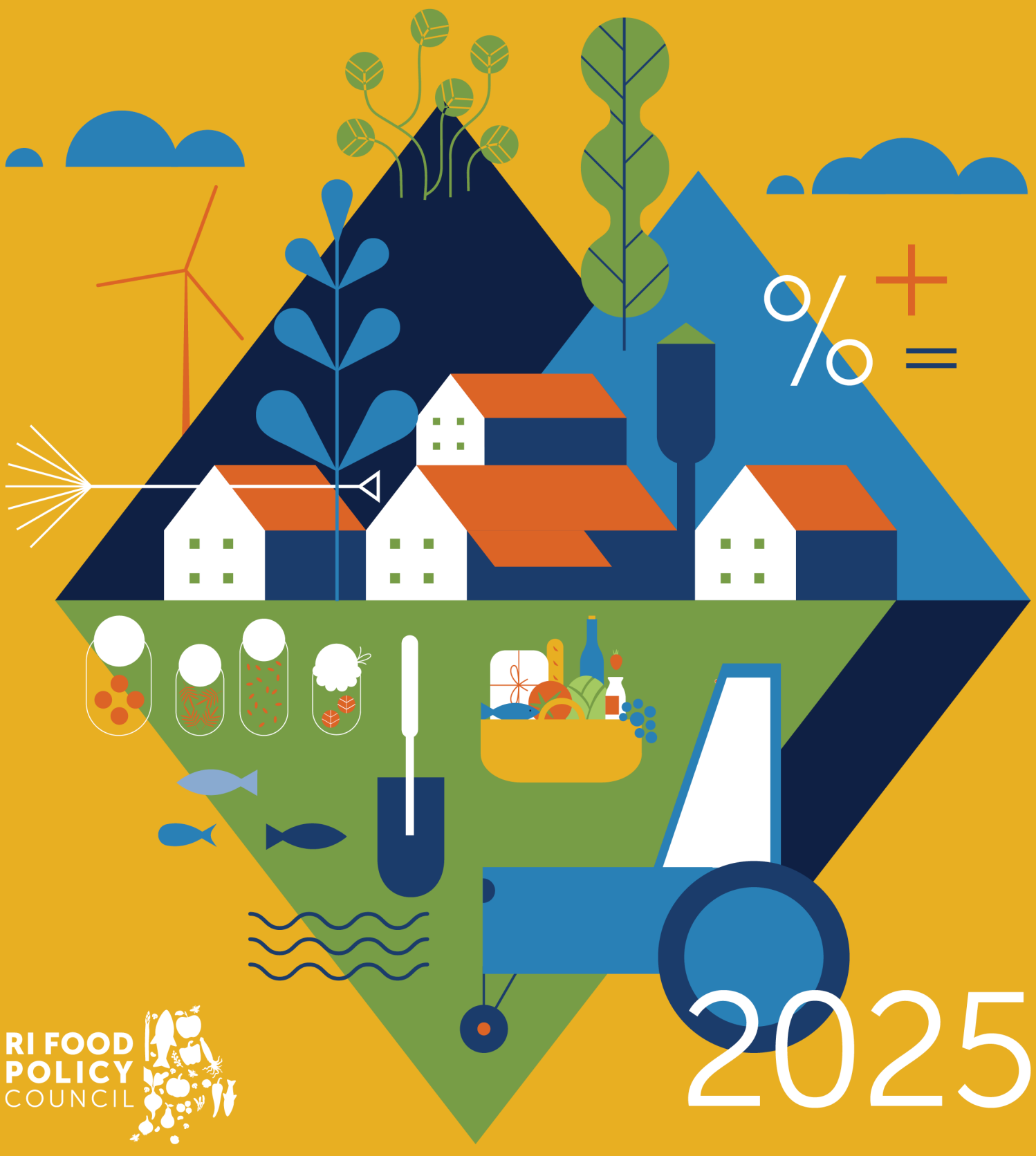
RI FOOD SYSTEM FACTBOOK



RI FOOD POLICY COUNCIL

2025

The Rhode Island Food Policy Council is an independent network with a mission to create a more equitable, accessible, economically vibrant, and environmentally sustainable food system in the Ocean State.

We appreciate the generous support of Rhode Island Foundation, Henry P. Kendall Foundation, Angell Foundation, Island Foundation, 11th Hour Racing Foundation, UNFI Foundation, and Point32Foundation and the partnership of state agencies serving on the RI Interagency Food and Nutrition Policy Advisory Council.

Starting in 2024, the Rhode Island Food System Factbook has been the primary annual publication of the Rhode Island Food Policy Council. The Factbook provides a data-driven landscape of the status of Rhode Island's food system, incorporating the best available research and data. Information is presented for the state of Rhode Island, and for each city and town.

The Factbook tracks the progress of about 50 indicators across five areas of food system health and well-being, and provides a cross-cutting look at metrics related to equity and justice:

- **Food System Economy**
- **Food Access and Security**
- **Agriculture and Land Use**
- **Commercial Fisheries and Aquaculture**
- **Climate Change**

Visit our Data Dashboard at **rifoodcouncil.org/dashboard** to explore and download individual indicators anytime.

Prepared by Scott Sawyer, with guidance from Nessa Richman and support from Max Mason De Faria.

FOOD SYSTEM FACTBOOK

The Rhode Island Food Policy Council works with hundreds of members and partners across the state in public, private, and nonprofit sectors to build a more just and resilient food system. We focus on **People** (food access and nutrition security), **Prosperity** (food business and economic development), and **Planet** (food, climate, and environment).

The goal of this annual Factbook, along with the regularly updated **Municipal Fact Sheets** and **RI Food Systems Metrics Dashboard** available on our website, is to share detailed analysis of major trends to help Rhode Islanders make sense of strengths, weaknesses, opportunities, and threats affecting our food system.

Our purpose in providing these resources is based on a simple value proposition: We believe that annual publication of this Factbook will elevate food system issues in Rhode Island and educate our key decision-makers, resulting in better food policy, an improved regulatory environment and more public and private investment in our farmers, fishers and food businesses.

Is Rhode Island's food system moving in the right direction? How can we know?

Using data from publicly available sources, the Food System Factbook visualizes big picture trends across five categories and poses key questions for each:

- **Food System Economy:** How big is Rhode Island's food system? What sectors are growing? What sectors are contracting?
- **Food Access and Security:** What are the trends in food security in Rhode Island? What are the disparities in how Rhode Islanders are impacted by food access challenges?
- **Agriculture and Land Use:** What kinds of agricultural products does Rhode Island grow/raise? Is Rhode Island's agricultural sector growing or contracting?
- **Commercial Fisheries and Aquaculture:** What kinds of seafood products does Rhode Island harvest? Are commercial fishing and aquaculture production growing or contracting?
- **Climate Change:** How is climate change impacting Rhode Island's food system?

Viewed comprehensively, we can see many bright spots in Rhode Island's food system, including the economic impact of wholesaling and distribution, growth in food processing and manufacturing, the importance of direct sales to local producers, and growth in aquaculture production. At the same time, as the smallest state with the highest cost of agricultural land in the nation, Rhode Island faces significant risks to long-term food production through land development and climate change. Every dataset with demographic information also reveals that Hispanic/Latino, Black, Indigenous, and Rhode Islanders of two or more races are disproportionately impacted by inequities in income, poverty, food security, farm and land ownership, and much more.

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HOW TO USE THE FOOD SYSTEM FACTBOOK

You can use this data to help achieve your mission:

- Set strategic goals for your organization
- Establish measurable objectives for your projects and programs
- Add key facts to grant proposals
- Emphasize a trend during public speaking opportunities
- Support your views in testimony at the State House

Key Features

- ☑ Trusted sources, clear citations
- ☑ Interactive charts
- ☑ Regularly updated data
- ☑ Easy to understand descriptions

Big picture trends are noted throughout:

POSITIVE TREND

- ↗ Employment increase
- ↘ Greenhouse gas emissions decrease

NEGATIVE TREND

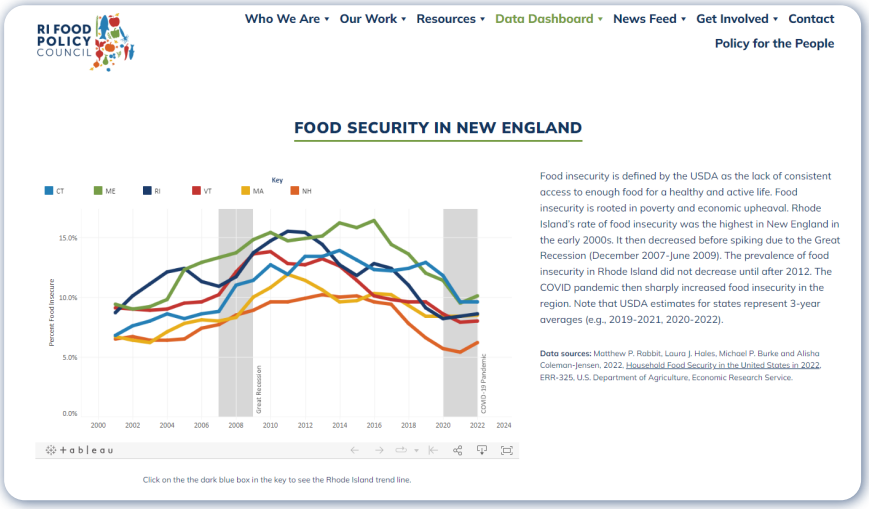
- ↗ Poverty increase
- ↘ Land in agriculture decrease

NO TREND

- — Food insecurity rate

No trend may mean that an indicator has not changed over time, or that only a snapshot in time is depicted.

Indicators are also dynamically depicted on the RIFPC Data Dashboard

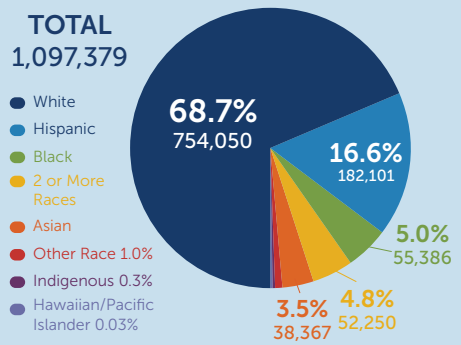


COMMITMENT TO EQUITY AND JUSTICE

RIFPC recognizes the fact that many negative impacts of Rhode Island's current food system are grounded in a history of colonialism, genocide of Indigenous people, slavery, private ownership of land, and the concentration of wealth and power in the hands of too few. RIFPC believes that when power shifts to be shared more equitably across our communities and our state, we transform our future together for generations to come.

At the RIFPC, we focus on two interconnected areas of work. First, to build and maintain a strong network of committed stakeholders from across our entire food system. Second, to leverage that network to build a strong food system that is environmentally and economically sustainable, and that provides all Rhode Islanders with wholesome and affordable food. We believe that it is only possible for us to fulfill this twofold mission by identifying and working to eliminate the ways in which our food system is unjust.

Rhode Island Population, 2023



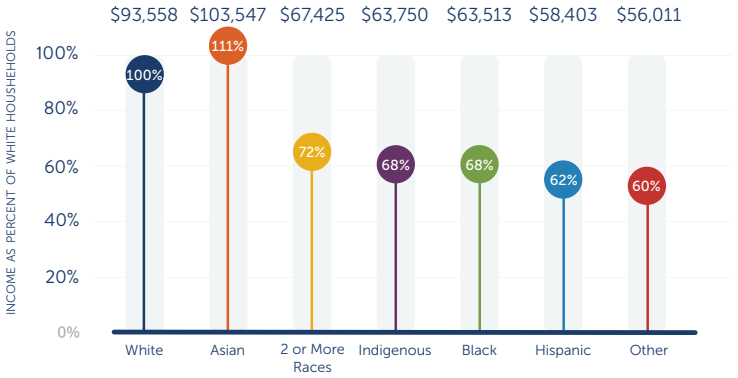
Source: American Community Survey, DP05 | ACS Demographic and Housing Estimates, 2023 5-Year Estimates.

Rhode Island's population is increasingly diverse, but opportunities have not been equitably experienced.

INDICATORS OF INEQUITY

Every dataset with demographic information reveals inequities based on race, ethnicity, gender, educational attainment, place of residence, and other variables. For example, Hispanic/Latino, Black, Indigenous, and people of 2 or more, or other races, earn ***much lower*** median household incomes than Asian and White Rhode Islanders.

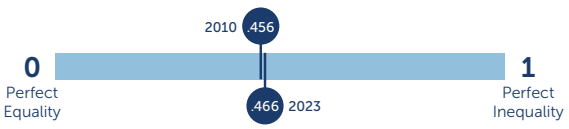
Median Household Income by Race/Ethnicity, 2023



Source: U.S. Census Bureau American Community Survey, Table B19013: Median Household Income, 2023 5-Year Estimates.

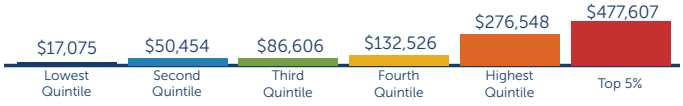
Although some progress has been made reducing the income gap between White and all other households—the median household income for Asian families now *exceeds* that of White families—income inequality has *increased* in Rhode Island. The Gini Index, a measure of inequality in the distribution of income, became more inequitable from 2010 to 2023. The spread between the lowest and highest income quintiles also increased from 2010 ($163,311) to 2023 ($259,473).

Gini Index, 2010, 2023



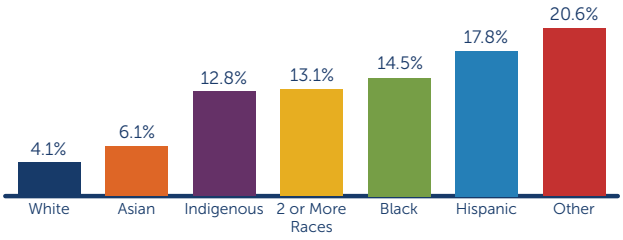
Source: U.S. Census Bureau American Community Survey, Table B19083: Gini Index of Income Inequality, 2010 and 2023 5-Year Estimates.

Mean Household Income Quintiles, 2023



Source: U.S. Census Bureau American Community Survey, Table B19081: Mean Household Income of Quintiles, 2023 5-Year Estimates.

Poverty Status in Past 12 Months of Families by Race/Ethnicity, 2023

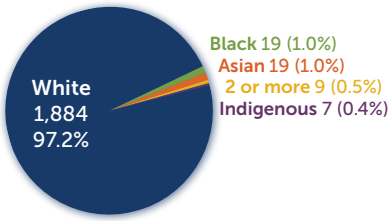


Source: U.S. Census Bureau American Community Survey, Table B17010: Poverty Status in the Past 12 Months of Families by Family Type, 2023 5-Year Estimates.

Poverty, which sociologist Matthew Desmond describes as a "relentless piling on of problems" and a "tight knot of social maladies," sets the stage for suboptimal health, well-being, and quality of life, including disproportional food and nutrition insecurity. A substantially higher percentage of non-White Rhode Islanders live in poverty.

Rhode Island Farmers by Race, 2022

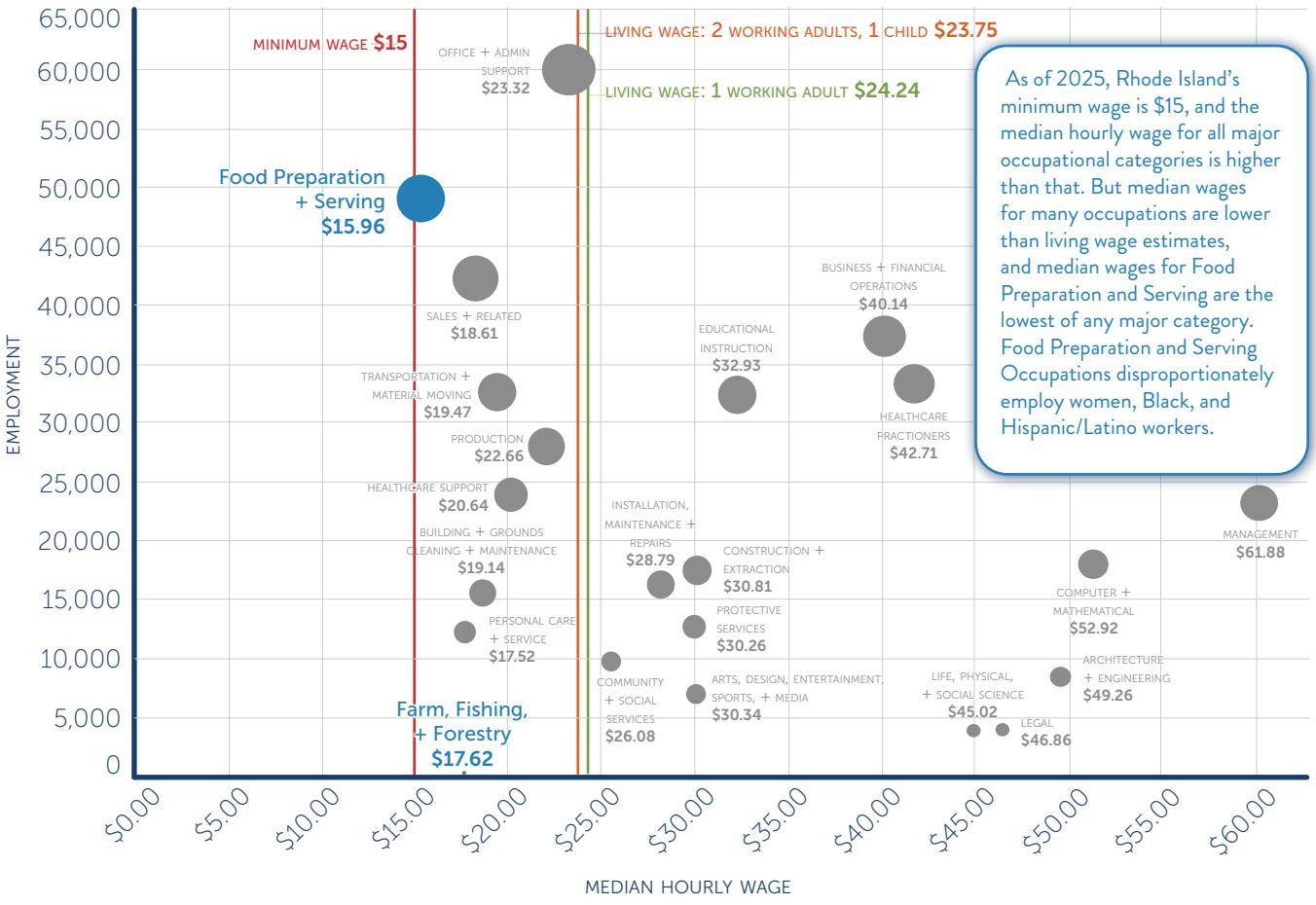
TOTAL: 1,938 PRODUCERS



Source: USDA 2022 Census of Agriculture, Selected Producer Characteristics by Race.

The Census of Agriculture recorded ***1*** non-White farmer in Rhode Island in 1992. Thirty years later, the Census of Agriculture recorded 54 Black, Asian, Indigenous and biracial farmers, or 2.8% of all farmers, and 32 Hispanic/Latino farmers (1.7% of farmers). Unequal access to farm-land limits opportunities to self-determination, wealth building, and culturally appropriate food.

Median Hourly Wages for Major Occupational Categories, 2023



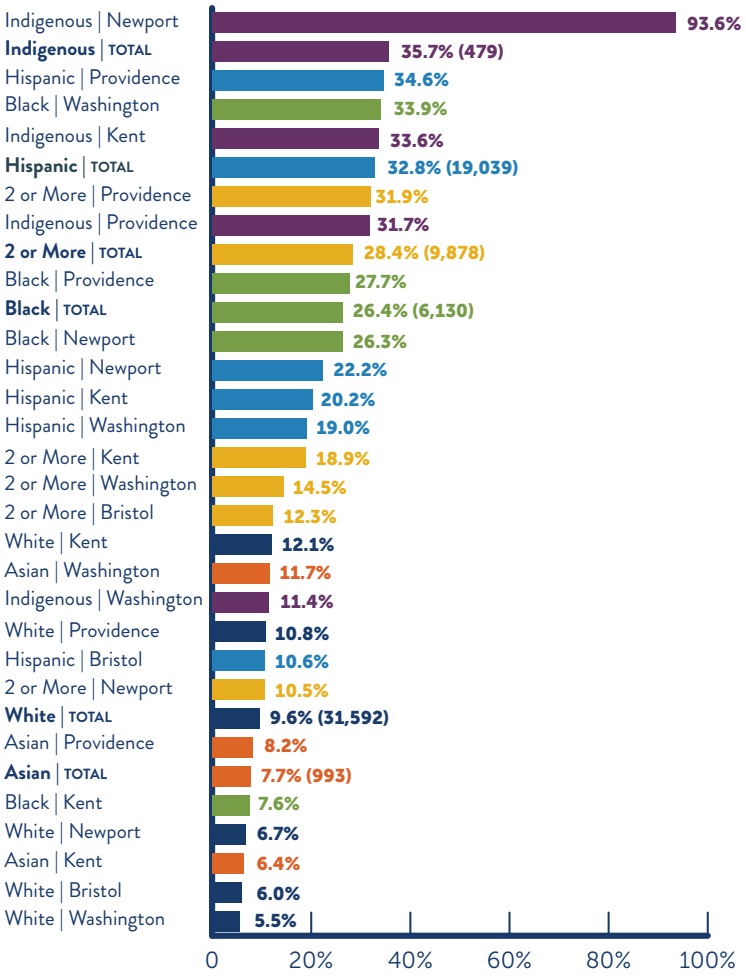
As of 2025, Rhode Island's minimum wage is $15, and the median hourly wage for all major occupational categories is higher than that. But median wages for many occupations are lower than living wage estimates, and median wages for Food Preparation and Serving are the lowest of any major category. Food Preparation and Serving Occupations disproportionately employ women, Black, and Hispanic/Latino workers.

Sources: U.S. Bureau of Labor Statistics, May 2023, Occupational Employment and Wage Statistics. Living Wage Calculator, Living Wage Calculation for Rhode Island. A living wage is the amount that 2 adults with 2 children would have to earn per hour to meet 8 basic needs in Rhode Island: housing, transportation, food, childcare, health care, civic engagement (e.g., entertainment), broadband, other necessities (e.g., clothing), and taxes. Adjusted for inflation to 2024 dollars.

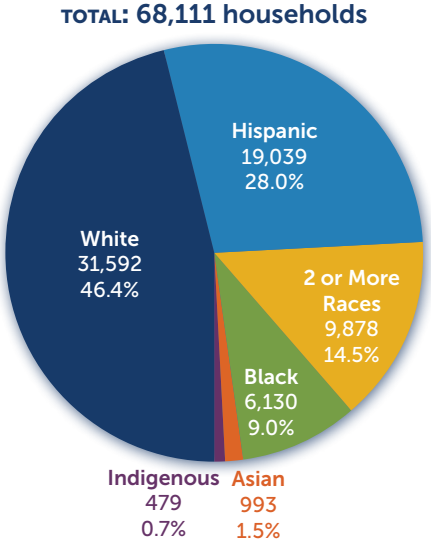
Low wages ripple throughout society as food system workers are disproportionately impacted by food and nutrition insecurity. U.S. Government Accountability Office research found that restaurants and other eating places employed the largest percentage of adult Medicaid enrollees and Supplemental Nutrition Assistance Program (SNAP) recipients. From 2019 to 2023, an average of 16.3% (68,111) of Rhode Island households received Supplemental Nutritional Assistance Program (SNAP) benefits to augment their grocery budgets. White Rhode Islanders make up the majority of the state's population (68.7%) and, consequently, the largest *number* of SNAP recipients in Rhode Island were White. But only 9.6% of White households received SNAP benefits. In contrast:

- Hispanic Rhode Islanders make up 16.6% of the state's population and 32.8% of Hispanic households received SNAP benefits.
- Black Rhode Islanders make up 5.0% of the state's population and 26.4% of Black households received SNAP benefits.
- Rhode Islanders of 2 or more races make up 4.8% of the state's population and 28.4% of these households received SNAP benefits.
- Indigenous Rhode Islanders make up 0.3% of the state's population and 35.7% of Indigenous households received SNAP benefits.
- Asian Rhode Islanders make up 3.5% of the state's population and 7.7% of Asian households received SNAP benefits.

Percent Receiving SNAP Benefits by Race/Ethnicity and County, 2023



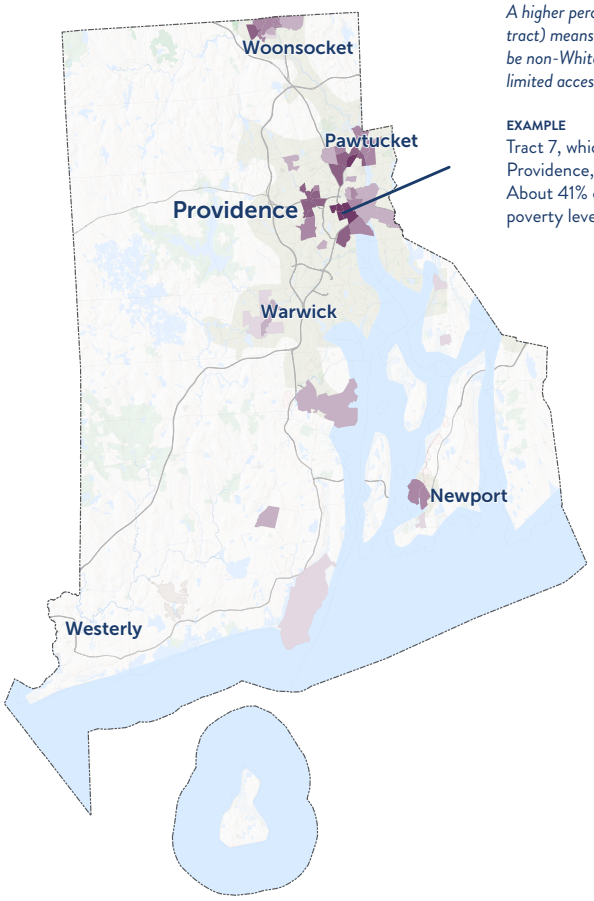
Total Number of Households Receiving SNAP Benefits by Race/Ethnicity and County, 2023



Source: U.S. Census Bureau American Community Survey, Receipt of Food Stamps/SNAP in Past 12 Months by Race of Householder. 2023 5-Year Estimates.

Social and commercial determinants also set the stage for lifelong disparities in food access by race/ethnicity and income. For example, Hispanic/Latino, Black, Asian, Indigenous, and Rhode Islanders of two or more races or some "other" race—make up 31.3% of the state's population, but 53.0% of its population living in low-income low- access (LILA)* census tracts.

Low-Income Low-Access Census Tracts by Race/Ethnicity, 2023



A higher percentage (i.e., a more purple census tract) means that residents are more likely to be non-White, Hispanic, and low income with limited access to grocery stores.

EXAMPLE
Tract 7, which spans Upper and Lower South Providence, is 91% non-White or Hispanic. About 41% of the population live below poverty level.

% NON-WHITE OR HISPANIC BY LILA CENSUS TRACT

- 78-99%
- 59-78%
- 41-59%
- 21-41%
- 2-21%

*** Low-Income Low-Access (LILA) =** Where a large proportion of the residents have low-incomes and are more than 1/2 mile from a food source for urban populations, and over 10 miles for rural populations.

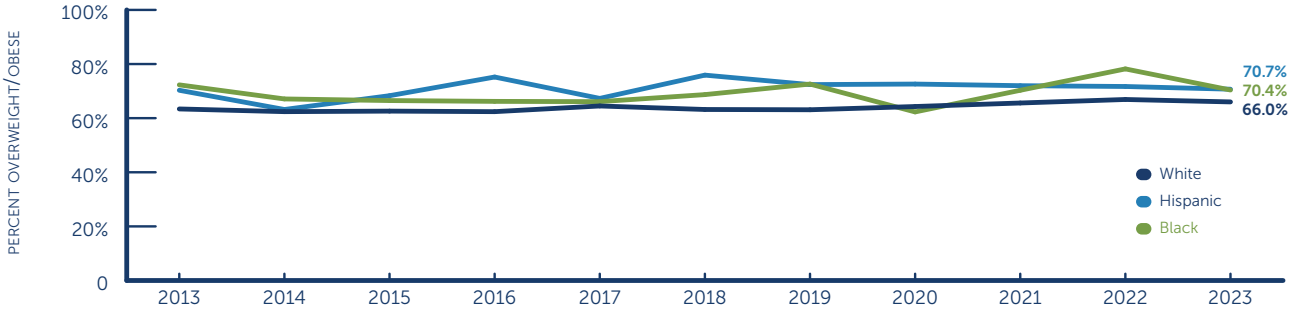
	% OF POPULATION		% LIVING IN LILA TRACTS
White	**68.7%** (754,050)	→	**17.8%** (133,989)
Hispanic/Latino	**16.6%** (182,101)	→	**51.2%** (93,219)
Black	**9.1%** (99,530)	→	**26.2%** (26,102)
Asian	**3.7%** (38,367)	→	**30.7%** (11,774)
Indigenous	**1.2%** (3,513)	→	**27.7%** (972)

Research by Kathryn De Master and Jess Daniels argues that the concept of "food deserts" and the LILA map overemphasize proximity to supermarkets and transportation and miss the important contributions of corner markets, bodegas, and other smaller stores. Using Providence as a case study, they emphasize that market basket surveys of all stores in an area can provide a more nuanced picture of foodscapes. Future versions of the Data Dashboard and Factbook can include this type of analysis.

Sources: USDA Food Research Atlas, 2019 data. American Community Survey, Table B03002: Hispanic or Latino Origin by Race, 2023 5-Year Estimates.

Poor diet—leading to health issues like high blood pressure, fasting plasma glucose, and cholesterol which are often associated with obesity—is the leading cause of illness and death in the United States, including Rhode Island. A 2023 report found that 49% of children living in Rhode Island's urban centers are overweight or obese, including a higher percentage of Hispanic/Latino children. The majority of Rhode Island adults are overweight or obese, including a higher percentage of Hispanic/Latino and Black adults.

Adults with Overweight or Obesity by Race/Ethnicity, 2013-2023



Source: U.S. Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, Weight Classification by Body Mass Index.

Food System Economy

How big is Rhode Island's food system? What sectors are growing? What sectors are contracting?

Rhode Island's food system employs over **74,000** people at more than **8,900 businesses**, and generates over **$17.8 billion** in sales. We estimate that Rhode Island's food system jobs account for about **12.8%** of all jobs and **6.4%** of businesses in the state, but this is likely an undercount due to data limitations. Retail Food Stores, Food Wholesaling and Distribution, and Food Services and Drinking Places accounted for the majority of food system sales (90.5%).

Although total food system employment increased by over **35%** from 2002 to 2023, it is important to note that agriculture and fisheries employment *decreased* in this timeframe. Food services (e.g., restaurants) account for the majority of food system jobs and are typically some of the ***lowest paid jobs*** in the state. In 2022, food prices increased by 9.9%, which is faster than any year since 1979, and by 5.8% in 2023. Over the past 60 years, food prices increased 954%, which is second only to health care costs. In 2023, Rhode Islanders also hadthe 14th highest per capita food expenditures in the country, and this inequitably impacts Hispanic/Latino, Black, low-income, and other residents.

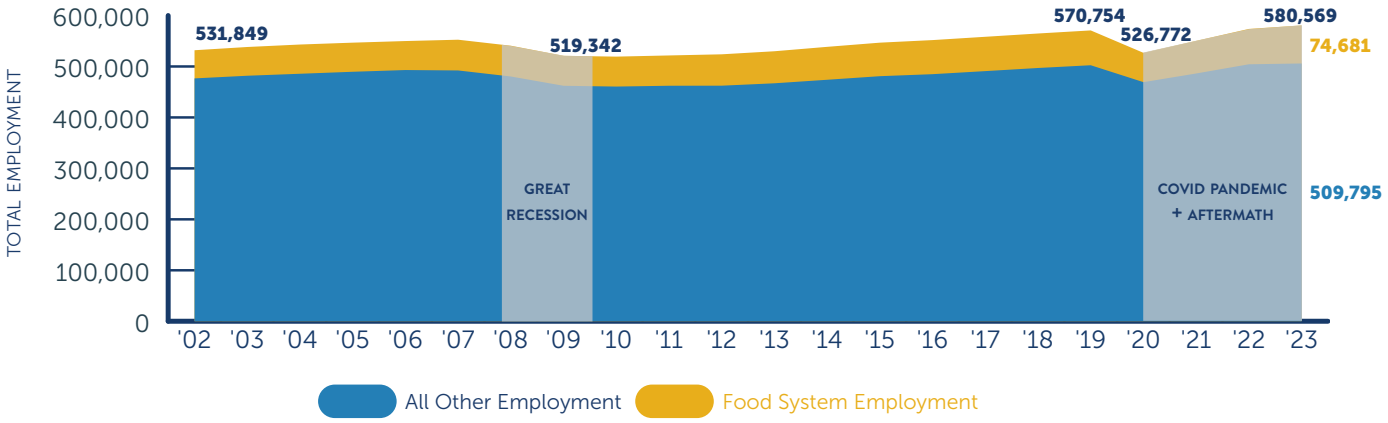
KEY STATS

	2024 FACTBOOK	2025 FACTBOOK	LONG-TERM TREND
EMPLOYMENT	>73,000 (2022)	>74,000 (2023)	+19,000 (2002-2023)
BUSINESSES	>8,800 (2022)	>8,900 (2023)	+1,745 (2002-2023)
TOTAL SALES	$17.3 billion (2017)	$17.8 billion (2022)	+$481million (2017-2022)
MEDIAN HOURLY WAGE *Food Preparation + Serving major occupational category*	$14.97 (2022)	$15.96 (2023)	+$2.56 (2002-2023)
		NEW INDICATOR	
GROCERY STORE MARKET CONCENTRATION		42.1% (2023)	Ahold Delhaize (Stop & Shop) is estimated to have 42.1% market share

TOTAL AND FOOD SYSTEM EMPLOYMENT, 2002-2023

POSITIVE TREND

Total employment in Rhode Island increased **9.2%** from 2002 (531,849) to 2023 (580,569). Food system jobs account for about **12.8% (74,681)** of all jobs in Rhode Island. This is likely an undercount because we are unable to specify all possible food system jobs (e.g., "general freight trucking" accounts for over 1,500 jobs in Rhode Island. However, although all food ultimately moves via transportation, we can't delineate trucking jobs that are exclusively for food distribution).

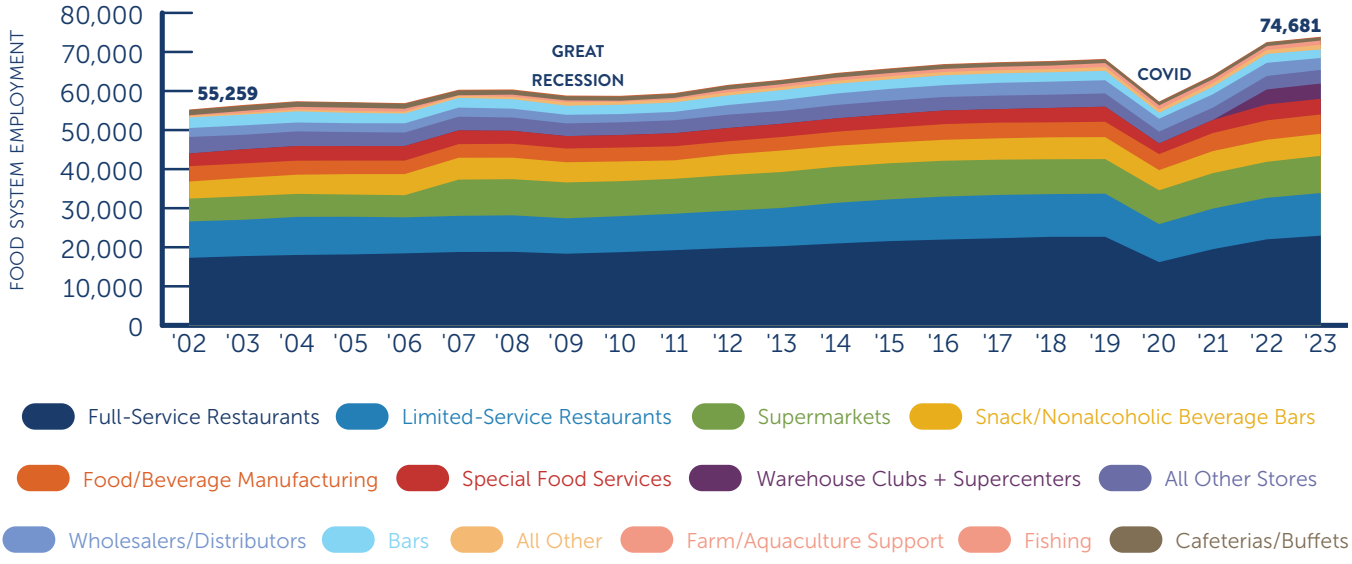


Sources: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages, and U.S. Census Bureau Nonemployer Statistics. The U.S. Bureau of Labor Statistics provides estimates of *covered* employment—work that is covered by unemployment insurance benefits. *Non-covered* employment, or nonemployer statistics, refers to jobs that are excluded from unemployment insurance reporting requirements. Non-covered employment is mostly made up of sole proprietors and partnerships with no paid employees. Combining both data sources together provides a more comprehensive picture of employment in Rhode Island. Farm employment is not captured very well by either data source. Estimates of the number of farmers and hired farmworkers are produced every 5 years by the USDA Census of Agriculture and are not shown in this figure.

FOOD SYSTEM EMPLOYMENT, 2002-2023

POSITIVE TREND

Total food system jobs in Rhode Island increased 35.1%, from from ≈55,000 in 2002 to nearly **75,000** in 2023. "Food services and drinking places" (e.g., restaurants, fast food, institutional food services, bars) account for the majority of food system jobs - over 45,000 jobs.



Sources: U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages, and U.S. Census Bureau Nonemployer Statistics. Estimates of the number of farmers and hired farmworkers are produced only every 5 years by the USDA Census of Agriculture and are consequently not shown in this figure. "All other stores" includes convenience stores, specialty food stores, liquor stores, health food stores, and vending machine operators. Employment data at warehouse clubs and supercenters was not available until 2022 and 2023. "Special Food Services" includes food service contractors, caterers, and mobile food services. "All other" includes community food services (e.g., food pantries), solid waste collection, and agricultural market and commodity regulation.

ECONOMIC IMPACT OF RHODE ISLAND'S FOOD SYSTEM, 2022

POSITIVE TREND

New England Feeding New England estimated the overall economic impact of New England's food system based on data from 2017 (and adjusted for inflation to 2020 dollars). Using data from the 2022 Economic Census and other sources, we can update the previous estimates and provide a new range of values in 2024 dollars. Food Services and Drinking Places accounted for the majority of food system jobs and grew slightly from 2017 to 2022. Retail Food Stores, Food Wholesaling and Distribution, and Food Services and Drinking Places accounted for the majority of sales. Food and Beverage Manufacturing both experienced double-digit percent increases in employment and sales.

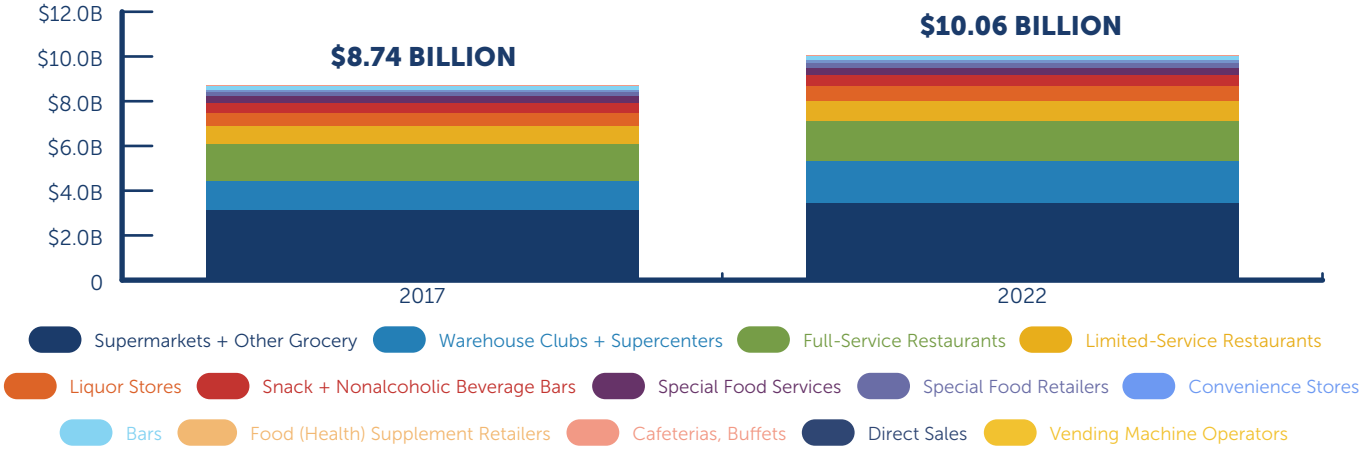
	2022 Employment	% of Total	Growth from 2017-2022	2022 Sales	% of Total	Growth from 2017-2022
Agriculture	3,765*	5.1%	1.0%	$96,125,185**	0.5%	12.0%
Fisheries	911	1.2%	-7.8%	$103,285,241	0.6%	-19.9%
Aquaculture	56	0.08%	n/d***	$8,364,885	0.05%	-2.8%
Food Manufacturing	4,240	5.8%	18.8%	$1,191,336,966	6.7%	52.7%
Beverage Manufacturing	723	1.0%	57.2%	$137,421,135	0.8%	32.5%
Wholesaling + Distributing	3,370	4.6%	3.2%	$6,092,000,591	34.2%	-17.5%
Stores	16,797****	22.9%	3.5%	$6,339,713,204	35.5%	19.0%
Food Services + Drinking Places	45,245	61.8%	0.8%	$3,707,209,951	20.8%	9.5%
All Others	1,028	1.4%	26.6%	$162,747,829	0.9%	18.0%
TOTAL	**73,240**	**100.0%**	**3.0%**	**$17,838,204,988**	**100.0%**	**2.8%**

Sources: Data collected from U.S. Census Bureau Economic Census, USDA Census of Agriculture, U.S. Census Bureau Nonemployer Statistics, Atlantic Coastal Cooperative Statistics Program Data Warehouse, and Rhode Island Coastal Resources Management Council for 2017 and 2022. Adjusted for inflation with producer price indices and the consumer price index to 2024 dollars. * We are using employment values for farmers and hired farm labor in this table since the Census of Agriculture and Economic Census were both conducted in 2017 and 2022. ** Agriculture sales include the value of sales and the value of "Support Services for Agriculture. *** Aquaculture employment data was suppressed in 2017. **** The value of "Warehouse Clubs and Supercenters" employment was not available in 2017 so we do not have a full picture of growth in retail store employment.

RETAIL FOOD SALES, 2017, 2022

POSITIVE TREND

Total retail food sales increased by 15.1% from 2017 ($8.7 billion) to 2022 ($10.0 billion). Grocery stores, warehouse clubs, and full-service and limited-service restaurants account for 80% of retail food sales. Note that direct sales—from farmer to consumer via farmstands, CSAs, and farmers markets—accounted for 0.1% of total retail food sales and are barely discernible in this figure.

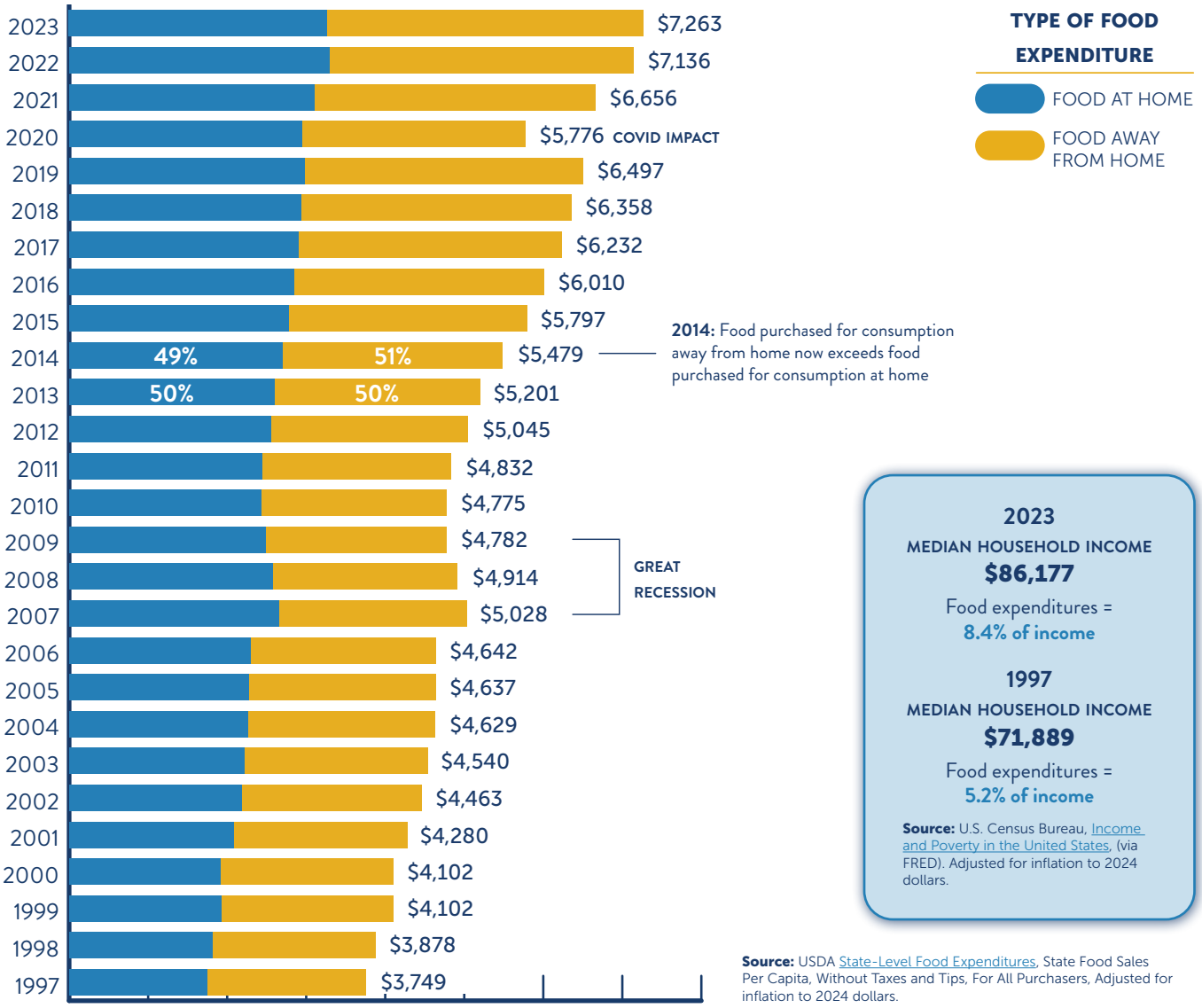


Sources: Data from U.S. Census Bureau Economic Census, USDA Census of Agriculture, and U.S. Census Bureau Nonemployer Statistics for 2017 and 2022. Adjusted for inflation with producer price indices and consumer price index to 2024 dollars.

PER CAPITA FOOD EXPENDITURES, 1997-2023

NEGATIVE TREND

Rhode Island had the fifth highest per capita food expenditures ($5,776) of any state in the country in 2020, but ranked 14th in 2023. The annual growth rate for median household incomes in Rhode Island from 1997 to 2023 was 0.7%, while the annual growth rate for food expenditures was 2.6%.



2023
MEDIAN HOUSEHOLD INCOME
$86,177
Food expenditures =
8.4% of income

1997
MEDIAN HOUSEHOLD INCOME
$71,889
Food expenditures =
5.2% of income

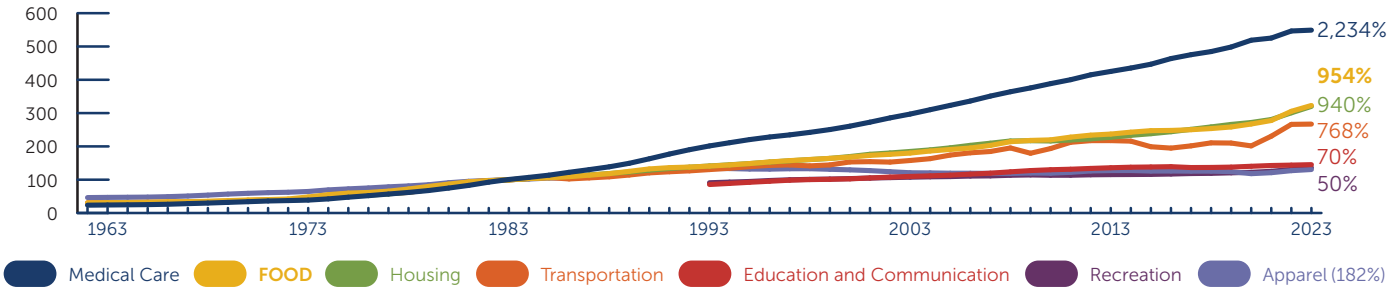
Source: U.S. Census Bureau, Income and Poverty in the United States, (via FRED). Adjusted for inflation to 2024 dollars.

Source: USDA State-Level Food Expenditures, State Food Sales Per Capita, Without Taxes and Tips, For All Purchasers, Adjusted for inflation to 2024 dollars.

INDEX OF MAJOR CONSUMER PRICE INDEX CATEGORIES, 1962-2023

NEGATIVE TREND

From 1962 to 2023, food prices increased 954%, which is second only to health care costs (which have grown 2,234%).

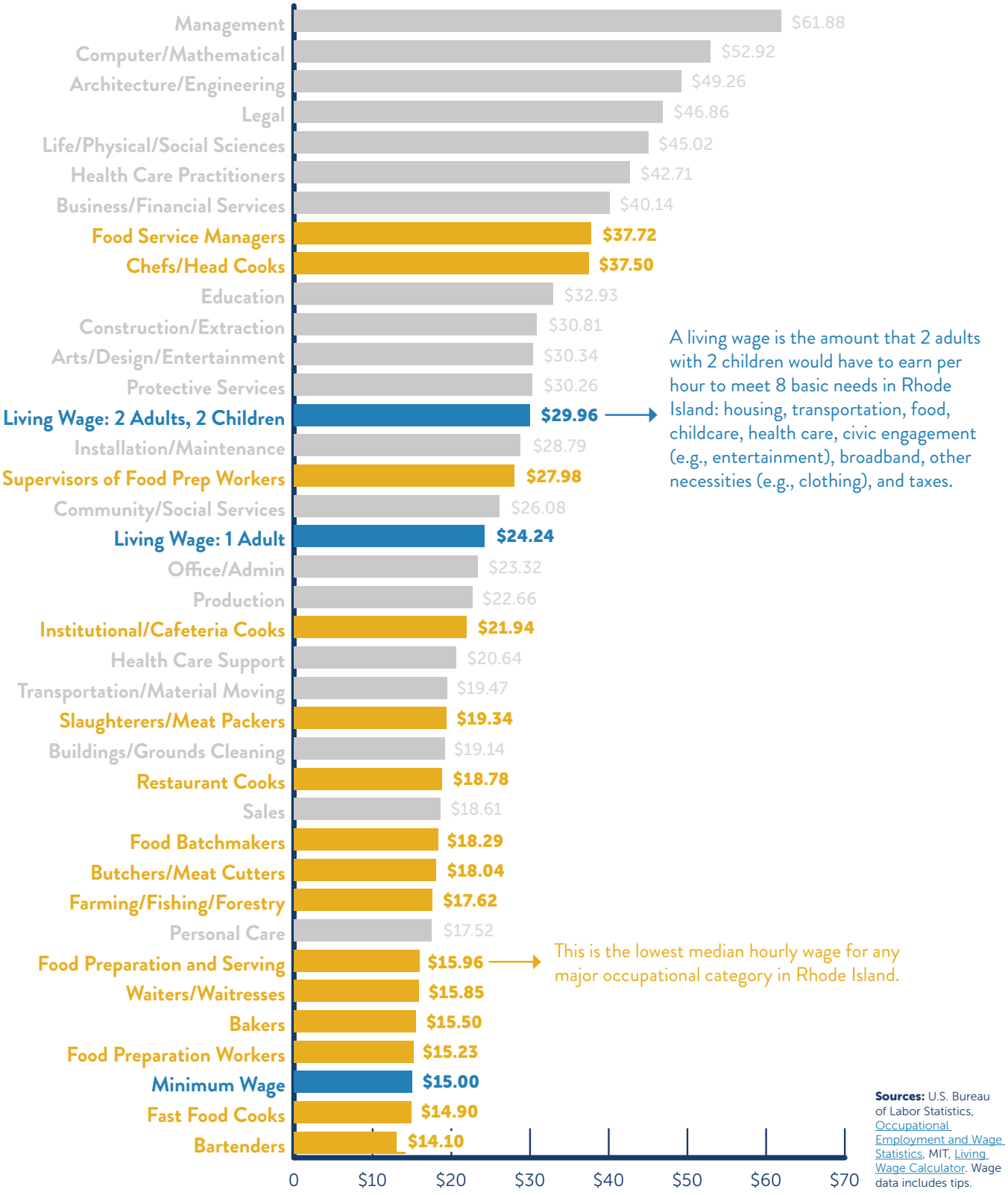


Source: USDA Economic Research Service, Food Price Environment, and Federal Reserve Bank of St. Louis (FRED), Consumer Price Index. Note: CPIs for education and communication and recreation begin in 1993.

MEDIAN HOURLY WAGES FOR SELECTED OCCUPATIONS, 2023

POSITIVE TREND

Although wages for most occupations have *increased* in recent years and are above Rhode Island's minimum wage, it is also the case that most food system jobs received some of the lowest wages of any jobs in Rhode Island. In fact, "*Food Preparation and Serving Occupations*" received the **lowest median hourly wage** of any major occupational category, and most food system jobs are paid below a living wage. Adjusted for inflation, median hourly wages for Food Preparation and Serving Occupations increased by only $2.56 from 2002 to 2023.



A living wage is the amount that 2 adults with 2 children would have to earn per hour to meet 8 basic needs in Rhode Island: housing, transportation, food, childcare, health care, civic engagement (e.g., entertainment), broadband, other necessities (e.g., clothing), and taxes.

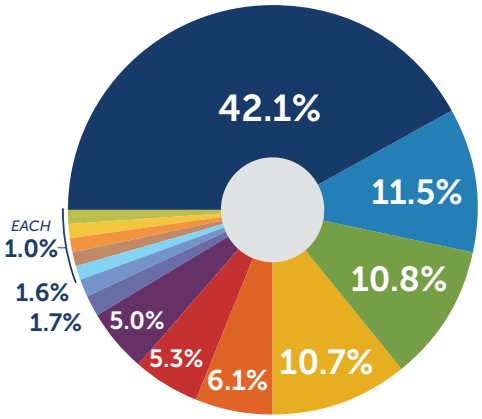
This is the lowest median hourly wage for any major occupational category in Rhode Island.

Sources: U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics, MIT, Living Wage Calculator. Wage data includes tips.

ESTIMATED MARKET SHARE OF GROCERY STORES IN RHODE ISLAND

NEGATIVE TREND

The Grocery Gap Atlas estimates that 81% of state markets are less concentrated than Rhode Island, while 19% of all states are more concentrated. It has been historically difficult to stock local or regional products at national grocery store chains.



- Ahold Delhaize (Stop & Shop)
- All Others
- Walmart
- Albertsons
- Dave's Marketplace
- Amazon
- Wakefern Food Corp (Price Rite)
- Dollar Tree
- BJ's Wholesale Club
- Clements' Marketplace
- Seabra Group
- Target
- Aldi
- Brigido's Fresh Marketplace

All Others includes dozens of corner markets, specialty food stores (e.g., meat markets) and other independent grocery stores.

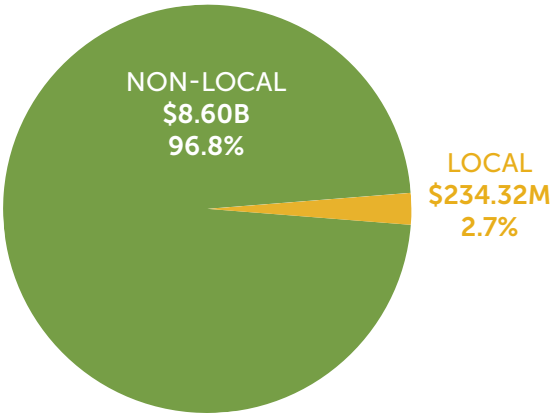
Source: Grocery Gap Analysis, State Report: Rhode Island.

ESTIMATED TOTAL AND LOCAL FOOD SPENDING IN RHODE ISLAND, 2022

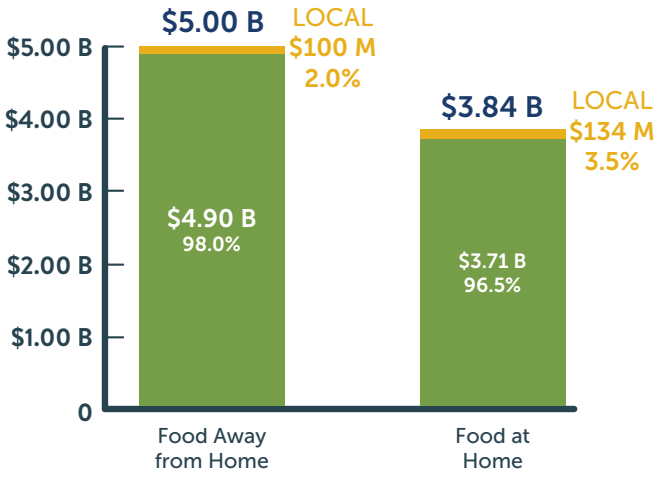
NO TREND

In 2022, New England Feeding New England conducted a local food count in each of the six states. In 2022, spending on food and alcohol for at home consumption totaled $3.84 billion, or 43.4%, of the state total, with the remaining $5.0 billion (56.6%) spent at restaurants and other venues away from home. Spending across just five channels, grocery stores, supercenters, food stores, and limited-service and full-service restaurants accounted for nearly 70.0% of total state food and alcohol sales. Spending on regionally-sourced products was estimated at $134 million for food and alcohol purchased for at home consumption and $100 million for food and alcohol consumed away from home, or 2.7% ($234 million) of total food and alcohol spending in the state

TOTAL:
$8.84 billion



By Market Channel



Source: New England Feeding New England, Rhode Island Local Food Count, 2022. Presented in original 2022 dollars. Food Away from Home refers to dining out at restaurants, including fast food. Food at Home refers to groceries purchased for preparation at home.

Food Access and Security

What are the trends in food security in Rhode Island? What are the disparities in how Rhode Islanders are impacted by food access challenges?

Rhode Island, like the rest of the country, has essentially made no progress reducing food insecurity rates over the past 20 years. The Great Recession increased the percentage of Rhode Islanders in poverty—and the percentage of food insecure Rhode Islanders—for several years. These percentages then decreased for several years before the COVID-19 pandemic elevated them once again.

There are different methodologies for measuring food insecurity, with two depicted here: the **RI Life Index** estimated higher rates of food insecurity for all Rhode Island households—particularly Hispanic and Black households—than the official **USDA** food insecurity estimates. The **Rhode Island Community Food Bank** also tracked a steep increase in people served by the charitable food system as a result of the COVID-19 pandemic.

Hispanic/Latino, Black, Indigenous, Asian, Biracial, and other Rhode Islanders make up 31.3% of the state's population, and 28.1% these households received SNAP benefits, compared to 9.6% of White households. 53.0% of non-White Rhode Islanders also live in low-income low-access census tracts, compared to 17.8% of White Rhode Islanders.

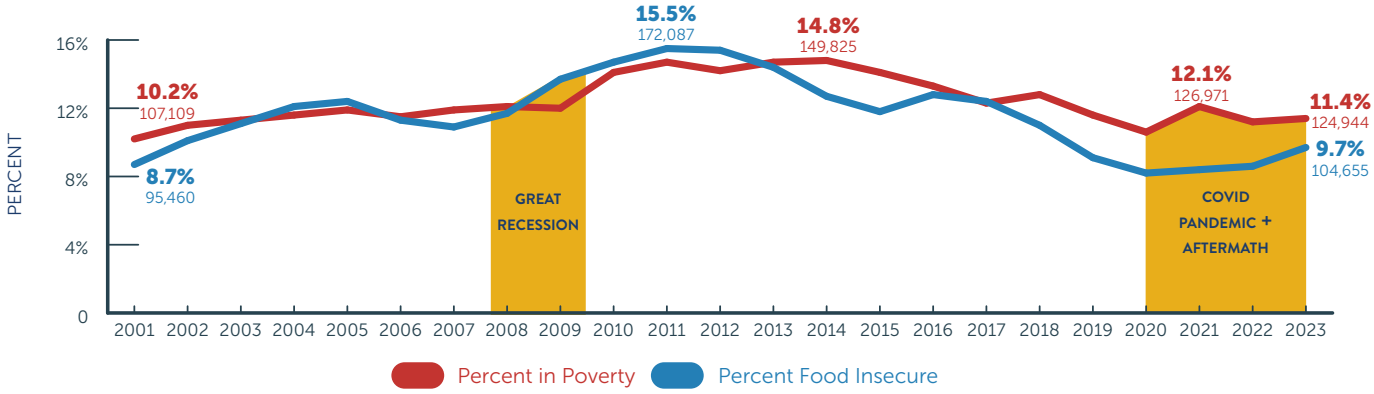
KEY STATS

	2024 FACTBOOK	2025 FACTBOOK	LONG-TERM TREND	
% IN POVERTY	11.2% 2022	11.4% 2023	12.4% 2001-2023	—
% FOOD INSECURE	8.6% 2022	9.7% 2023	11.6% 2001-2023	—
PEOPLE SERVED BY FOOD BANK	77,500 2023	84,400 2024	+25,400 2016-2024	↗
	NEW INDICATOR			
% NONWHITE HOUSEHOLDS RECEIVING SNAP BENEFITS	34.8% 2018 5-year average	28.1% 2023 5-year average	-5.5% Change from 2013 to 2023	—
% WHITE HOUSEHOLDS RECEIVING SNAP BENEFITS	11.2% 2018 5-year average	9.6% 2023 5-year average	-0.3% Change from 2013 to 2023	—

POVERTY AND FOOD INSECURITY, 2001-2023

NO TREND

The percent of Rhode Islanders in poverty gradually increased from 2001 to 2009. Poverty then jumped several percentage points due to the Great Recession and lingered at over **14%** for six years. Poverty then decreased from 2014 to 2019, although it did not go below the percentage in 2001. The COVID-19 pandemic then spiked the percent of Rhode Islanders in poverty to **12.1% (126,971 people)**, before decreasing to **11.4% (124,944 people)** in 2023. **Food insecurity in Rhode Island mirrors poverty trends and has recently increased.**



Sources: U.S. Census Bureau Small Area Income and Poverty Estimates (via FRED) and USDA Economic Research Service, Household Food Security in the United States, multiple years. USDA estimates of food insecurity are based on 18 questions contained in the Food Security Supplement administered by the Current Population Survey to about 50,000 households across the country. State-level estimates are obtained by averaging 3 years of data (e.g., 2021-2023) to generate large enough sample sizes for each State to produce reliable estimates. Response rate for 2023 = 69.3%. Note: number of households were converted into number of people.

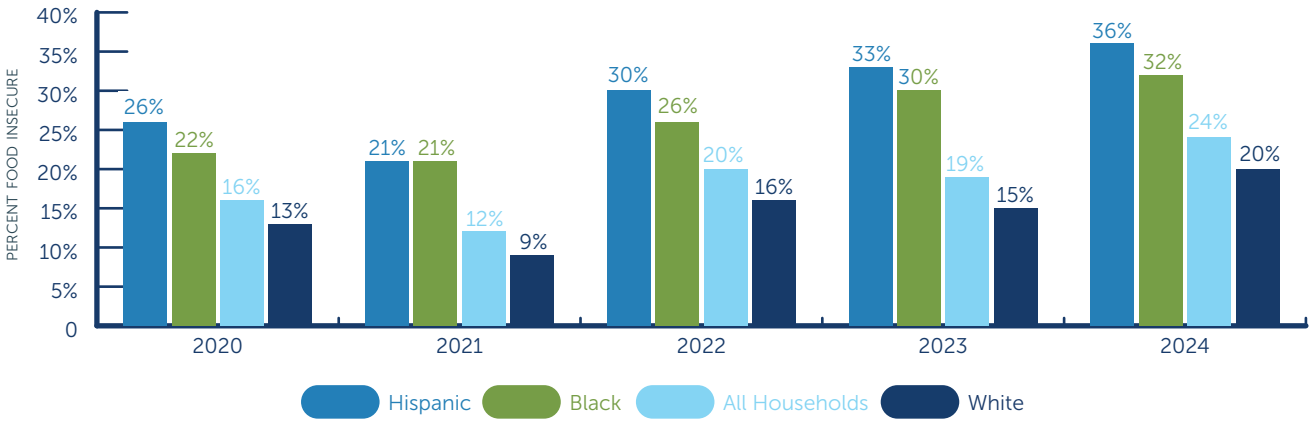
FOOD INSECURITY (RI LIFE INDEX), 2020-2023

NEGATIVE TREND

The RI Life Index asks Rhode Islanders two types of food security questions: actual experiences about food security and perceptions of community access to nutritious food. Unfortunately, questions about actual experiences with food security were not asked in 2019, so we do not have a pre-COVID estimate. Available data suggests that Hispanic and Black Rhode Islanders had higher percentages of food insecurity than White Rhode Islanders at the start of the COVID pandemic. Percentages of food insecure Rhode Islanders then decreased in 2021, probably due to an uptick in federal benefits. Percentages of food insecurity for all respondents then increased in 2022, 2023, and 2024, possibly as some federal benefits ended.

Respondents were asked to respond "almost always true," "true most of the time," "sometimes true," or "never true" to two statements: *1) We worried whether our food would run out before we got money to buy more in the last 12 months;* and *2) The food we bought just didn't last and we didn't have money to get more.*

Percentages reflect respondents who answered "almost always true," "true most of the time," and "sometimes true."

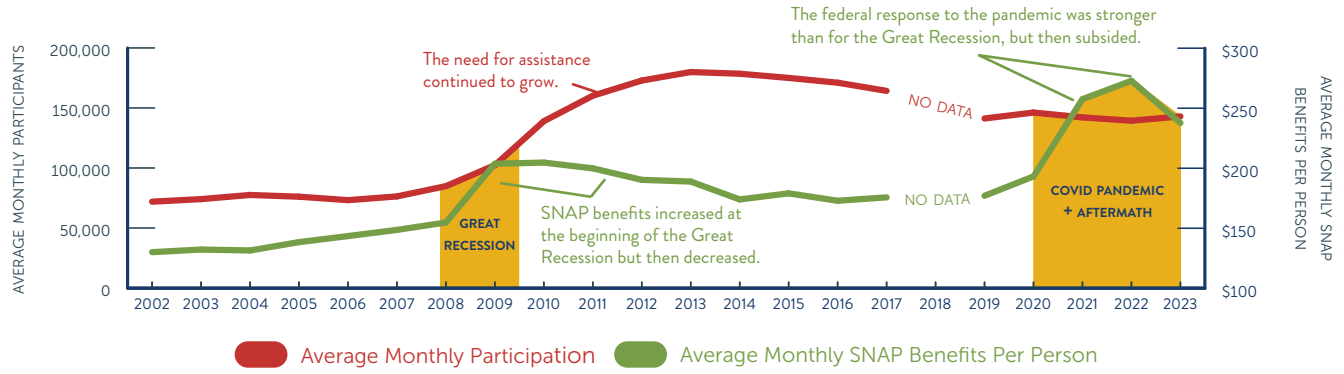


Source: RI Life Index. The RI Life Index was created by Blue Cross & Blue Shield of Rhode Island and the Brown University School of Public Health in 2019. It has been administered to over 2,000 Rhode Islanders every year since 2019. The response rate for 2024 was 4.3%.

SNAP PARTICIPATION AND BENEFITS, 2002-2023

NEGATIVE TREND

Periods of economic turbulence that increase unemployment and poverty also triggered the need for supplemental assistance. With the Great Recession, the need for assistance remained high for many years after its official end. Benefits introduced during the COVID pandemic—such as universal school meals and funding for emergency food delivery systems—may have reduced families' need for SNAP benefits. However, these benefits have mostly ended.

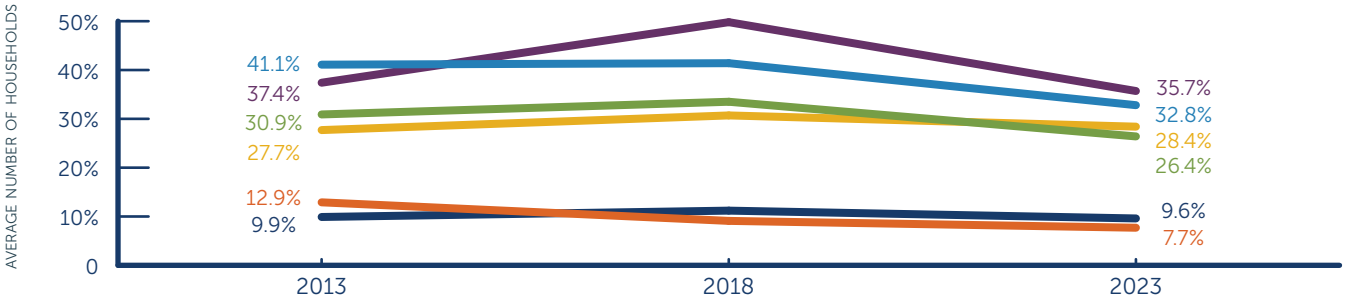


Source: KFF SNAP Benefits.

SNAP PARTICIPATION BY RACE/ETHNICITY

NO TREND

The average number of households participating in SNAP increased slightly from 14.4% in 2013, to 14.9% in 2023. The percentage of Indigenous, Hispanic/Latino, Black, and biracial households participating in SNAP seemingly decreased from 33.6% in 2009 to 28.1% in 2023. Nevertheless, the percentage of Indigenous, Hispanic/Latino, Black, and biracial households participating in SNAP remains 17-28% higher than for White and Asian households.

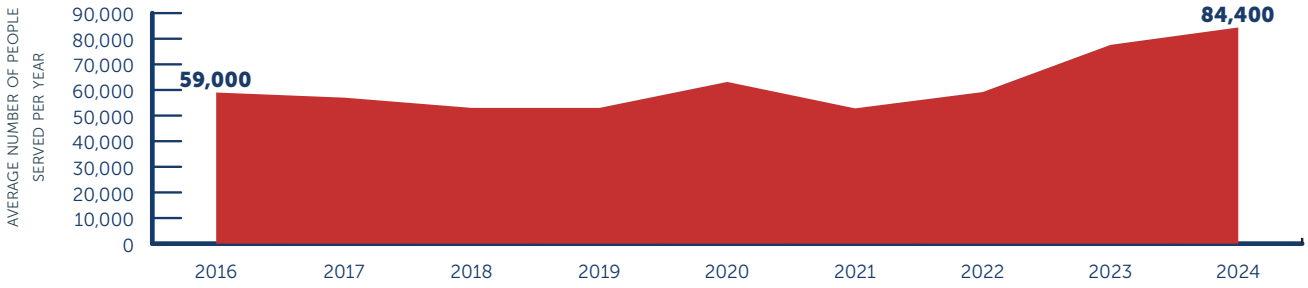


Source: American Community Survey, Receipt of Food Stamps/SNAP in the Past 12 Months by Race of Householder. Note: each year represents an average of five years (e.g., 2013 equals average number of households participating in SNAP in 2009, 2010, 2011, 2012, and 2013).

AVERAGE NUMBER OF PEOPLE SERVED BY CHARITABLE FOOD SYSTEM

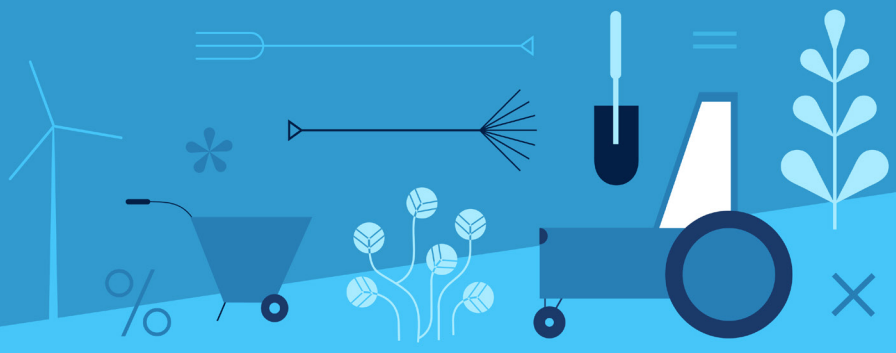
NEGATIVE TREND

In 2024, the Rhode Island Community Food Bank estimated that a record number of Rhode Islanders—**84,400**—sought assistance through the Food Bank and its network of 147 member agencies. High food prices due to supply chain disruptions—like the COVID-19 pandemic, war in Ukraine, and avian influenza outbreak—and the ending of emergency SNAP benefits in 2023 are thought to be the primary drivers of the increased need for food assistance.



Source: Rhode Island Community Food Bank, Status Report on Hunger in Rhode Island, multiple years.

Agriculture and Land Use



What kinds of agricultural products are grown/raised in Rhode Island? Is Rhode Island's agricultural sector growing or contracting?

Due to its small land area, Rhode Island had the lowest amount of land in agriculture—**59,076 acres**—and the second lowest agricultural sales—**$86.6 million***—of any state in 2022. A consequence of Rhode Island's relatively small land base, coupled with intense development pressure, is that it has the most expensive farmland in the country: **$22,000 per acre.** From 1945 to 2022, farmland as a percentage of Rhode Island's total land area decreased from 40% (264,734 acres) to 8.9% (59,076 acres).

Rhode Island is heavily invested in inedible products. **Greenhouses/nurseries/floriculture accounted for 21.9% (231) of farms and 63.5% ($55.0 million) of sales in 2022.** Acreage for vegetables, fruits, and berries equaled **18.8% (2,519 acres)** of harvested cropland and 5.5% of total land in agriculture. In 2022, 2.1% of farms accounted for 49.7% of sales.

** Note: Alaska had the lowest value of agricultural sales in 2022. Rhode Island's estimate does not include the value of aquaculture production reported in the 2022 Census of Agriculture. The value of aquaculture is shared in the next section.*

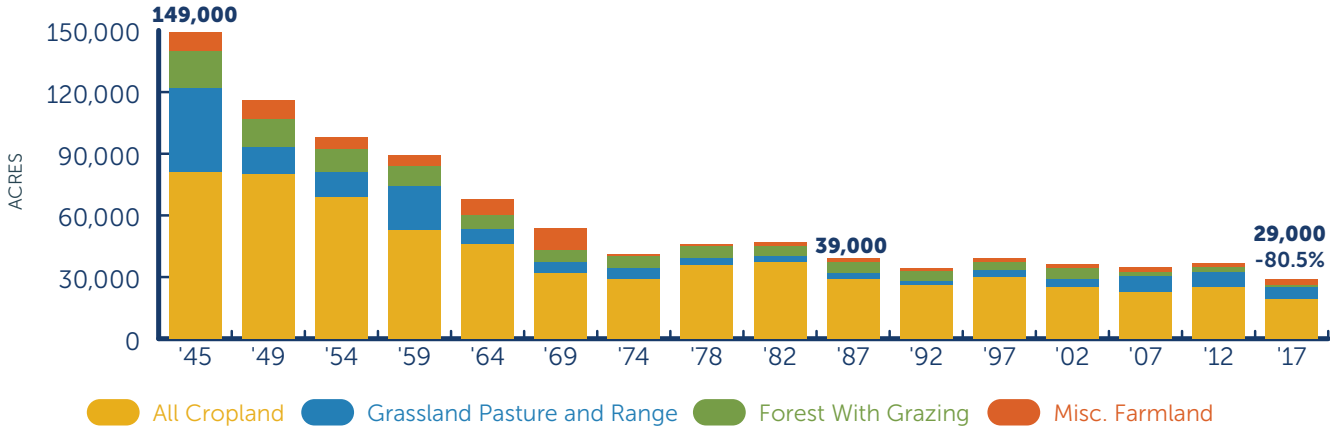
KEY STATS

	2024 FACTBOOK	2025 FACTBOOK	LONG-TERM TREND
MAJOR LAND INVENTORY	36,647 (2012)	29,000 (2017)	-120,000 (1945-2017) ↘
AG CENSUS ACRES	56,864 (2017)	59,076 (2022)	-1,745 (2002-2022) ↘
FARMLAND VALUE/ACRE	$18,874 (2023)	$22,000 (2024)	+$1,745 (2006-2024) ↗
TOTAL SALES (DOES NOT INCLUDE USDA AQUACULTURE ESTIMATES)	$80,394,004 (2017)	$86,647,303 (2022)	+$6,253,299 (2017-2022) ↗
SALES BY ECONOMIC CLASS	0.5% farms accounted for 28.8% of sales (2017, farms with sales >$1 million)	2.1% farms accounted for 49.7% of sales (2022, farms with sales >$1 million)	Widening gap ↗
RACE OF FARMER	98% White (2017)	97% White (2022)	+53 Non-White Farmers (1992-2022) —

MAJOR AGRICULTURAL LAND USES IN RHODE ISLAND, 1945-2017

NEGATIVE TREND

The USDA's Major Land Uses series is the "longest running, most comprehensive accounting of all major land uses of public and private land in the United States." This series shows a steep decrease in land in agriculture in RI after World War II that flattens out around 1987. Since then, acreage has remained ≈36,000 acres, comprised mostly of cropland. Acreage then dropped steeply to 29,000 acres in 2017.

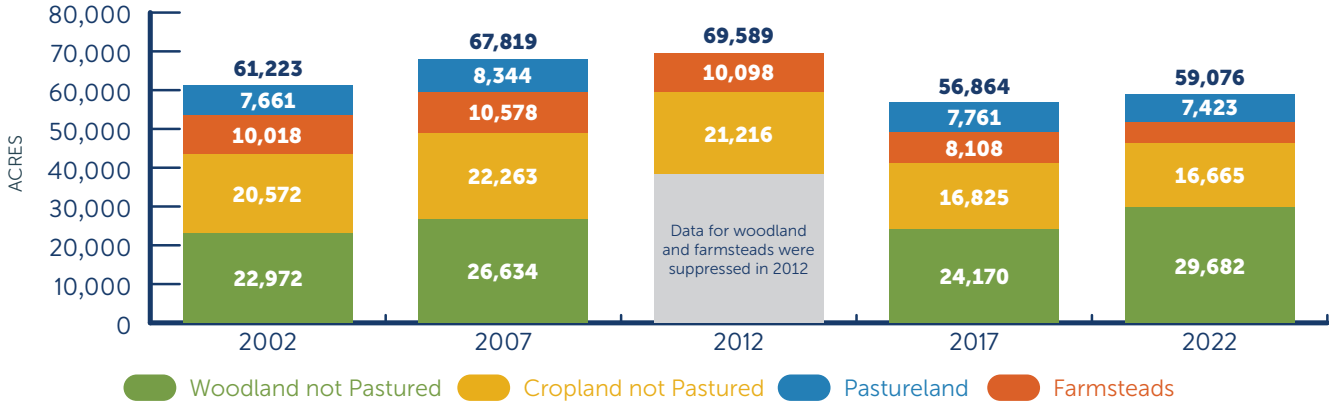


Source: USDA Major Land Uses. Data for 2022 has not been published. Note: the Major Land Uses series designates "forest with grazing" and *not* the total amount of forest land (i.e., "woodland") owned by farmers, as shown in the figure below.

LAND IN AGRICULTURE, 2002-2022

NEGATIVE TREND

The 2022 Census of Agriculture estimates a larger amount of land in agriculture than the Major Land Uses series because it includes *all* woodland owned by a farm. Land in agriculture is estimated to have increased from 2002 to 2012, decreased from 2012 to 2017, and then increased from 2017 to 2022. An important point to emphasize, however, is that cropland, pastureland, and farmstead acreage generally *decreased*, while woodland estimates went up and down. Washington (35%) and Providence (28.7%) counties contain the majority of agricultural land.

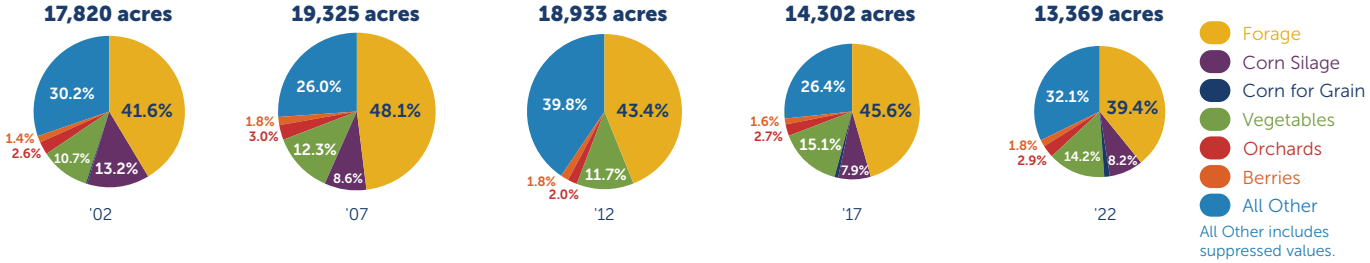


Source: USDA Census of Agriculture, multiple years.

SELECTED CROPS BY ACRES HARVESTED, 2002-2022

NEGATIVE TREND

The amount of harvested cropland decreased by over 4,400 acres from 2002 to 2022. Forage and other animal feed accounted for 49% of harvested cropland in 2022, while vegetables, fruits, and berries made up 19%.

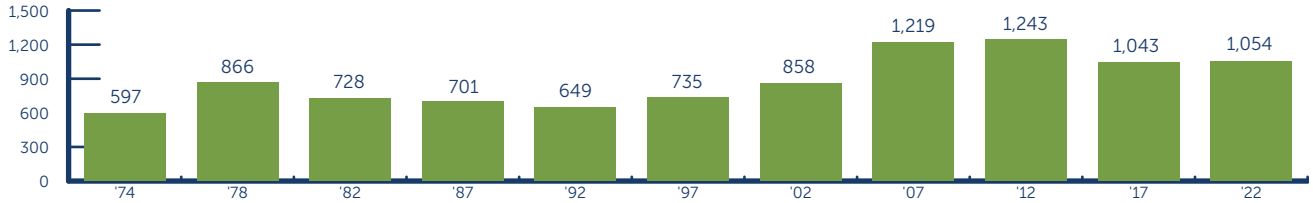


Source: USDA Census of Agriculture, multiple years.

NUMBER OF FARMS IN RHODE ISLAND, 1974-2022

NO TREND

How many farms are in Rhode Island? The Census of Agriculture provides confusing results over the past 48 years. It is unclear why the year-to-year changes are so abrupt, but over 1,000 farms have been counted since 2007.

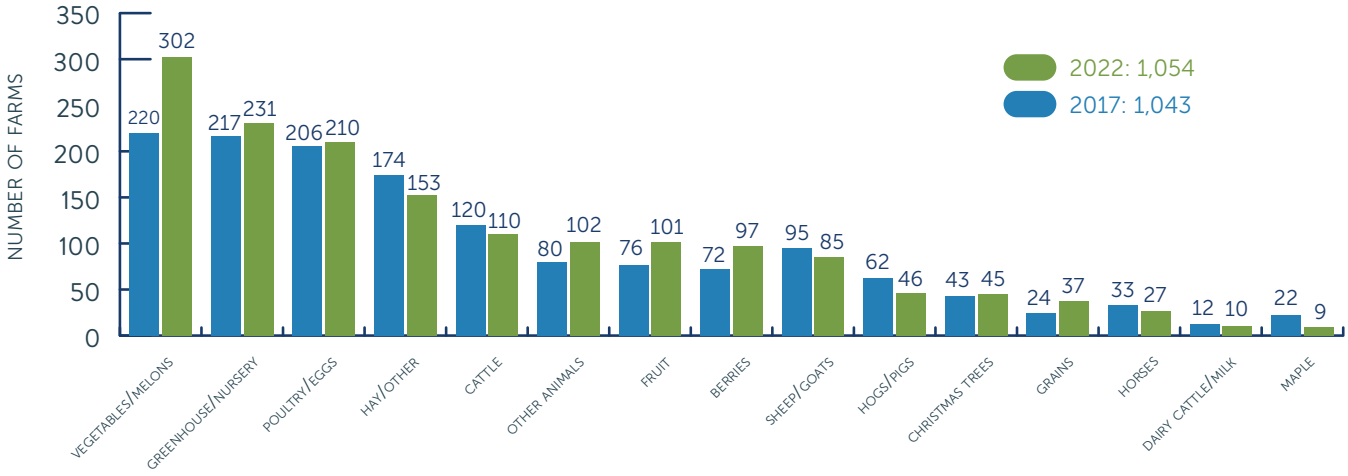


Source: USDA Census of Agriculture, multiple years. Since 1974, the USDA has defined a farm as any place that produces or sells at least $1,000 worth of agricultural products a year.

NUMBER OF FARMS ENGAGED IN EACH CATEGORY, 2017-2022

POSITIVE TREND

The number of farms in Rhode Island was estimated at 1,043 in 2017 and 1,054 in 2022. Note that most farms are engaged in more than one type of agricultural activity. The bars in this figure are not mutually exclusive. Nearly 29% of all farms in Rhode Island grow vegetables/melons, 22% grow greenhouse/nursery products, and 20% raise poultry/eggs.

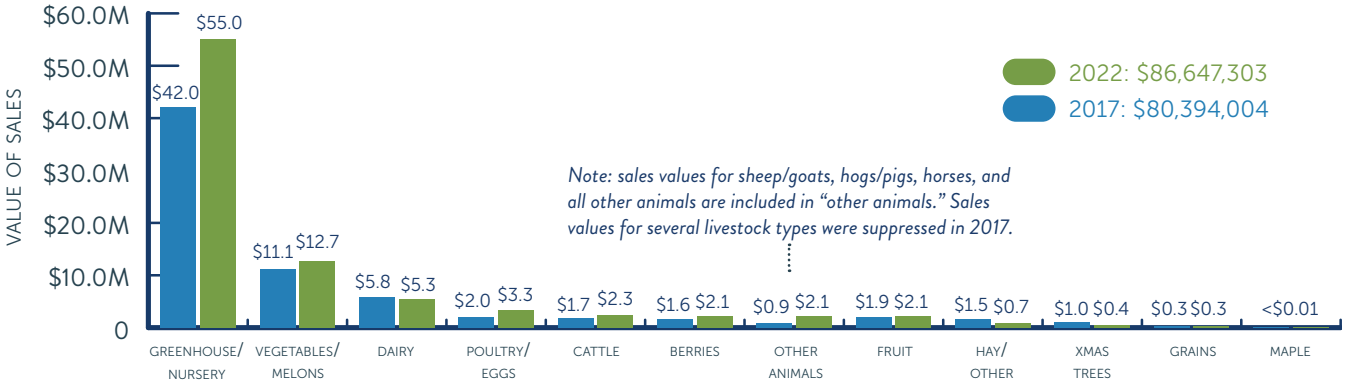


Source: USDA 2017 and 2022 Censuses of Agriculture. Aquaculture farms are not included here. See the next section, Commercial Fisheries & Aquaculture, for more information.

AGRICULTURAL SALES, 2017-2022

POSITIVE TREND

Agricultural sales in Rhode Island increased from $62.4 million in 2017, to $86.6 million in 2022. With its limited landmass, Rhode Island is heavily invested in **inedible products**. Greenhouses/nurseries/floriculture accounted for 21.9% of farms and 63.5% of sales in 2022, and *most* of the sales increase from 2017 to 2022 was due to greenhouse/nursery/floriculture sales.

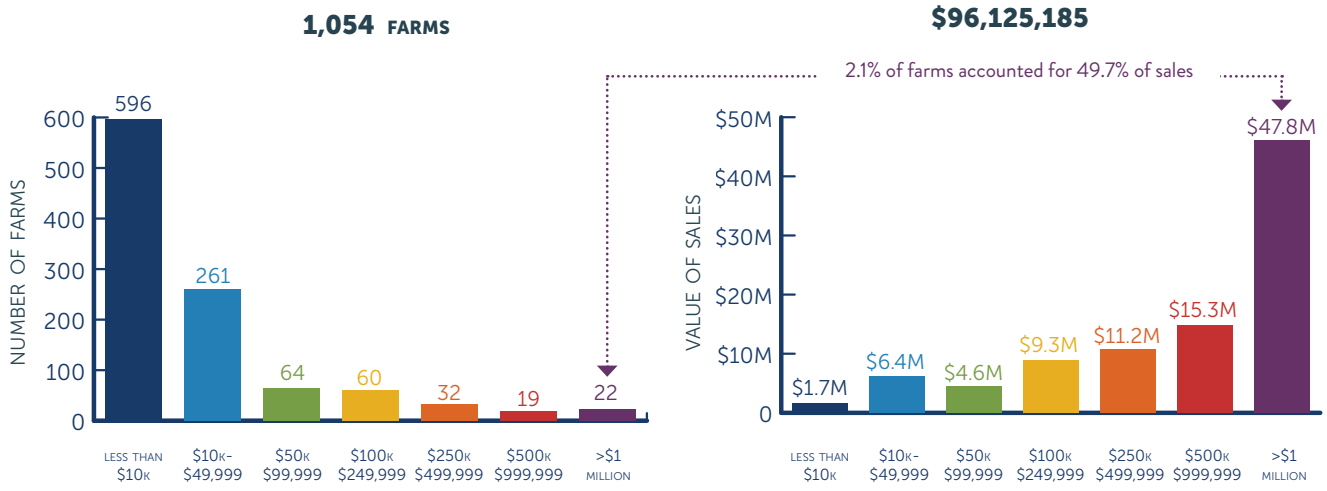


Source: USDA 2017 and 2022 Censuses of Agriculture. Adjusted for inflation to 2024 dollars. Agriculture sales in this figure also do not include agricultural support activities or aquaculture.

NUMBER OF FARMS AND SALES BY ECONOMIC CLASS, 2022

NEGATIVE TREND

As with most states in the country, a fundamental scale asymmetry is evident in Rhode Island agriculture: Small farms make up the majority of farms but they have comparatively limited sales. A small number of large farms—selling mostly nursery/greenhouse/floriculture products—generate the majority of sales.

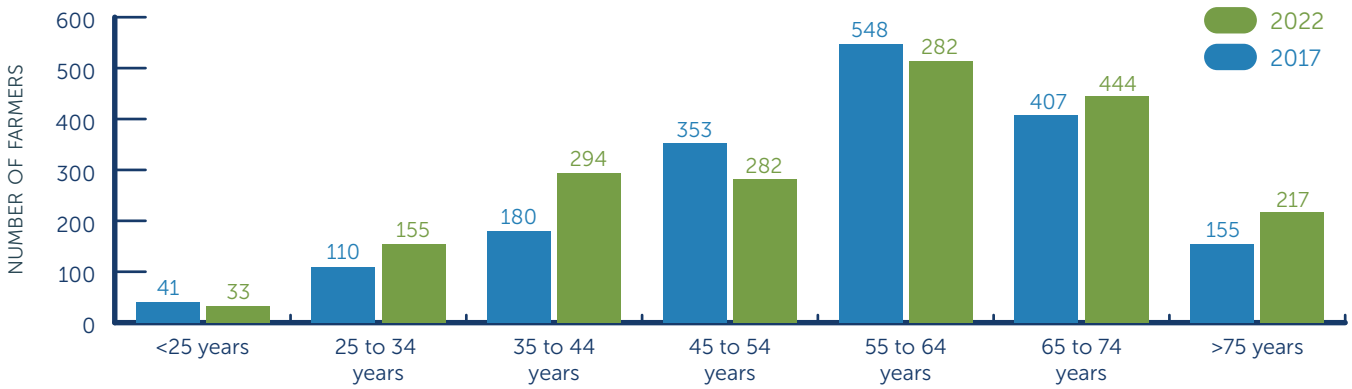


Source: USDA 2022 Census of Agriculture, Table 2: Market Value. Adjusted for inflation to 2024 dollars with produce price indices. Note: number of farms and sales *do* include USDA estimates of aquaculture farms and sales.

FARMER AGE DEMOGRAPHICS, 2017-2022

NO TREND

About 61% of Rhode Island farmers are over the age of 55. The average age of farmers was 56.9 in 2017 and 56.6 in 2022.

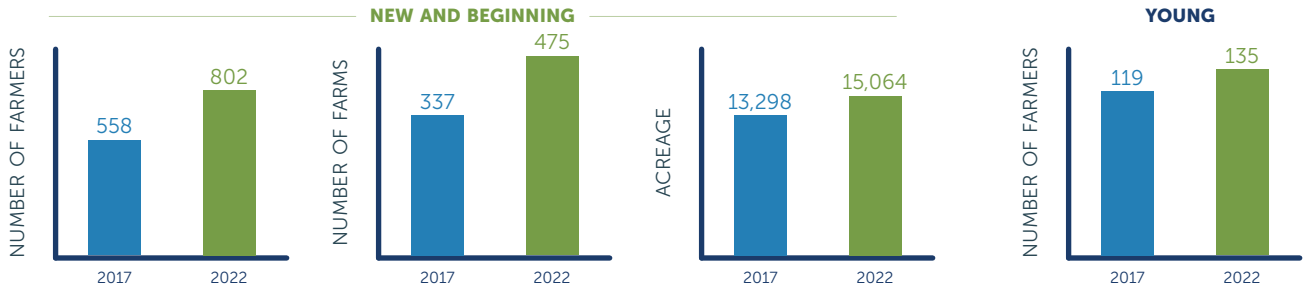


Source: USDA 2022 Census of Agriculture, Table 52: Selected Producer Characteristics.

NEW, BEGINNING, AND YOUNG PRODUCERS, 2017-2022

POSITIVE TREND

The number of new and beginning producers—with 10 or fewer years of experience—increased from 558 in 2017 to 802 in 2022, while the number of farms with a new and beginning producer increased by 138, and farmland acreage increased 1,766 acres. Young producers, under the age of 35, increased by 16.

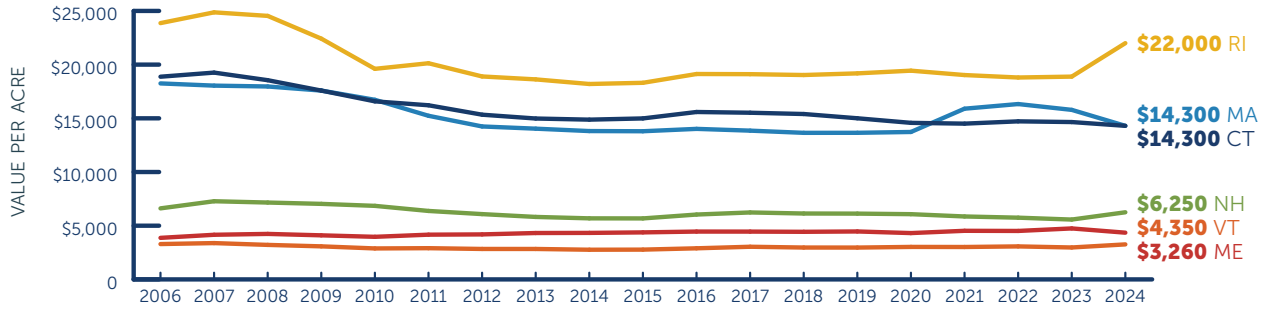


Source: USDA 2022 Census of Agriculture, Table 70: New and Beginning Producers, Table 68: Young Producers.

NEW ENGLAND FARM LAND REAL ESTATE VALUES, 2006-2024

NO TREND

The average price per acre of farm land in Rhode Island has been over **$20,000** for the past 19 years. This is the highest average price per acre in the country.



Source: USDA National Agricultural Statistics Service, August 2024, Land Values 2024 Summary. Reported in 2024 dollars.

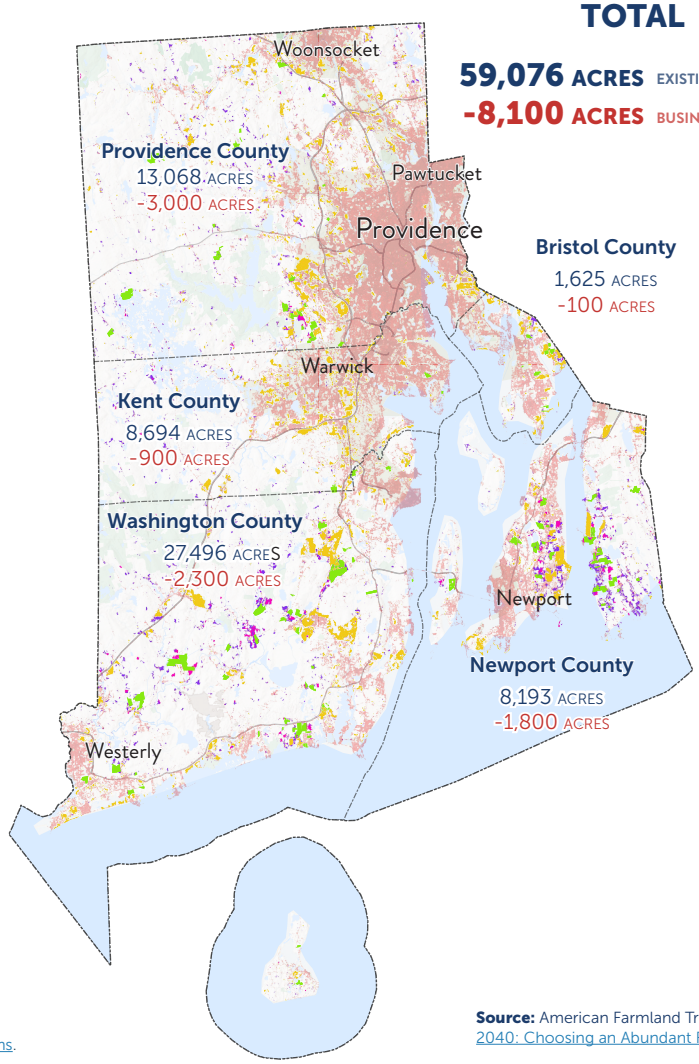
PROJECTED CHANGES IN LAND IN AGRICULTURE, BUSINESS AS USUAL SCENARIO

NEGATIVE TREND

An analysis from the American Farmland Trust (AFT) estimates that Rhode Island could lose an additional **8,100 acres** by 2040 under a "Business as Usual" development scenario (equal to a 13.7% decrease in available farmland) and **9,900 acres** under a "Runaway Sprawl" scenario. AFT projects that **Providence, Washington, and Newport** counties will experience the biggest decreases in land in agriculture.

LAND USES

- CULTIVATED CROPS
- PASTURE/HAY
- EASEMENT
- DEVELOPED LAND
- PROJECTED URBAN AND HIGHLY DEVELOPED AND LOW-DENSITY RESIDENTIAL



Land in Agriculture by County, 2017-2022 (Acres)

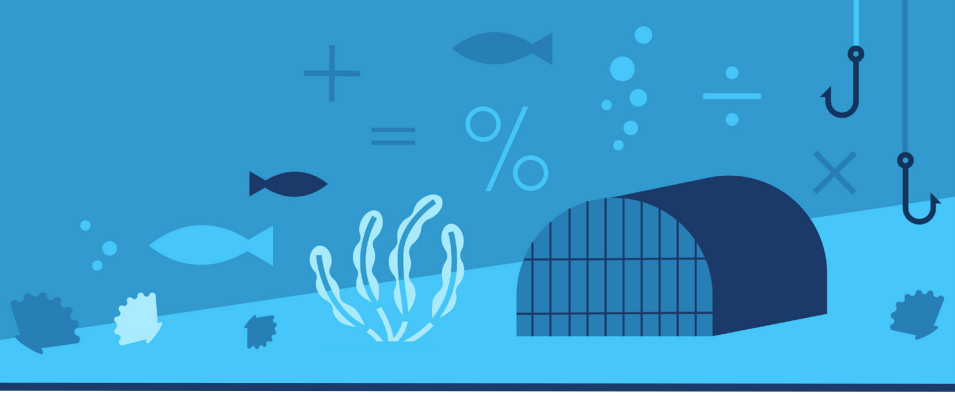
The increase in farmland in Rhode Island from 2017 to 2022 was mostly due to a 7,630 acre estimated increase—consisting mostly of *woodland*—in Washington County. Acreage decreased in Kent, Newport, and Providence counties.

County	2017	2022
Bristol	1,331	1,625
Kent	9,626	8,694
Newport	9,713	8,193
Providence	16,328	13,068
Washington	19,866	27,496
Total	**56,864**	**59,076**

Source: USDA 2022 Census of Agriculture, Table 8: Land in Farms.

Source: American Farmland Trust, Farms Under Threat 2040: Choosing an Abundant Future.

Commercial Fisheries & Aquaculture



What kinds of seafood products does Rhode Island catch and harvest? Are commercial fishing and aquaculture growing or contracting?

More than 100 species are caught or harvested by Rhode Island fishermen, but **15 species account for the majority of seafood pounds and sales.** Rhode Island has the second largest and most diversified fishing port in the region—Point Judith—supported by a state-owned port infrastructure that prioritizes the needs of the commercial fishing industry. However, local markets are lacking for many of these species, and currently most of Rhode Island's catch is shipped overseas for processing, a situation that makes it difficult for local and New England consumers to access Rhode Island's fresh local fish.

Although landings increased from 2022 to 2023, sales were down, and the long-term trend for landings and sales is down. The number of fishermen contributing to the harvest of each species has also decreased from 2019 to 2023.

Acres devoted to aquaculture and aquaculture sales continue to incrementally grow.

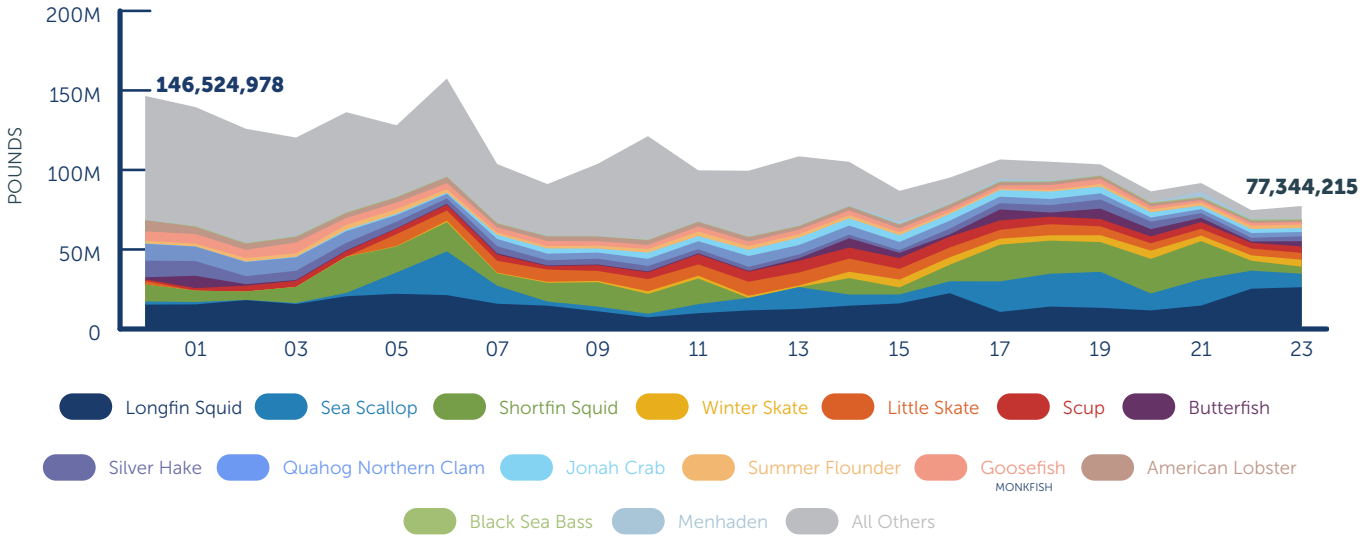
KEY STATS

	2024 FACTBOOK	2025 FACTBOOK	LONG-TERM TREND	
LANDINGS (POUNDS)	74,701,068 (2022)	77,344,215 (2023)	-69,180,763 (2000-2023)	↘
SALES	$106,789,777 (2022)	$89,639,504 (2023)	-$75,756,946 (2000-2023)	↘
# OF FISHERMEN HARVESTING	Example: Black sea bass 527 (2022)	Example: Black sea bass 506 (2023)	# of fishermen harvesting most species declined from 2019 to 2023	↘
AQUACULTURE ACRES	374 (2022)	384.3 (2023)	+330.6 (2002-2023)	↗
AQUACULTURE SALES	$8,364,885 (2022)	$8,496,065 (2023)	+≈$8 million (2002-2023)	↗

COMMERCIAL SEAFOOD LANDINGS, 2002-2023

NEGATIVE TREND

Total pounds of seafood landed by commercial Rhode Island fishermen decreased by **47.2%** from 2000 (146 million pounds) to 2023 (77 million pounds), although seafood landings have been relatively consistent over the past 13 years. Together, longfin and shortfin squid accounted for 40% of pounds landed in 2023.

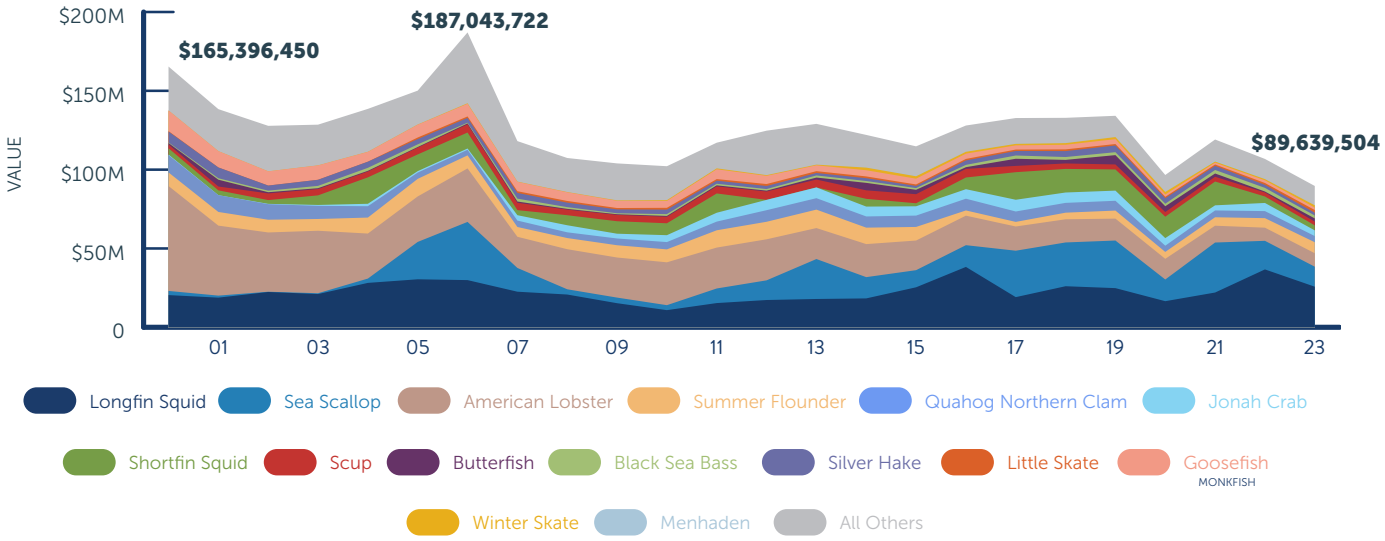


Source: Atlantic Coastal Cooperative Statistics Program. Note: Live pounds are used here.

VALUE OF COMMERCIAL SEAFOOD LANDINGS, 2002-2023

NEGATIVE TREND

Except for a spike in 2006 and a valley in 2020 due to the COVID-19 pandemic, the total value of seafood landed by Rhode Island fishers has been *relatively* consistent over the past 23 years at over $100 million. Longfin squid (29.2%) and sea scallop (14.4%) accounted for 43.6% of the value.

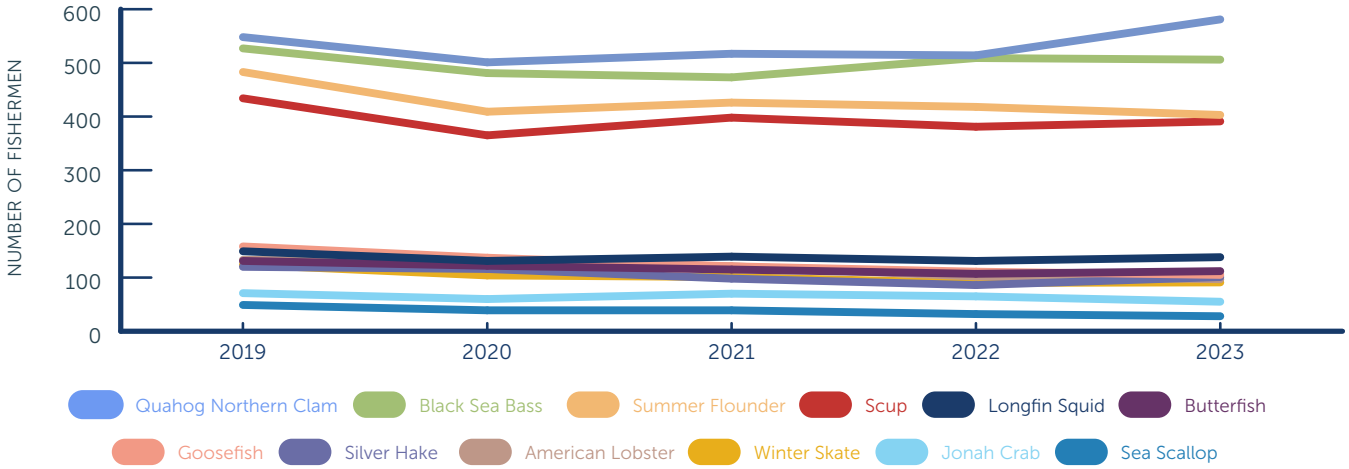


Sources: NOAA Fisheries and the Atlantic Coastal Cooperative Statistics Program. Adjusted for inflation to 2024 dollars using producer price indices.

NUMBER OF FISHERMEN CONTRIBUTING TO HARVEST BY SPECIES

NEGATIVE TREND

Except for Quahogs, the number of fishermen contributing to the harvest of Rhode Island's top 15 species (by weight) has decreased from 2019 to 2023. Quahogs (581), Black sea bass (506), summer flounder (403), and scup (391) have the most fishermen that harvest them. Sea scallop (-42.9%), shortfin squid (-35.7%), and goosefish (-33.5%) experienced the biggest percent decreases.



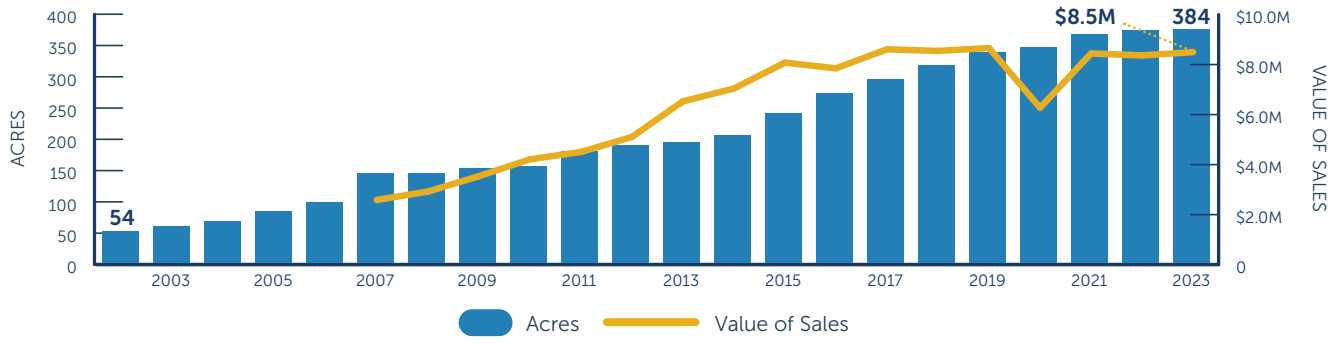
Species	2019	2020	2021	2022	2023	% Change
Quahog Northern Clam	548	501	517	514	581	6.0%
Black Sea Bass	527	481	473	509	506	-4.0%
Summer Flounder	483	409	426	418	403	-16.6%
Scup	434	365	398	381	391	-9.9%
Longfin Squid	149	131	139	131	138	-7.4%
Butterfish	131	122	115	107	112	-14.5%
Goosefish	158	137	121	111	105	-33.5%
Silver Hake	120	116	98	86	101	-15.8%
American Lobster	133	130	121	102	97	-27.1%
Winter Skate	124	104	101	90	91	-26.6%
Jonah Crab	71	60	70	65	55	-22.5%
Sea Scallop	49	39	39	32	28	-42.9%

Source: Rhode Island Department of Environmental Management Division of Marine Fisheries, 2024, Rhode Island Annual Fisheries Report: 2023. Little skate, shortfin squid, and menhaden not shown at this scale.

AQUACULTURE PRODUCTION, 2002-2023

POSITIVE TREND

Eastern oysters, the most valuable seafood species coming out of Rhode Island waters, account for about 98% of all Rhode Island aquaculture production. Rhode Island has experienced steady growth in its aquaculture industry over the past 20 years, from 54 acres in 2002, to 384 acres in 2023. Aquaculture sales were about $315,000 in 2002 and over $8.5 million in 2023. Sales dipped dramatically in 2020 due to the COVID-19 pandemic since most Eastern oysters are served in restaurants. Sales subsequently rebounded to a little more than $8 million from 2021 to 2023.



Source: Coastal Resources Management Council. Adjusted for inflation to 2024 dollars using unprocessed shellfish producer price index. PPI values are not available prior to 2007.

Climate Change

How is climate change impacting Rhode Island's food system?

Global greenhouse gas emissions continue unabated, although U.S. emissions seemingly peaked in 2000. 2024 was the warmest year on record and the past ten years—2015-2024—were the ten warmest on record. The use of fossil fuels is the major driver of greenhouse gas emissions, but food system activities like cultivating crops, raising livestock, and land use changes, are also major drivers of climate change. *And* food systems are particularly vulnerable to climate change. Less distinct seasons, milder winters, earlier spring conditions, and more unpredictable weather are expected to impact agricultural production in Rhode Island.

Long term estimates suggest that the overall climate in Rhode Island will become wetter and warmer in coming decades. The Atlantic Ocean supports tourism, recreation, and economic activities, including fisheries. Some evidence shows that **cold-water iconic fishery species like cod, winter flounder, hake, and lobster are migrating out of Rhode Island waters, while warm-water species like scup, butterfish, black sea bass, and winter squid are moving in.**

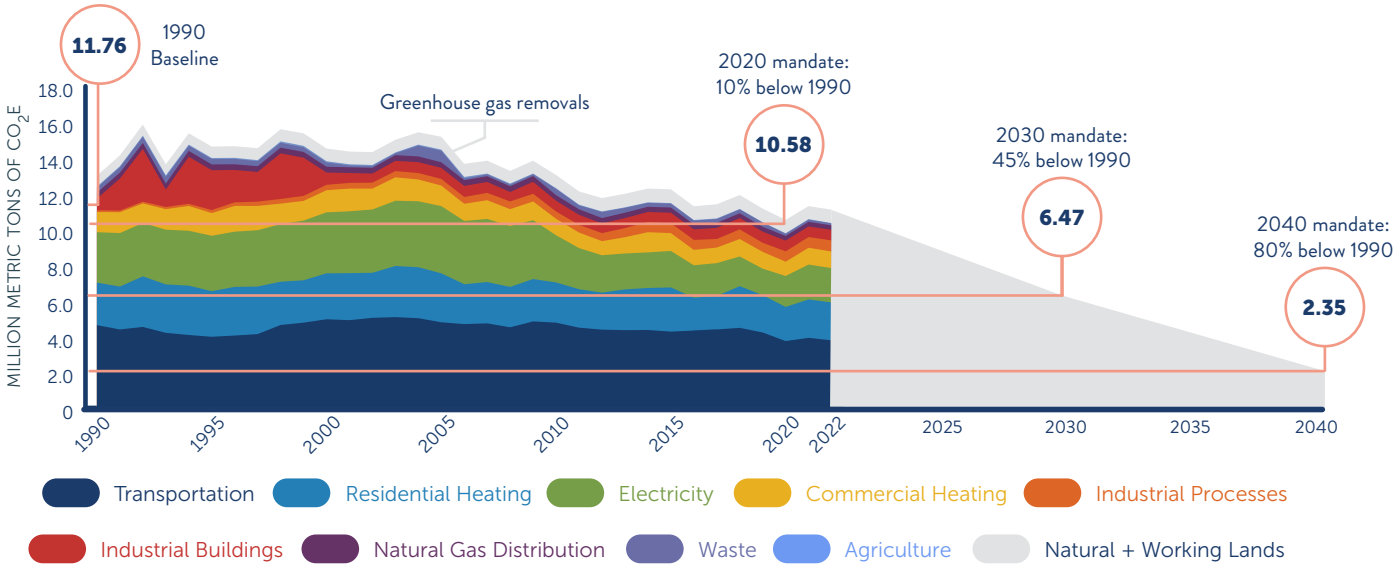
KEY STATS

	2024 FACTBOOK	2025 FACTBOOK	LONG-TERM TREND	
NET GHG EMISSIONS	9.03 (2020)	9.60 (2022)	-1.96 $MMTCO_2E$	↘
AVERAGE AIR TEMPERATURE	52.7°F (2023)	52.3°F (2024)	2024 compared to average +5.0°F (1990-2022)	↗
BILLION DOLLAR DISASTERS	32 (2023)	34 (2024)	1.8 Events/year 2020-2024	↗
	NEW INDICATORS			
GULF OF MAINE SST ANOMALY	0.72°F (2023)	1.33°F (2024)	+1.48°F (1983-2024)	↗
METRIC TONS OF CO_2E FROM SOLID WASTE	15,545 (2021)	4,997 (2022)	-97.3% (1990-2022)	↘

GREENHOUSE GAS INVENTORY, 1990-2022

POSITIVE TREND

Net greenhouse gas emissions decreased **18.3%** from 11.76 MMCO2e in 1990, to **9.60 MMCO2e in 2022**. Transportation continues to be the largest source of emissions in Rhode Island. Emissions reductions for transportation from 2019 to 2020 are likely due to pandemic restrictions on travel (e.g., -79.6% for aviation emissions). Additional substantial decreases are required to meet 2030 and 2040 mandates.

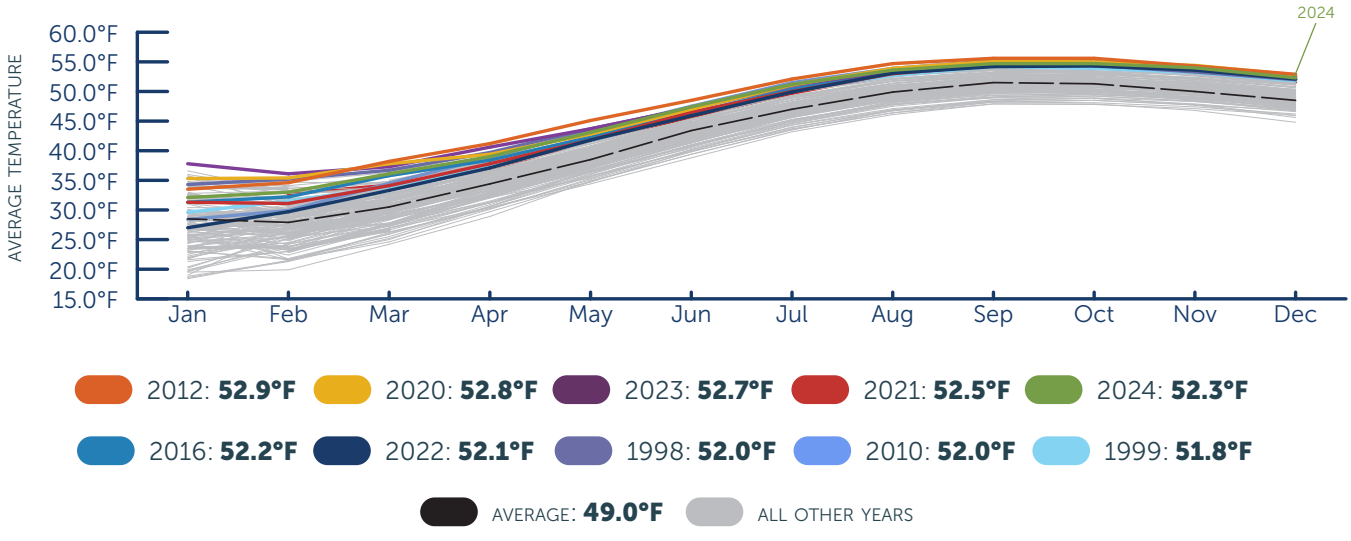


Source: State of Rhode Island Department of Environmental Management, 1990-2022 Rhode Island Greenhouse Gas (GHG) Emissions Inventory.

AVERAGE ANNUAL TEMPERATURE, 1895-2024

NEGATIVE TREND

Eight of the ten warmest years on record in Rhode Island—**2012, 2020, 2023, 2021, 2024, 2016, 2022, 2010,** —have happened since the 2010s. 2024 was the warmest year on record on Earth, and the fifth warmest in Rhode Island. As the Fifth National Climate Assessment warns, "the more the planet warms, the greater the impacts."

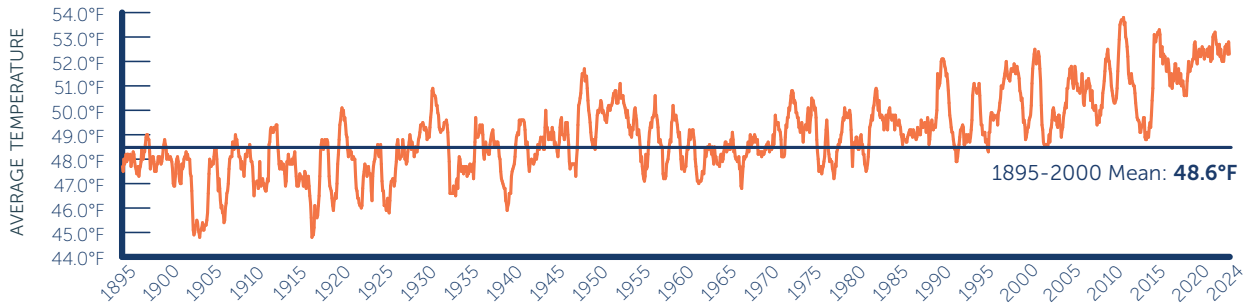


Source: NOAA National Centers for Environmental Information, Climate at a Glance: Statewide Haywoods. Note: NOAA provides slightly different time ranges for estimating mean temperatures. For each graphic, we use the mean date range presented on the data source webpage.

AIR TEMPERATURE ANOMALY, 1895-2024

NEGATIVE TREND

Temperature anomalies are used to indicate how much a temperature departs from a reference period. In this case, the average temperature in Rhode Island from January to December 2024, **52.3°F**, was **3.7°F higher** than the average temperature during the previous century. For the past twenty years, temperatures in every Rhode Island county have regularly been 3-4°F above the twentieth century average.



Source: NOAA, National Centers for Environmental Information, Rhode Island Average Temperature, 12-Month Period. Note: NOAA provides slightly different time ranges for estimating mean temperatures. For each graphic, we use the mean date range presented on the data source webpage.

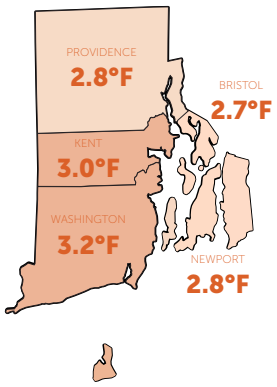
County Air Temperature Anomaly

1901-2000 Mean: **48.6°F**

-9°F -7°F -5°F -3°F -1°F 1°F 3°F 5°F 7°F 9°F

1990

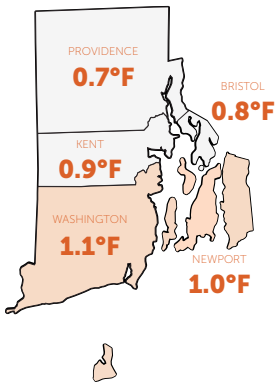
ANOMALY: 2.9°F
14TH WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 1990.

2000

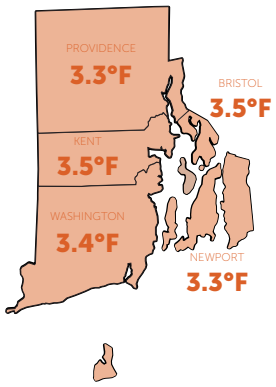
ANOMALY: 0.9°F
40TH WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2000.

2010

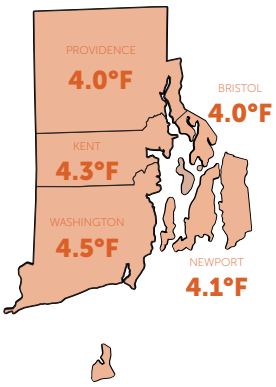
ANOMALY: 3.4°F
8TH WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2010.

2020

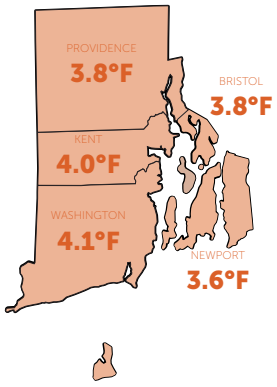
ANOMALY: 4.2°F
2ND WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2020.

2021

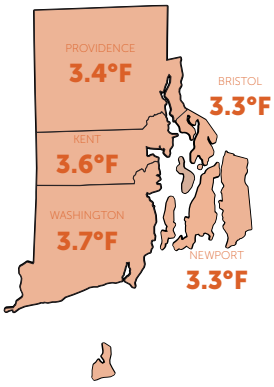
ANOMALY: 3.9°F
3RD WARMEST (TIED)



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2021.

2022

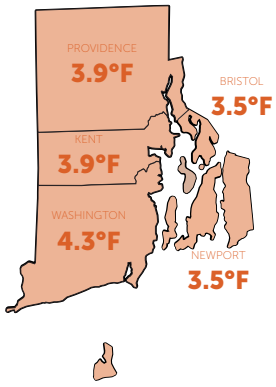
ANOMALY: 3.5°F
7TH WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2022.

2023

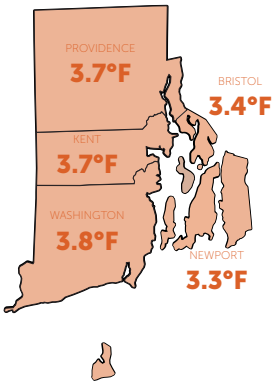
ANOMALY: 4.0°F
3RD WARMEST



Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2023.

2024

ANOMALY: 3.7°F
5TH WARMEST

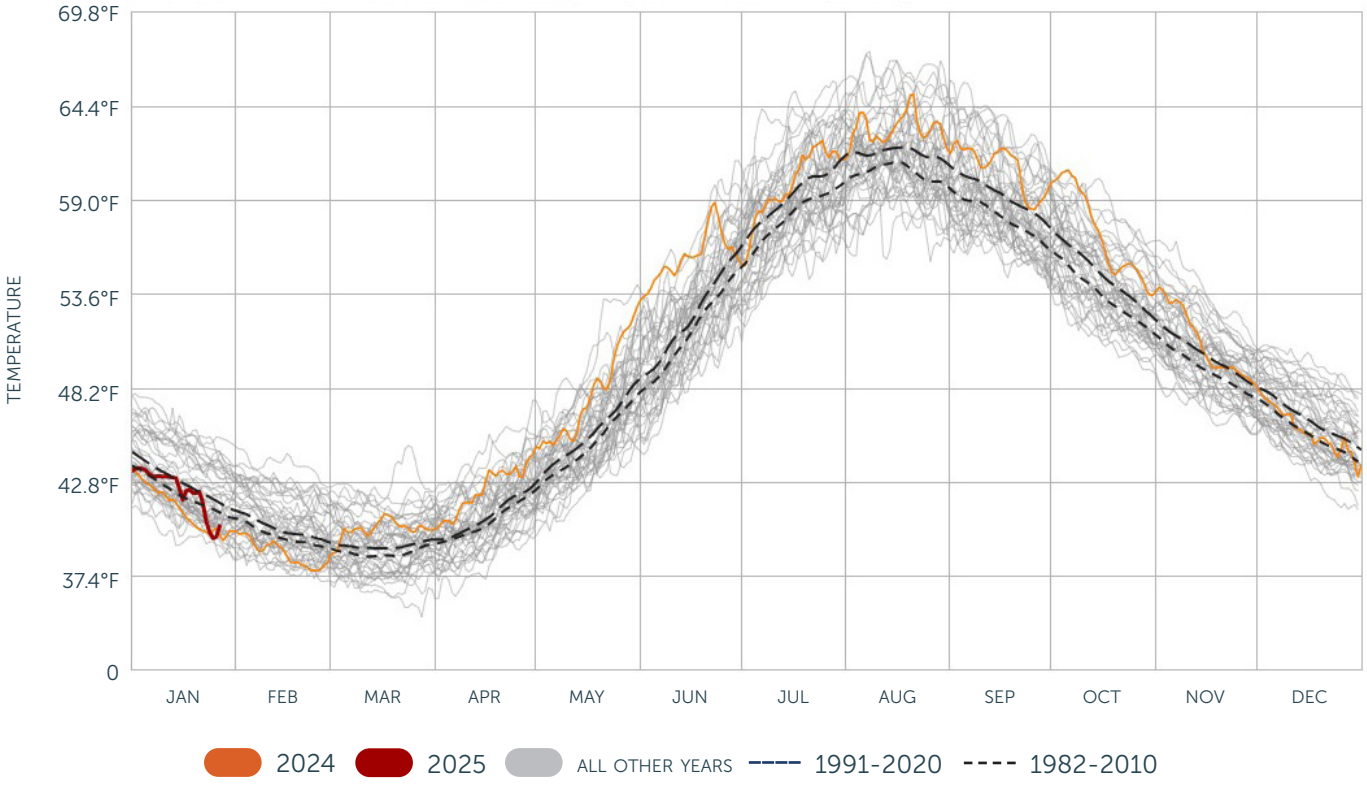


Source: NOAA, National Centers for Environmental Information, County Time Series, January - December 2024.

GULF OF MAINE DAILY SEA SURFACE TEMPERATURE, 1981-2024

NEGATIVE TREND

Sea surface temperatures in the Gulf of Maine in 2024 were the 10th warmest on record. Oceans absorb the majority of the heat caused by climate change. Warmer ocean temperatures—the Northeast Continental Shelf is warming much faster than the global average—sea level rise, acidification, and increased storm frequency and intensity all threaten marine ecosystems and the communities that depend on them in Rhode Island.



Source: ClimateReanalyzer.org, Daily Sea Surface Temperature, Climate Change Institute, University of Maine.

Top 10 Gulf of Maine Warmest Fall Sea Surface Temperature Anomalies

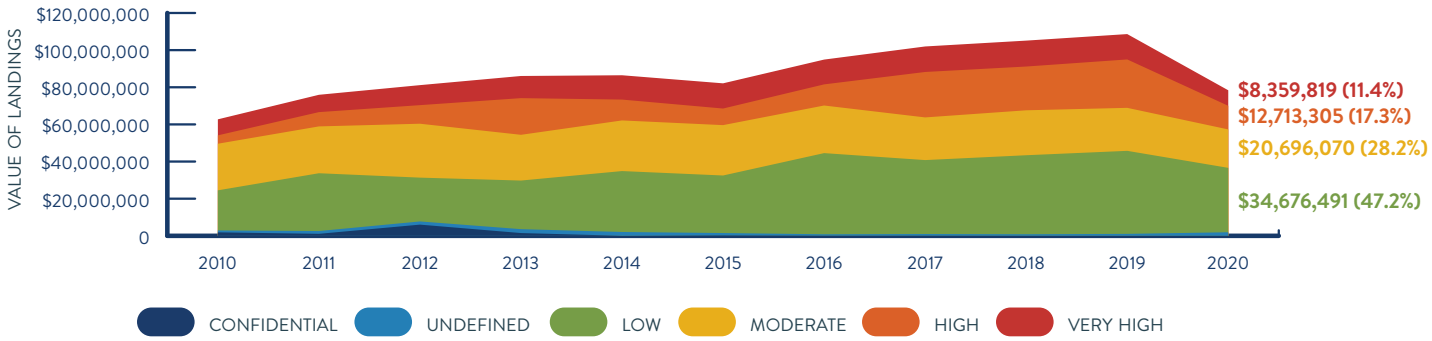
1	2021: **4.00°F**	3	2012: **2.70°F**	5	2015: **2.26°F**	7	2014: **2.09°F**	9	2018: **1.64°F**
2	2022: **3.47°F**	4	2016: **2.36°F**	6	2017: **2.22°F**	8	2020: **1.96°F**	10	2024: **1.33°F**

Source: Gulf of Maine Research Institute, Gulf of Maine Warming Update: Fall 2024.

CLIMATE VULNERABILITY OF RHODE ISLAND SEAFOOD CATCH, '10-'20

NEGATIVE TREND

About **29%** of the value of Rhode Island's seafood catch in 2020 (e.g., sea scallops) was classified as having **very high** or **high** vulnerability to changes in abundance or distribution due to climate change.

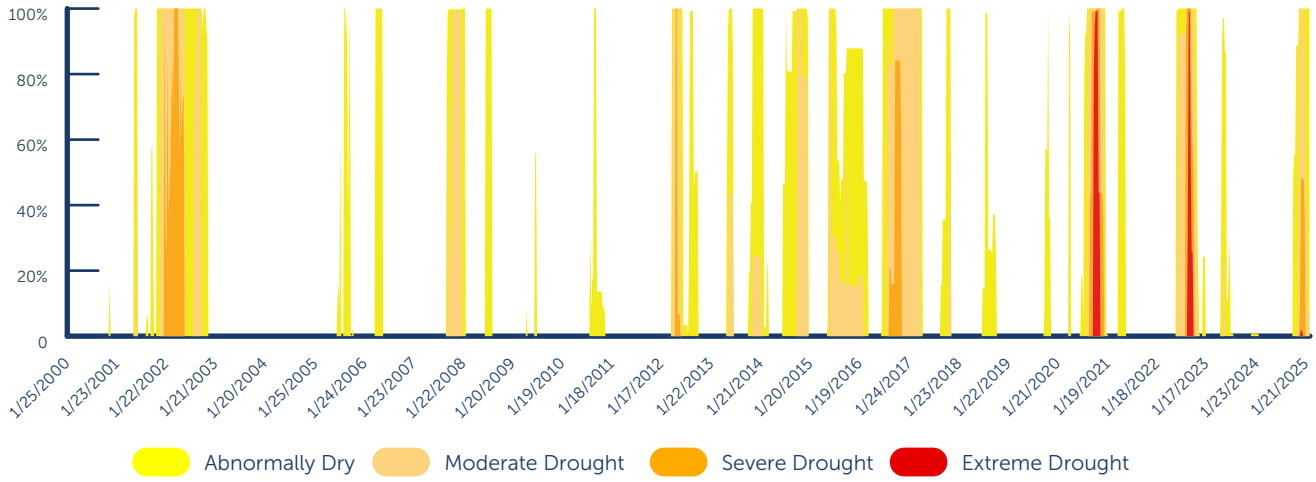


Source: NOAA Fisheries, Northeast Vulnerability Assessment.

PERCENT OF RHODE ISLAND IN DROUGHT, 2000-2024

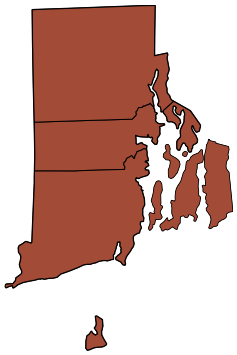
NEGATIVE TREND

Rhode Island has experienced more abnormally dry days during the past 10 years then it did in the early 2000s. This includes an extreme drought in 2020 and 2022. Drought in 2022 harmed the yield and quality of crop production, leading to a USDA natural disaster declaration for the entire state.



Source: U.S. Drought Monitor, State Time Series.

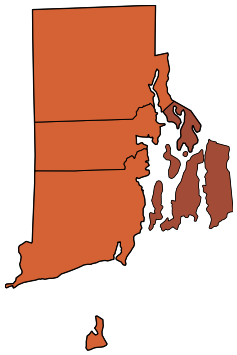
Projected Climate Risk: Water Stress



A 2020 analysis identified the top climate risk in every county of the United States. The highest risks for Rhode Island counties were deemed the destructive power of hurricanes and the possibility of water stress and drought.

HIGH RISK

Projected Climate Risk: Sea Level Rise



From the 1930s to 2022, sea level increased by about 1 foot at Providence and Newport tidal gauges. Sea level is likely to additionally increase by more than 1 foot in the Northeast by 2050.

HIGH RISK

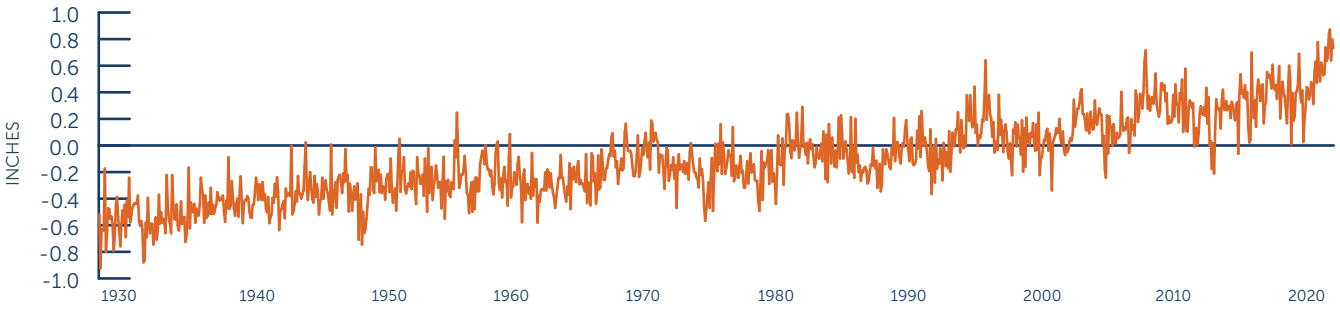
MEDIUM RISK

Source: Stuart A. Thompson and Yaryna Serkez, September 18, 2020, "Every Place Has Its Own Climate Risk. What Is It Where You Live?," *The New York Times*. Based on data from Four Twenty Seven.

SEA LEVEL RISE IN NEWPORT, 1930-2024

NEGATIVE TREND

The mean sea level at Newport rose by nearly 1 foot over the past 100 years. Subsiding land and ice melt in Greenland mean that sea levels are rising faster on the East Coast than many other places. Rhode Island's many flood plains and coastal areas are likely to face saltwater intrusion into freshwater bodies and damage to infrastructure.



Source: NOAA Tides & Currents. Note: negative values meant the land was rising more quickly than the ocean was rising.

BILLION-DOLLAR WEATHER AND CLIMATE DISASTERS, 1980-2024

NEGATIVE TREND

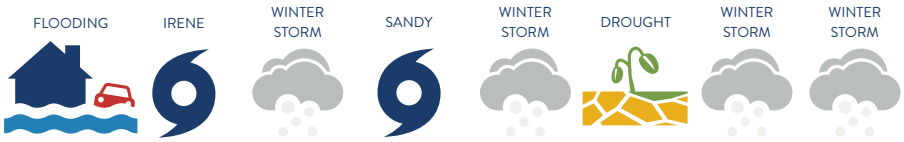
NOAA's Billion-Dollar Weather and Climate Disasters dataset indicates that the United States has sustained 403 disasters since 1980 that have cumulatively cost over $2.915 trillion. Rhode Island has experienced **33 events**, with a total cost between **$2-$5 billion**. While winter storms have been the most common type of billion-dollar disaster, tropical cyclones/hurricanes are the costliest type of disaster. In the 29 years from 1980 to 2009, Rhode Island experienced 3 hurricanes. In the 13 years between 2010 and 2024, the state has experienced 5 hurricanes. **Note that the cost of each billion-dollar weather and climate disaster are borne by multiple states, particularly in the tightly clustered Northeast.**

1980-1989

1990-1999

2000-2009

2010-2019



Last 5 Years
2020-2024

Last 3 Years
2022-2024

Last Year
2024

1980-2024

EVENTS	COST	COSTLIEST DISASTER TYPE
33	$2.0-$5.0 billion	45.6% OF TOTAL COSTS

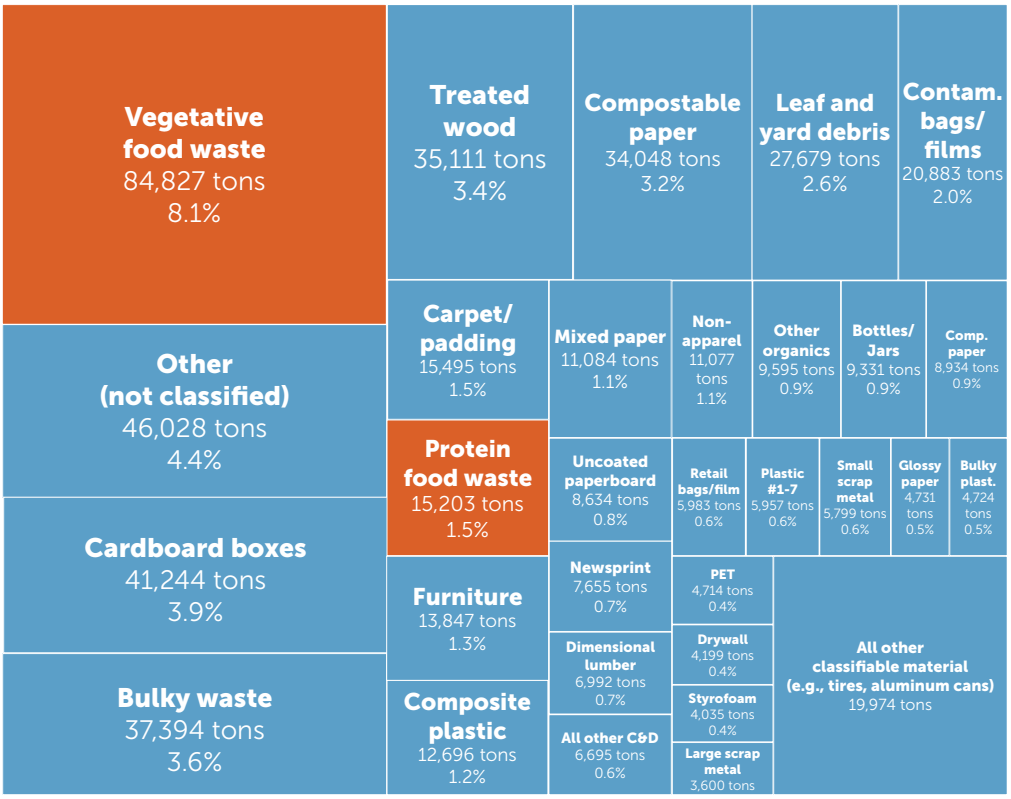
Source: NOAA National Centers for Environmental Information, U.S. Billion-Dollar Weather and Climate Disasters.

FOOD WASTE, 2015

NO TREND

A 2015 "Waste Characterization" study found that food waste (vegetative and protein) is the top single material in Rhode Island's municipal waste stream at **100,000 tons (2 million pounds)**. Residential food waste accounted for 60.6% (60,677 tons) of total food waste, while industrial, commercial, and institutional food waste accounted for 39.4% (39,453 tons). As food waste decomposes, methane—a greenhouse gas 28 times as potent as carbon dioxide at trapping heat—is emitted. While food is landfilled by the ton each day, thousands of people in Rhode Island simultaneously experience food insecurity.

528,168 TONS TOTAL MSW
100,030 TONS FOOD WASTE
60,577 TONS RESIDENTIAL FOOD WASTE
39,453 TONS INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FOOD WASTE

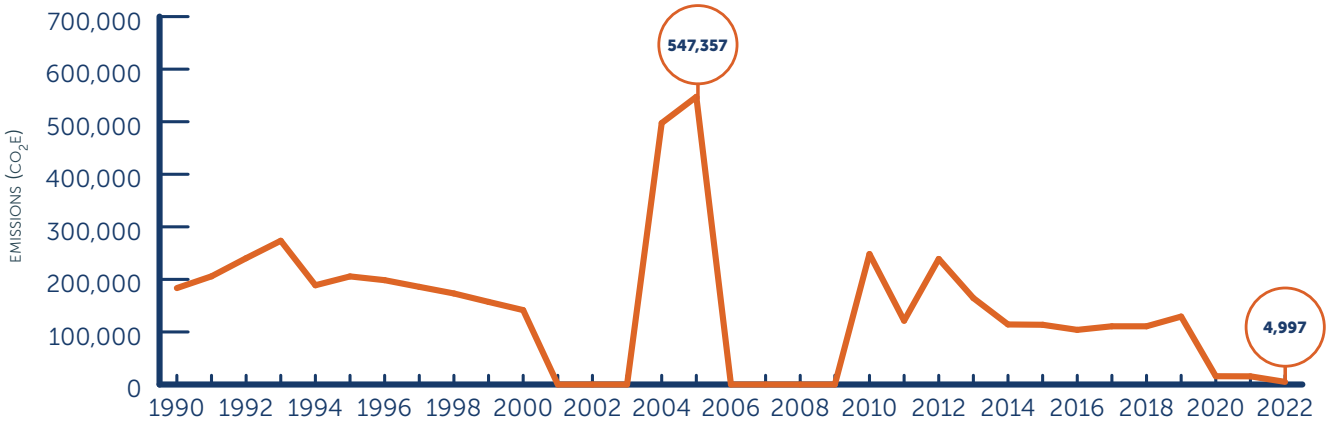


Source: DSM Environmental Services, 2015, Rhode Island Solid Waste Characterization Study.

GREENHOUSE GAS EMISSIONS FROM SOLID WASTE, 1990-2022

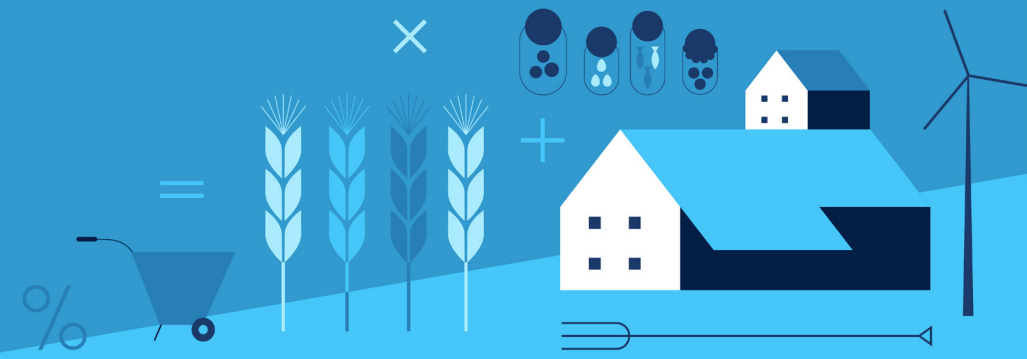
POSITIVE TREND

The Rhode Island Department of Environmental Management's (DEM) calculations of greenhouse gas emissions from waste are based on estimates of decaying organic matter at the Central Landfill in Johnston. DEM reports that, "Since 1990, the Rhode Island Resource Recovery Corporation's advances in landfill gas collection technology at the Central Landfill have significantly reduced methane emissions from solid waste disposal by 97.3%."



Source: State of Rhode Island Department of Environmental Management, 1990-2022 Rhode Island Greenhouse Gas (GHG) Emissions Inventory. Note: Data for emissions for 2001, 2002, 2003, 2006, 2007, 2008, and 2009 were listed as 0 with no explanation provided.

Municipal Data



Where can community leaders find food system information about their community?

RIFPC has prepared local food system fact sheets for *every* city and town in the state, providing municipal leaders with recent and relevant indicators. The data can be a useful guide for community conversations on areas in need of additional support and investment.

RESOURCES

- Municipal Fact Sheets
- Planning Accessible, Equitable, and Resilient Municipal Food Systems
- Data Dashboard

Municipal Fact Sheets

Food System Economy

Build the Food System Economy: The food economy encompasses a broad range of industries and sectors involved in the multi-step process of producing, processing, distributing, and selling food. The data presented here can help municipalities understand the current impacts, future opportunities, and potential challenges to growing the community's food economy.

EXAMPLE: PROVIDENCE	City	State
Restaurants	1,212	5,461
Farmers Markets	8	26
Food Markets	297	1,302
Food Processors	96	703
Food Distibutors	19	152
Annual Municipal Fee to Landfill Residential Food Waste	$1,124,736	$3,835,384

Land Use & Sustainability

Plan a Sustainable Municipality: More than any other level of government, municipalities maintain wide control of their land use and its related sustianability impacts. The data presented under Land Use & Sustainability may be used to understand how land is currently being used and to create alternative plans that account for the need to have a sustainable and resilient local food system.

	City	State
Aquaculture Farms	0	83
Commercial Fishermen	23	2,416
Farms	49	1,274
Urban Farms	12	33
Annual Tons of Residential Food Waste	19,995	68,185
Food Waste Recycling Facilities	1	6
Public School District Expenditures on Locally Grown Produce	$418,808	$1,201,611

Food Access & Security

Improve Food Access & Security: Providers of free and low cost food options interface with the community in different ways to meet people where they are. The data in Food Access & Security can help municipalities identify how the extent to which current community members are able to access these critical resources and evaluate how to maximize the impacts of these different food assistance programs.

	City	State
Congregate Meal Sites	38	214
Food Pantries	68	118
Meals on Wheels Home Delivery Recipients	754	3,042
SNAP Participants	55,435	143,023
Students Enrolled in Free/Reduced Meals	29,665	117,779
WIC Participants	8,910	19,297

FOOD ECONOMY INDICATORS

City/Town	Restaurants	Farmers Markets	Food Markets	Food Processors	Food Distributors	Annual Muni. Fee to Landfill Residential Food Waste
Barrington	42	0	6	8	0	$66,176
Bristol	100	1	23	14	3	$72,310
Burrillville	55	1	7	10	0	$56,897
Central Falls	87	1	25	8	1	$69,389
Charlestown	45	0	13	4	5	$8,251
Coventry	82	1	28	12	0	$126,363
Cranston	398	1	86	37	15	$294,707
Cumberland	95	0	27	12	1	$129,837
East Greenwich	113	1	17	14	1	$48,399
East Providence	197	2	50	14	3	$164,498
Exeter	27	0	2	6	0	$15,227
Foster	14	0	10	3	1	$21,246
Glocester	28	0	6	12	0	$32,290
Hopkinton	30	0	10	4	0	$16,837*
Jamestown	29	0	9	6	2	$24,331
Johnston	143	0	39	21	2	$199,340
Lincoln	92	0	14	15	3	$84,565
Little Compton	17	0	6	7	3	$18,106
Middletown	144	1	19	19	4	$30,924
Narragansett	110	0	17	21	14	$61,484
New Shoreham	73	0	10	7	4	$1,986
Newport	229	2	23	12	0	$65,365
North Kingstown	119	0	24	20	13	$65,291
North Providence	125	2	33	12	1	$123,427
North Smithfield	46	0	13	6	6	$42,689
Pawtucket	293	1	89	40	5	$301,962
Providence	1,212	8	297	96	19	$1,124,736
Portsmouth	54	0	15	5	4	$15,458
Richmond	43	0	12	3	0	$16,837**
Scituate	21	1	6	3	0	$44,784
Smithfield	123	0	23	9	2	$108,998
South Kingstown	180	0	44	11	2	$63,993
Tiverton	59	0	22	17	3	
Warren	110	0	56	81	3	$42,716
Warwick	399	1	86	33	17	$418,720
West Greenwich	30	0	7	1	1	$13,478
West Warwick	110	1	27	13	2	$114,563
Westerly	186	0	41	15	4	$109,404
Woonsocket	169	1	57	22	4	$109,188
TOTAL	**5,461**	**26**	**1,302**	**703**	**152**	**$3,835,384**

* Represents data for the entire Chariho school district.
** Represents combined number for Richmond-Hopkinton.

LAND USE AND SUSTAINABILITY INDICATORS

City/Town	Aquaculture Farms	Commercial Fishermen	Farms	Urban Farms	Annual Tons of Residential Food Waste	Food Waste Recycling Facilities	Total Spent on Locally Grown Produce
Barrington	0	36	4	0	1,176	0	$19,170
Bristol	0	156	25	0	1,286	0	$18,903
Burrillville	0	0	18	0	1,011	0	$20,705
Central Falls	0	0	0	0	1,234	0	$53,346
Charlestown	24	151	35	0	147	1	$16,534
Coventry	0	67	30	0	2,246	0	$37,252
Cranston	0	45	54	15	5,239	0	$77,421
Cumberland	0	13	41	0	2,380	0	$40,966
East Greenwich	0	14	18	0	860	0	$17,949
East Providence	0	9	2	0	2,924	0	$19,083
Exeter	0	47	48	0	271	0	$14,020
Foster	0	20	62	0	378	0	$23,545*
Glocester	0	2	7	0	574	0	$23,545*
Hopkinton	0	3	5	0	299**	0	$16,534***
Jamestown	7	40	19	0	433	0	$4,350
Johnston	0	21	33	0	3,544	1	$24,388
Lincoln	0	9	11	0	1,503	0	$45,183
Little Compton	1	58	60	0	322	0	$1,636
Middletown	2	39	30	0	550	0	$26,257
Narragansett	15	148	6	0	1,093	0	$8,982
New Shoreham	9	0	0	0	35	2	$1,589
Newport	0	43	16	0	1,162	0	$8,929
North Kingstown	12	17	36	0	1,161	0	$22,221
North Providence	0	4	2	0	2,194	0	$12,655
North Smithfield	0	2	16	0	384	0	$13,055
Pawtucket	0	9	6	1	5,368	0	$14,698
Providence	0	23	49	12	19,995	1	$418,808
Portsmouth	11	72	44	0	275	0	$20,357
Richmond	0	23	19	0	299**	1	$16,534***
Scituate	0	7	17	0	796	0	$8,120
Smithfield	0	8	18	0	1,938	0	$39,911
South Kingstown	3	9	19	0	1,138	0	$4,714
Tiverton	1	103	95	0	690	0	$6,839
Warren	0	66	21	0	759	0	$18,903
Warwick	1	300	25	4	7,444	0	$90,559
West Greenwich	0	6	11	0	240	0	$14,020
West Warwick	0	8	1	0	2,037	0	$54,626
Westerly	3	57	21	0	1945	0	$18,536
Woonsocket	0	8	3	0	1,941	0	$95,723
TOTAL	**83**	**2,416**	**1,274**	**33**	**68,185**	**6**	**$1,201,611**

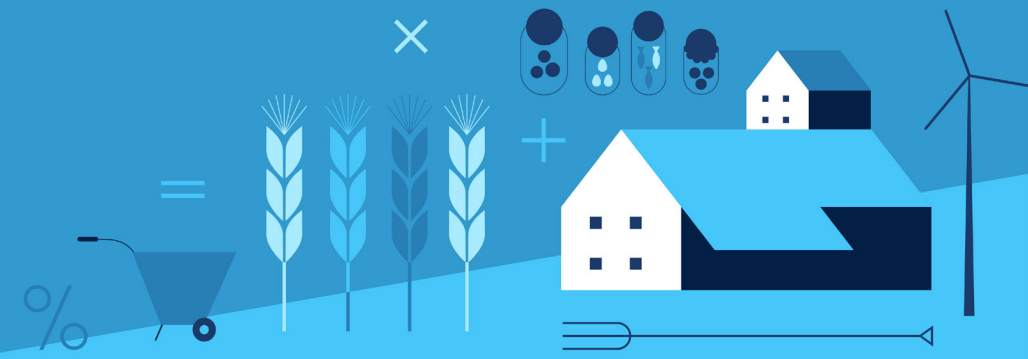
* Represents data for the entire Foster-Glocester school district.
** Represents combined number for Richmond-Hopkinton.
*** Represents data for entire Chariho school district.

FOOD ACCESS & SECURITY INDICATORS

City/Town	Congregate Meal Sites	Food Pantries	Meals on Wheels Home Delivery Recipients	SNAP Participants	Students Enrolled in Free or Reduced Meals	WIC Participants
Barrington	1	2	30	407	3,305	33
Bristol	2	3	53	1,157	2,763	105
Burrillville	5	7	1	1,273	2,028	90
Central Falls	5	7	65	5,577	2,714	1,118
Charlestown	0	2	17	433	3,028*	51
Coventry	2	4	100	2,859	4,156	208
Cranston	8	12	212	9,101	10,178	1,369
Cumberland	4	6	91	2,270	4,897	266
East Greenwich	4	5	32	704	2,511	38
East Providence	15	18	76	5,390	5,240	641
Exeter	1	1	9	378	1,562**	29
Foster	0	2	11	288	1,570***	28
Glocester	1	1	4	481	1,901***	37
Hopkinton	0	1	1	604	3,028*	141
Jamestown	3	3	12	151	406	7
Johnston	0	2	108	3,576	3,169	418
Lincoln	6	4	45	1,825	3,346	185
Little Compton	2	3	2	103	210	9
Middletown	2	2	33	1,127	1,942	167
Narragansett	0	1	36	593	1,061	38
New Shoreham	0	0	12	19	127	0
Newport	20	13	68	3,007	1,854	400
North Kingstown	2	4	61	1,942	3,776	123
North Providence	4	7	108	4,151	3,529	380
North Smithfield	0	0	32	737	1,652	103
Pawtucket	33	44	227	15,903	7,996	2,085
Providence	38	68	754	55,435	29,665	8,910
Portsmouth	2	2	40	749	2,161	81
Richmond	0	1	3	539	3,028*	12
Scituate	0	0	14	457	1,179	26
Smithfield	0	1	60	1,694	4,054	178
South Kingstown	3	5	9	1,351	2,334	119
Tiverton	2	4	59	1,090	1,540	95
Warren	4	5	31	1,026	2,763	101
Warwick	11	13	382	12,464	11,480	1,142
West Greenwich	1	1	9	274	1,562**	20
West Warwick	7	8	120	4,822	3,623	462
Westerly	4	5	53	1,934	2,205	168
Woonsocket	17	17	168	12,232	5,584	1,500
TOTAL	**214**	**118**	**3,042**	**143,023**	**117,779**	**19,297**

* Represents data for the entire Chariho district.
** Represents data for the entire Exeter-West Greenwich school district.
*** Represents data for Glocester and Foster-Glocester.

Data Sources



Federal, state, and county data sources are used throughout the Food System Factbook and Data Dashboard because they are conveniently available, released at known times, and allow for comparability between locations. Unfortunately these sources do not tell the whole story. There is other information we would like to know about our food system that is simply not currently collected. Readers should also note that there is a time lag between data availability, so that the *2024* Factbook may be referencing data from *2022* or earlier. Dollar values were adjusted for inflation to 2024 dollars, which does not allow for comparison back to previous Factbooks.

Data Sources	Latest Available Year	Purpose
Food System Economy		
U.S. Census Bureau: Economic Census	**2022** Conducted every 5 years	The Economic Census is the official five-year measure of American businesses, providing comprehensive statistics at the national, state, and local levels. ***Key data: food system employment, establishments, sales.***
U.S. Census Bureau: Nonemployer Statistics	**2022** Published annually	This is an annual series that provides national, state, and county data for businesses that have *no* paid employees. ***Key data: food system employment, establishments, sales.***
U.S. Bureau of Labor Statistics: Quarterly Covered Employment and Wages	**2023** Published monthly/ annually	This is a federal/state cooperative program that publishes monthly employment and quarterly wage data. ***Key data: food system employment, establishments, sales.***
U.S. Bureau of Labor Statistics: Occupational Employment and Wage Statistics	**2023** Published annually	This program generates employment and wage estimates for about 830 occupations for the country, states, and metropolitan areas. ***Key data: median hourly wages.***
Rhode Island Department of Labor and Training: Data Center	**2023** Published annually	The RIDLT collects and analyzes data from federal and state sources. ***Key data: employment, unemployment, wages, industry and employment projections.***
Rhode Island Secretary of State Corporate Database	Current year.	This is a searchable database of businesses incorporated in Rhode Island. ***Key data: name and number of active businesses.***

Data Sources	Latest Available Year	Purpose
Food Access & Security		
U.S. Department of Agriculture: Economic Research Service	**2023** Published annually	The USDA ERS provides many types of data and analyses, including the Food Expenditure Series and official estimates of food insecurity. ***Key data: percent food insecure, state-level food expenditures.***
U.S. Bureau of Labor Statistics: Consumer Expenditure Survey	**2023** Published annually	The Consumer Expenditure Survey provides data on expenditures and income by certain demographic characteristics. ***Key data: food expenditures.***
Food Access & Security		
Rhode Island Community Food Bank	**2024** Published annually	The RICFB highlights important food access trends. ***Key data: number of people served by the charitable food system.***
RI Life Index	**2024** Published annually	The RI Life Index is an annual survey of over 2,000 Rhode Islanders. ***Key data: access to nutritious food and food security.***
Feeding America	**2021** Publication schedule unclear	Feeding America generates estimates based on the American Community Survey. ***Key data: food insecurity by county, money necessary to meet food needs.***
Agriculture and Land Use		
U.S. Department of Agriculture: Census of Agriculture	**2022** Conducted every 5 years	This is a "complete count of U.S. farms and ranches and the people who operate them." ***Key data: number of farms, land in agriculture, crop and livestock data, farmer demographics, economic data.***
U.S. Department of Agriculture: National Agricultural Statistics Service New England Field Office	**2024** Crop reports are filed weekly	The New England Field Office provides monthly Crop Progress and Condition Reports for the six states and Annual Statistical Bulletins. ***Key data: number of farms, land in agriculture, crop and livestock data, soil moisture and temperature data.***
U.S. Department of Agriculture: Major Land Uses	**2017** Publication schedule unclear	This is the longest running, most comprehensive accounting of all major uses of land in the U.S. ***Key data: acres in cropland, grassland pasture and range, forest-used land grazed, and miscellaneous farmland.***

Data Sources	Latest Available Year	Purpose
Commercial Fisheries and Aquaculture		
National Oceanic and Atmospheric Administration: Commercial Fisheries Landings (Fisheries One Stop Shop)	**2023** Published annually	This is a federal/state cooperative program that collects species, pounds, and sales values of fish and shellfish that are landed in the U.S. ***Key data: pounds and sales values for fish and shellfish landed in Rhode Island.***
Atlantic Coastal Cooperative Statistics Program: Data Warehouse	**2023** Published annually	This is a database of Atlantic coast fishery data that collects species, pounds, and sales values of fish and shellfish. ***Key data: pounds and sales values for fish and shellfish landed in Rhode Island.***
RI Coastal Resources Management Council: Aquaculture Annual Reports	**2023** Published annually	This annual report quantifies growth in Rhode Island's aquaculture industry. ***Key data: number of sites, acres under cultivation, sales values.***
Climate Change		
U.S. Global Change Research Program: Fifth National Climate Assessment	**2023** Usually published every 4 years.	Chapter 18 of the National Climate Assessment summarizes major trends in the Northeast. ***Key data: number of farms, land in agriculture, crop and livestock data, soil moisture and temperature data.***
NOAA National Centers for Environmental Information: State Climate Summaries 2022	**2022** Publication schedule unclear	This is a summary of major climate change impacts by state. ***Key data: trends in temperature, precipitation, sea level rise, etc.***
NOAA National Centers for Environmental Information: Statewide Time Series	**2024** Data is updated monthly	This source provides estimates of air temperature and precipitation from 1895 to the present. ***Key data: temperature anomalies.***
NOAA National Centers for Environmental Information: Billion-Dollar Weather and Climate Disasters	**2024** Updated as disasters occur	This source tracks weather events that cause more than $1 billion in damages. ***Key data: number of billion-dollar disasters, types of disasters, costs of disasters.***
National Oceanic and Atmospheric Administration: Northeast Vulnerability Assessment	**2016**	This source estimates fish and shellfish vulnerability to climate change. ***Key data: name and value of species by vulnerability rank.***

NEW ENGLAND FEEDING NEW ENGLAND

Can the six New England states provide 30% of their food from regional farms and fisheries by 2030? If where our food comes from suddenly mattered, would New England be prepared with a reliable, safe, and abundant food supply?

New England Feeding New England, a collaboration amongst state-level food system organizations—including RIFPC—state agricultural, economic and environmental department representatives, and Food Solutions New England—convened research teams to analyze dietary patterns, regional food self-reliance, economic trends, market channels, and common food system challenges.

A regional approach to food system resilience means that we work collectively to adapt, expand, and fortify New England's food production and distribution systems to ensure the availability of adequate, affordable, and culturally appropriate food for all who call New England home.

Understanding how Rhode Island connects to other New England states as we collectively strive to build a more just, sustainable, and resilient food system is important. The NEFNE resources are a great companion to our Factbook, Dashboard and Municipal Fact Sheets.

RHODE ISLAND FOOD STRATEGY 2030

An update to Relish Rhody, the first Rhode Island Food Strategy, will be published in 2025. State food plans help government agencies, nonprofits, and industry partners in identifying common challenges, opportunities, and strategies, and catalyzing collective action across our food system. Rhode Island Food Strategy 2030 features 23 Briefs written by teams throughout the state on a wide variety of topics, including: policy, economic development, stewardship of working lands and waterfronts, food and nutrition security, and accessing market channels.

Understanding how we are doing in collectively implementing the state food strategy requires a data-based platform. RIFPC's Factbook, Data Dashboard and Municipal Fact Sheets provide critical resources for this understanding.

RI FOOD POLICY COUNCIL

The Rhode Island Food Policy Council is building a more just and resilient food system for all Rhode Islanders.

rifoodcouncil.org