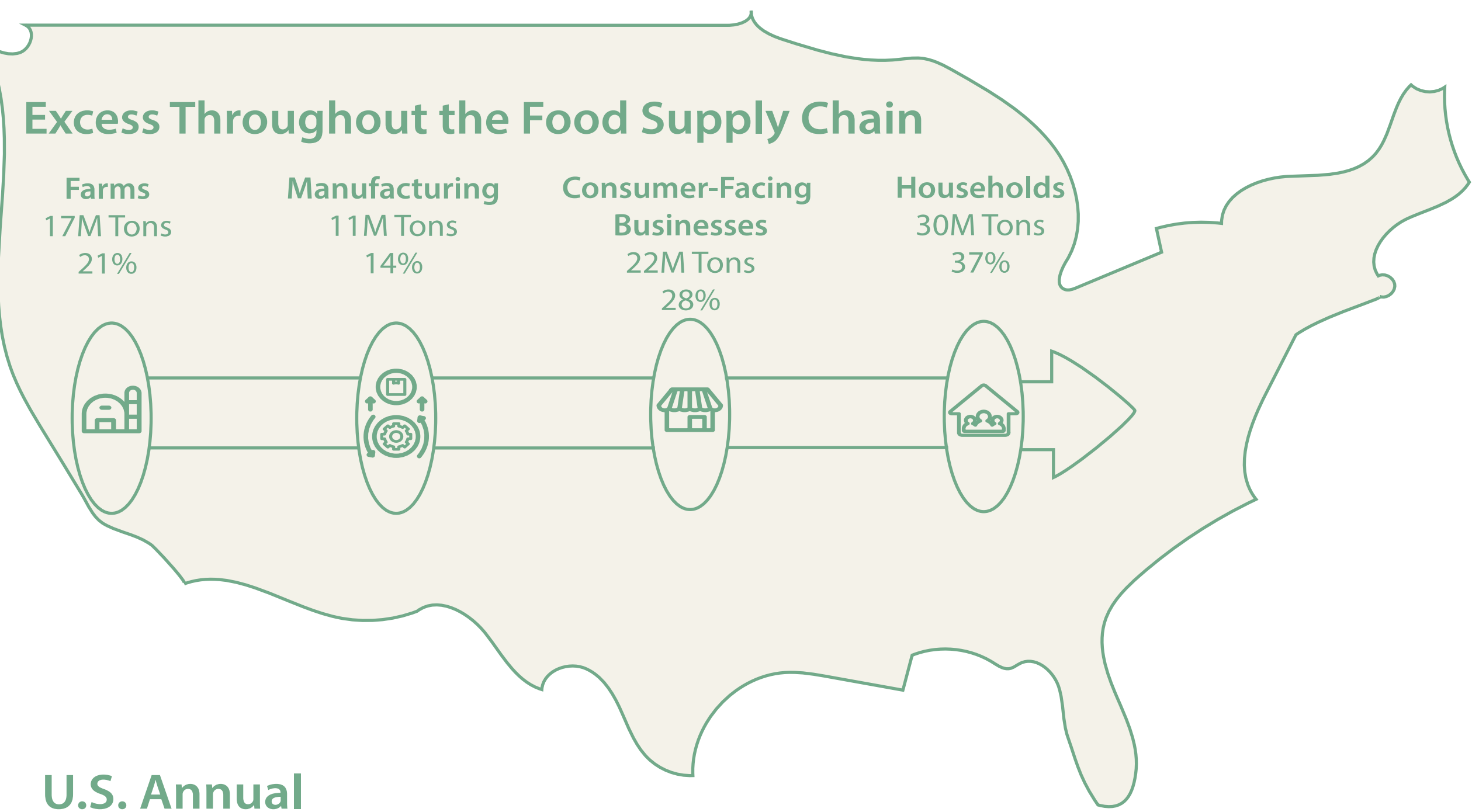


## Background

Figure 1: **Food Excess in the United States**

**U.S. (2019): 229M Tons of Food Produced for Human Consumption**  
80M Tons (35%) Unsold or Uneaten: 54M Wasted - 23M Recycled - 3M Donated



### U.S. Annual Cradle to Consumer Environmental Impacts:

- Food Supply Chain Total | Food Loss & Waste (FLW) %**
- 140M ac of agricultural land use
    - 16% (FLW)
  - 5.9T gal freshwater use
    - 17% (FLW)
  - 664B kWh energy use
    - 20% (FLW)
  - 170M MTCO<sub>2</sub>e
    - 16% (FLW)

### Food Disposal

- U.S.: Among the largest global municipal solid waste (MSW) generators
- MSW landfills = 3rd largest source of U.S. anthropogenic methane emissions
  - FLW = 24% of U.S. MSW landfills

### U.S. Food Access:

2021: 10.2 % (13.5 million) of U.S. households were food insecure  
2001-2016 trends: food insecurity rates for Black & Hispanic households were at least twice that of White households

## Methods

**Dane County Case Study:** Compile local food excess and food access datasets, comprehensive review of tracking methods for recommendation. Compare the Dane County foodscape to resilient regional models, with insight from COVID-19 supply chain & infrastructure gaps.

**Participatory Mapping:** Partner with local organizations for data input, conduct interviews investigating organizational experience and barriers to food excess reduction and food accessibility. Survey stakeholder groups at large for regional data, resources, and interest in local collaboration. Data to be aggregated and democratized on public website (figure 4).

**Campus & Community Collaboration** Initial partner discussions and survey design with Env St 600, capstone course. Partnered with Madison Area Food Pantry Gardens, Feeding the Youth, & Slow Food UW to examine effects of gleaning, food processing, and local recovery programs. Final interviews and surveys to follow. Community narratives to be added as multimedia to the project website.

## Outcomes

Figure 3: **City of Madison Food Access Open Data**

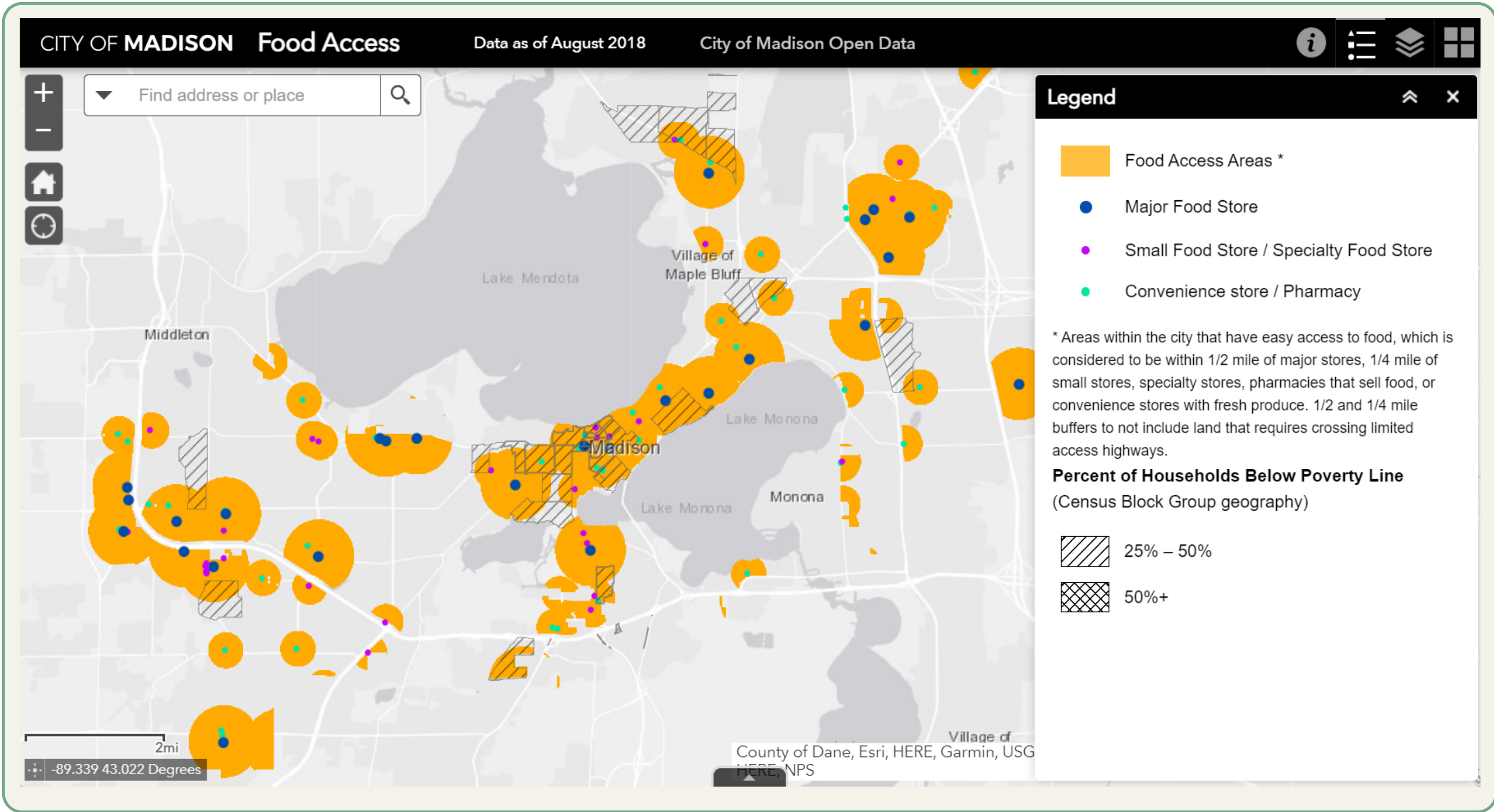
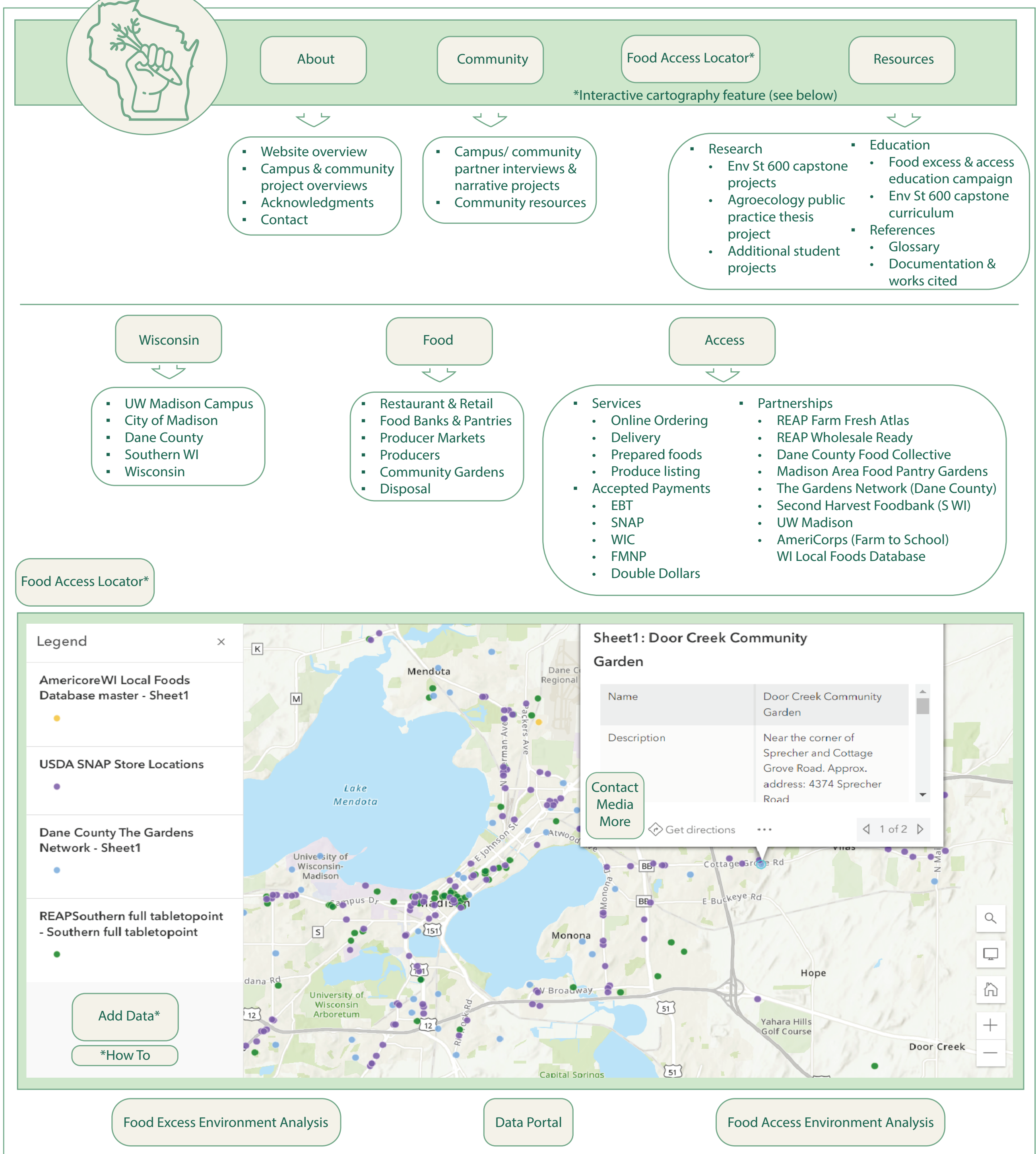


Figure 4: **wifoodaccess.org**



## Implications

Geovisualization of food resources is expected to enhance connectivity and collaboration among programs promoting food accesability (re)distribution. With interactive cartographic features providing customized experiences for those with a range of skills and needs. Inclusion of educational and narrative materials are intended to curb hesitancy and stigmatization of recovered food. Case study research will produce foodscape analyses and advanced cartographic tools, similar to figure 3, for added stakeholder insight and planning use.

Figure 5: **Local Food Excess & Access Initiatives**



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**Objectives:**  
Examine best practices for tracking, redistributing, and reducing excess food resources, while evaluating models for regional food systems resilience and the role of participatory planning.

Project deliverables will include a food access locator tool and food resource guides for local residents, published on [wifoodaccess.org](http://wifoodaccess.org) (figure 4). Project data will be made available for public analysis, supporting place-based food systems planning.

- **Public website** serving educational, collaborative, and resource location purposes (figure 4)
  - Materials supporting consumer education campaigns
- **Narrative platform** highlighting community initiatives
  - Continued work with Env St 600 capstone Fall '23
- **Updated local datasets** and foodscape planning maps (similar to figure 3) for network analysis, complementing stakeholder research:
  - **Metrics:** City of Madison & NRDC *Food Matters Regional Initiative*
  - **Feedstocks:** Dane County Landfill's upcoming Sustainability Campus
  - **Collaboration:** *Dane County Pandemic Food System Study*
  - **Infrastructure:** *Madison Terminal Market Plan*, in addition to
  - *Locally Grown Vegetable Processing Facility Feasibility Study*