

National Risk Index



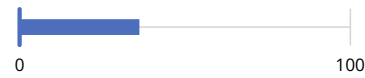
November 13, 2024

Seneca County, Ohio

Summary

Risk Index is **Very Low**

Score **36.3**



Expected Annual Loss is **Very Low**

Score **39.2**



Social Vulnerability is **Relatively Low**

Score **23.4**



Community Resilience is **Very High**

Score **86.7**



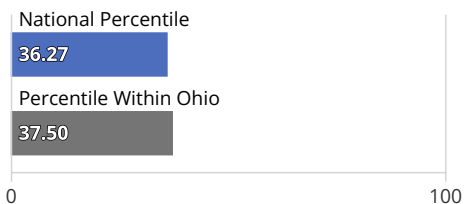
While reviewing this report, keep in mind that low risk is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience.

For more information about the National Risk Index, its data, and how to interpret the information it provides, please review the **About the National Risk Index** and **How to Take Action** sections at the end of this report. Or, visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Risk Index

The Risk Index rating is **Very Low** for **Seneca County, OH** when compared to the rest of the U.S.

Score **36.27**



36% of U.S. counties have a lower Risk Index















38% of counties in Ohio have a lower Risk Index

Risk Index Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- No Rating
- Not Applicable
- Insufficient Data

Hazard Type Risk Index

Hazard type Risk Index scores are calculated using data for only a single hazard type, and reflect a community's Expected Annual Loss value, community risk factors, and the adjustment factor used to calculate the risk value.

Hazard Type	Risk Index Rating	Risk Index Score	National Percentile
Avalanche	Not Applicable	--	
Coastal Flooding	Not Applicable	--	
Cold Wave	Relatively Low	40.8	0  100
Drought	No Rating	0	0  100
Earthquake	Very Low	54.3	0  100
Hail	Relatively Low	47.9	0  100
Heat Wave	Relatively Low	48.6	0  100
Hurricane	Very Low	45.4	0  100
Ice Storm	Relatively High	89	0  100
Landslide	Relatively Low	19.2	0  100
Lightning	Relatively Low	32.4	0  100
Riverine Flooding	Relatively Low	48.5	0  100
Strong Wind	Relatively Moderate	60.1	0  100
Tornado	Relatively Low	60	0  100
Tsunami	Not Applicable	--	
Volcanic Activity	Not Applicable	--	
Wildfire	Very Low	4.8	0  100
Winter Weather	Relatively High	91.3	0  100

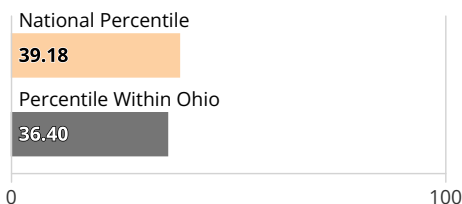
Risk Factor Breakdown

Hazard Type	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
Tornado	\$1,564,645	Relatively Low	Very High	1.04	\$1,644,369	60
Ice Storm	\$538,885	Relatively Low	Very High	1.04	\$566,186	89
Strong Wind	\$499,080	Relatively Low	Very High	1.04	\$520,152	60.1
Winter Weather	\$460,074	Relatively Low	Very High	1.04	\$480,399	91.3
Riverine Flooding	\$422,731	Relatively Low	Very High	1.04	\$435,865	48.5
Earthquake	\$183,111	Relatively Low	Very High	1.04	\$192,841	54.3
Hurricane	\$134,369	Relatively Low	Very High	1.04	\$138,225	45.4
Hail	\$95,381	Relatively Low	Very High	1.04	\$98,741	47.9
Heat Wave	\$76,362	Relatively Low	Very High	1.04	\$79,479	48.6
Lightning	\$59,003	Relatively Low	Very High	1.04	\$61,800	32.4
Cold Wave	\$28,545	Relatively Low	Very High	1.04	\$29,848	40.8
Landslide	\$21,900	Relatively Low	Very High	1.04	\$19,766	19.2
Wildfire	\$2,149	Relatively Low	Very High	1.04	\$2,167	4.8
Drought	\$0	Relatively Low	Very High	1.04	\$0	0
Avalanche	--	Relatively Low	Very High	1.04	--	--
Coastal Flooding	--	Relatively Low	Very High	1.04	--	--
Tsunami	--	Relatively Low	Very High	1.04	--	--
Volcanic Activity	--	Relatively Low	Very High	1.04	--	--

Expected Annual Loss

In **Seneca County, OH**, expected loss each year due to natural hazards is **Very Low** when compared to the rest of the U.S.

Score **39.18**



39% of U.S. counties have a lower Expected Annual Loss

36% of counties in Ohio have a lower Expected Annual Loss

Expected Annual Loss Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low

No Expected Annual Losses Not Applicable Insufficient Data

Composite Expected Annual Loss **\$4,086,235.39**

Composite Expected Annual Loss Rate National Percentile **8.9**

Building EAL	\$2,960,504.81	Population EAL	0.09 fatalities
Building EAL Rate	\$1 per \$3.83K of building value	Population EAL Rate	1 per 640.75K people
Agriculture EAL	\$128,882.02	Population Equivalence EAL	\$996,848.56
Agriculture EAL Rate	\$1 per \$1.25K of agriculture value		

Expected Annual Loss for Hazard Types

Expected Annual Loss scores for hazard types are calculated using data for only a single hazard type, and reflect a community's relative expected annual loss for only that hazard type.

14 of 18 hazard types contribute to the expected annual loss for **Seneca County, OH**.

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Tornado	Relatively Low	\$1,564,645	64.6
Ice Storm	Relatively High	\$538,885	89.7
Strong Wind	Relatively Moderate	\$499,080	65.3

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Winter Weather	Relatively High	\$460,074	92.0
Riverine Flooding	Relatively Low	\$422,731	51.5
Earthquake	Very Low	\$183,111	55.3
Hurricane	Very Low	\$134,369	45.5
Hail	Relatively Low	\$95,381	52.2
Heat Wave	Relatively Low	\$76,362	52.0
Lightning	Relatively Low	\$59,003	37.5
Cold Wave	Relatively Low	\$28,545	43.2
Landslide	Relatively Low	\$21,900	20.8
Wildfire	Very Low	\$2,149	6.5
Drought	No Expected Annual Losses	\$0	0.0
Avalanche	Not Applicable	--	--
Coastal Flooding	Not Applicable	--	--
Tsunami	Not Applicable	--	--
Volcanic Activity	Not Applicable	--	--

Expected Annual Loss Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	--	--	--	--	--
Coastal Flooding	--	--	--	--	--
Cold Wave	\$28,545	\$3,349	\$24,489	0.00	\$707
Drought	\$0	n/a	n/a	n/a	\$0
Earthquake	\$183,111	\$148,902	\$34,208	0.00	n/a
Hail	\$95,381	\$81,581	\$7,612	0.00	\$6,188
Heat Wave	\$76,362	\$949	\$69,889	0.01	\$5,525
Hurricane	\$134,369	\$108,295	\$896	0.00	\$25,179
Ice Storm	\$538,885	\$538,525	\$360	0.00	n/a
Landslide	\$21,900	\$4,500	\$17,400	0.00	n/a
Lightning	\$59,003	\$8,258	\$50,745	0.00	n/a
Riverine Flooding	\$422,731	\$174,741	\$186,622	0.02	\$61,368
Strong Wind	\$499,080	\$445,590	\$25,023	0.00	\$28,467
Tornado	\$1,564,645	\$1,033,103	\$530,511	0.05	\$1,031

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	\$2,149	\$1,999	\$150	0.00	\$1
Winter Weather	\$460,074	\$410,713	\$48,944	0.00	\$417

Exposure Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	--	--	--	--	--
Coastal Flooding	--	--	--	--	--
Cold Wave	\$650,222,193,529	\$11,329,882,437	\$638,730,729,434	55,062.99	\$161,581,658
Drought	\$0	n/a	n/a	n/a	\$0
Earthquake	\$650,130,127,000	\$11,329,727,000	\$638,800,400,000	55,069.00	n/a
Hail	\$650,222,264,571	\$11,329,882,913	\$638,730,800,000	55,063.00	\$161,581,658
Heat Wave	\$650,222,193,529	\$11,329,882,437	\$638,730,729,434	55,062.99	\$161,581,658
Hurricane	\$649,788,757,319	\$11,323,318,427	\$638,307,380,857	55,026.50	\$158,058,036
Ice Storm	\$650,060,611,871	\$11,329,882,437	\$638,730,729,434	55,062.99	n/a
Landslide	\$10,429,127,567	\$308,986,882	\$10,120,140,685	872.43	n/a
Lightning	\$650,060,682,913	\$11,329,882,913	\$638,730,800,000	55,063.00	n/a
Riverine Flooding	\$15,900,790,425	\$254,877,154	\$15,639,842,123	1,348.26	\$6,071,147
Strong Wind	\$650,222,264,571	\$11,329,882,913	\$638,730,800,000	55,063.00	\$161,581,658
Tornado	\$650,222,264,571	\$11,329,882,913	\$638,730,800,000	55,063.00	\$161,581,658
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	\$18,399,023,724	\$353,534,717	\$18,041,677,013	1,555.32	\$3,811,994
Winter Weather	\$650,222,193,529	\$11,329,882,437	\$638,730,729,434	55,062.99	\$161,581,658

Annualized Frequency Values

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Avalanche	--	--	--
Coastal Flooding	--	--	--
Cold Wave	0.7 events per year	11	2005-2021 (16 years)

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Drought	0 events per year	0	2000-2021 (22 years)
Earthquake	0.044% chance per year	n/a	2021 dataset
Hail	3.7 events per year	126	1986-2021 (34 years)
Heat Wave	0.6 events per year	10	2005-2021 (16 years)
Hurricane	0 events per year	3	East 1851-2021 (171 years) / West 1949-2021 (73 years)
Ice Storm	0.9 events per year	61	1946-2014 (67 years)
Landslide	0 events per year	0	2010-2021 (12 years)
Lightning	55 events per year	1,210	1991-2012 (22 years)
Riverine Flooding	1 event per year	25	1996-2019 (24 years)
Strong Wind	2.5 events per year	86	1986-2021 (34 years)
Tornado	0.3 events per year	18	1950-2021 (72 years)
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	0.001% chance per year	n/a	2021 dataset
Winter Weather	2.2 events per year	36	2005-2021 (16 years)

Historic Loss Ratios

Hazard Type	Overall Rating
Avalanche	--
Coastal Flooding	--
Cold Wave	Very Low
Drought	No Rating
Earthquake	Relatively Low
Hail	Very Low
Heat Wave	Very Low
Hurricane	Relatively Low
Ice Storm	Relatively Moderate
Landslide	Relatively Moderate
Lightning	Very Low
Riverine Flooding	Very Low
Strong Wind	Relatively Low
Tornado	Relatively Low

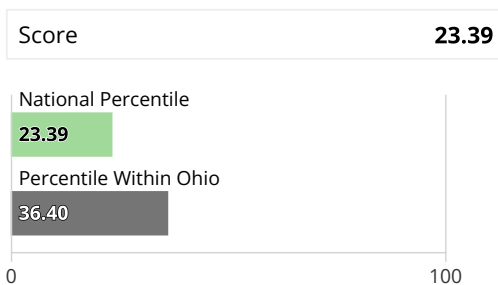
Hazard Type	Overall Rating
Tsunami	--
Volcanic Activity	--
Wildfire	Relatively Moderate
Winter Weather	Relatively High

Expected Annual Loss Rate

Hazard Type	Building EAL Rate (per building value)	Population EAL Rate (per population)	Agriculture EAL Rate (per agriculture value)
Avalanche	--	--	--
Coastal Flooding	--	--	--
Cold Wave	\$1 per \$3.38M	1 per 26.08M	\$1 per \$228.43K
Drought	--	--	--
Earthquake	\$1 per \$76.09K	1 per 18.67M	--
Hail	\$1 per \$138.88K	1 per 83.91M	\$1 per \$26.11K
Heat Wave	\$1 per \$11.94M	1 per 9.14M	\$1 per \$29.25K
Hurricane	\$1 per \$104.62K	1 per 713.17M	\$1 per \$6.42K
Ice Storm	\$1 per \$21.04K	1 per 1.78B	--
Landslide	\$1 per \$2.52M	1 per 36.71M	--
Lightning	\$1 per \$1.37M	1 per 12.59M	--
Riverine Flooding	\$1 per \$64.84K	1 per 3.42M	\$1 per \$2.63K
Strong Wind	\$1 per \$25.43K	1 per 25.53M	\$1 per \$5.68K
Tornado	\$1 per \$10.97K	1 per 1.20M	\$1 per \$156.66K
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	\$1 per \$5.67M	1 per 4.27B	\$1 per \$201.13M
Winter Weather	\$1 per \$27.59K	1 per 13.05M	\$1 per \$387.58K

Social Vulnerability

Social groups in **Seneca County, OH** have a **Relatively Low** susceptibility to the adverse impacts of natural hazards when compared to the rest of the U.S.



23% of U.S. counties have a lower Social Vulnerability

36% of counties in Ohio have a lower Social Vulnerability

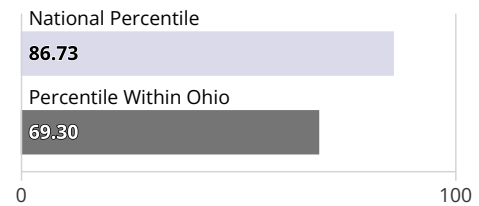
Social Vulnerability Legend

- Very High
- Relatively High
- Relatively Moderate
- Relatively Low
- Very Low
- Data Unavailable

Community Resilience

Communities in **Seneca County, OH** have a **Very High** ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.

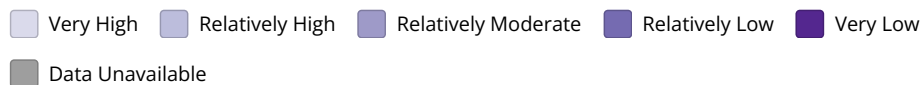
Score **86.73**



13% of U.S. counties have a higher Community Resilience

31% of counties in Ohio have a higher Community Resilience

Community Resilience Legend



About the National Risk Index

The National Risk Index is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hail, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather.

The National Risk Index leverages available source data for Expected Annual Loss due to these 18 hazard types, Social Vulnerability, and Community Resilience to develop a baseline relative risk measurement for each United States county and Census tract. These measurements are calculated using average past conditions, but they cannot be used to predict future outcomes for a community. The National Risk Index is intended to fill gaps in available data and analyses to better inform federal, state, local, tribal, and territorial decision makers as they develop risk reduction strategies.

Explore the National Risk Index Map at hazards.fema.gov/nri/map.

Visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Calculating the Risk Index

Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability and Community Resilience:

$$\text{Risk Index} = \text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience}$$

Risk Index scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/determining-risk.

Calculating Expected Annual Loss

Expected Annual Loss scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios for 18 hazard types:

$$\text{Expected Annual Loss} = \text{Exposure} \times \text{Annualized Frequency} \times \text{Historic Loss Ratio}$$

Expected Annual Loss scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/expected-annual-loss.

Calculating Social Vulnerability

Social Vulnerability is measured using the Social Vulnerability Index (SVI) published by the Centers for Disease Control and Prevention (CDC).

For more information, visit hazards.fema.gov/nri/social-vulnerability.

Calculating Community Resilience

Community Resilience is measured at the County level using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).

For more information, visit hazards.fema.gov/nri/community-resilience.

How to Take Action

There are many ways to reduce natural hazard risk through mitigation. Communities with high National Risk Index scores can take action to reduce risk by decreasing Expected Annual Loss due to natural hazards, decreasing Social Vulnerability, and increasing Community Resilience.

For information about how to take action and reduce your risk, visit hazards.fema.gov/nri/take-action.

Disclaimer

The National Risk Index (the Risk Index or the Index) and its associated data are meant for planning purposes only. This tool was created for broad nationwide comparisons and is not a substitute for localized risk assessment analysis. Nationwide datasets used as inputs for the National Risk Index are, in many cases, not as accurate as available local data. Users with access to local data for each National Risk Index risk factor should consider substituting the Risk Index data with local data to recalculate a more accurate risk index. If you decide to download the National Risk Index data and substitute it with

local data, you assume responsibility for the accuracy of the data and any resulting data index. Please visit the [Contact Us](#) page if you would like to discuss this process further.

The methodology used by the National Risk Index has been reviewed by subject matter experts in the fields of natural hazard risk research, risk analysis, mitigation planning, and emergency management. The processing methods used to create the National Risk Index have produced results similar to those from other natural hazard risk analyses conducted on a smaller scale. The breadth and combination of geographic information systems (GIS) and data processing techniques leveraged by the National Risk Index enable it to incorporate multiple hazard types and risk factors, manage its nationwide scope, and capture what might have been missed using other methods.

The National Risk Index does not consider the intricate economic and physical interdependencies that exist across geographic regions. Keep in mind that hazard impacts in surrounding counties or Census tracts can cause indirect losses in your community regardless of your community's risk profile.

Nationwide data available for some risk factors are rudimentary at this time. The National Risk Index will be continuously updated as new data become available and improved methodologies are identified.

The National Risk Index Contact Us page is available at hazards.fema.gov/nri/contact-us.