

Census tract 48021950700, Bastrop County, Texas

Summary

Risk Index is **Relatively Moderate**



Expected Annual Loss is **Relatively Moderate**



Social Vulnerability is **Relatively High**



Community Resilience is **Relatively Low**

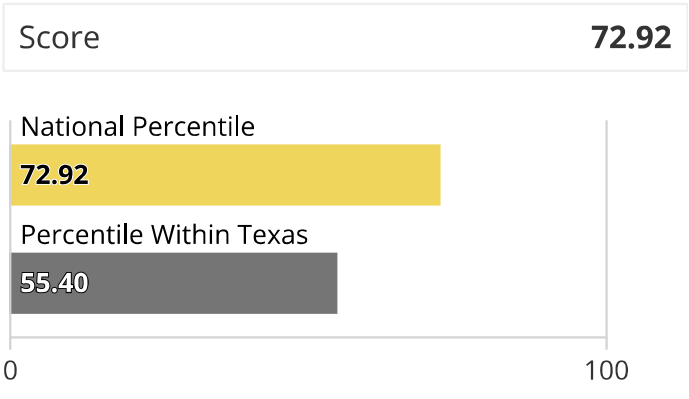
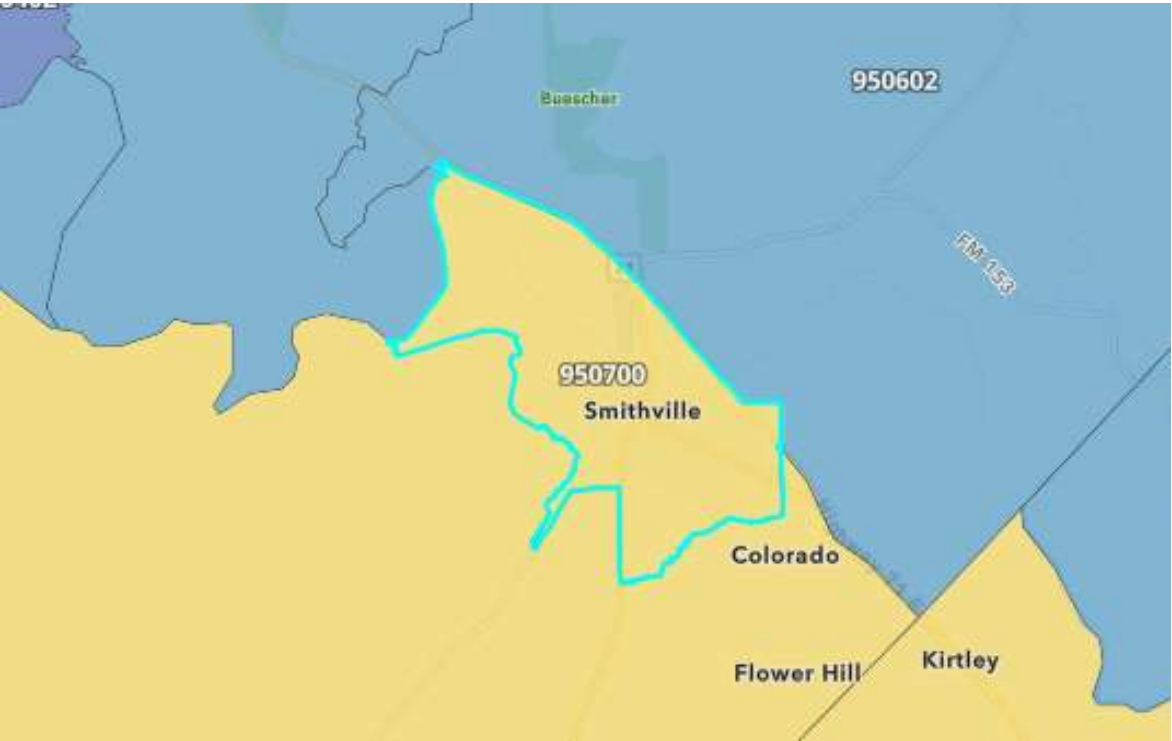


While reviewing this report, keep in mind that low risk is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience.

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 **Relatively Moderate** for **Census tract 48021950700** when compared to the rest of the U.S.



73% of U.S. Census tracts have a lower Risk Index

55% of Census tracts in Texas 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 Moderate	83.3	0100
Drought	Relatively Low	81.9	0100
Earthquake	Very Low	19.2	0100
Hail	Relatively Low	65.6	0100
Heat Wave	Relatively Moderate	75.8	0100
Hurricane	Relatively Low	59.1	0100
Ice Storm	Relatively Moderate	72.1	0100
Landslide	Relatively Moderate	75	0100
Lightning	Relatively High	82.4	0100
Riverine Flooding	Relatively High	96.2	0100
Strong Wind	Relatively Moderate	70.1	0100

Hazard Type	Risk Index Rating	Risk Index Score	National Percentile	
Tornado	Relatively High	91.6	0	100
Tsunami	Not Applicable	--		
Volcanic Activity	Not Applicable	--		
Wildfire	Relatively Low	81.3	0	100
Winter Weather	Relatively High	92.4	0	100

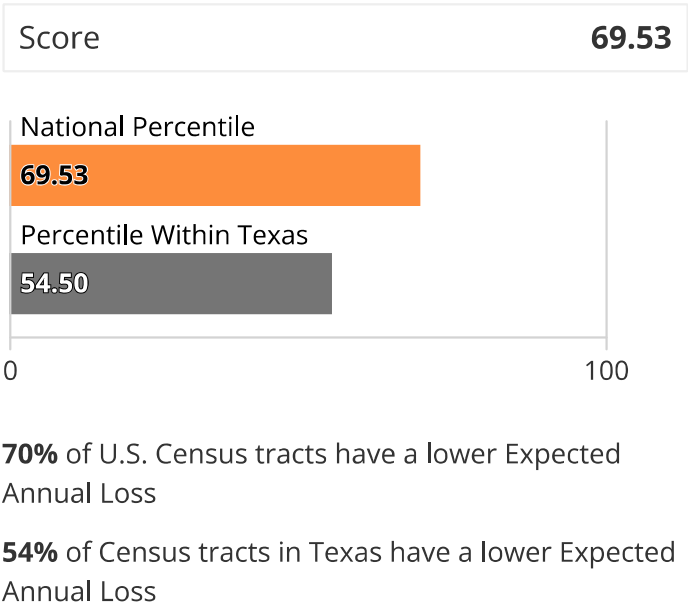
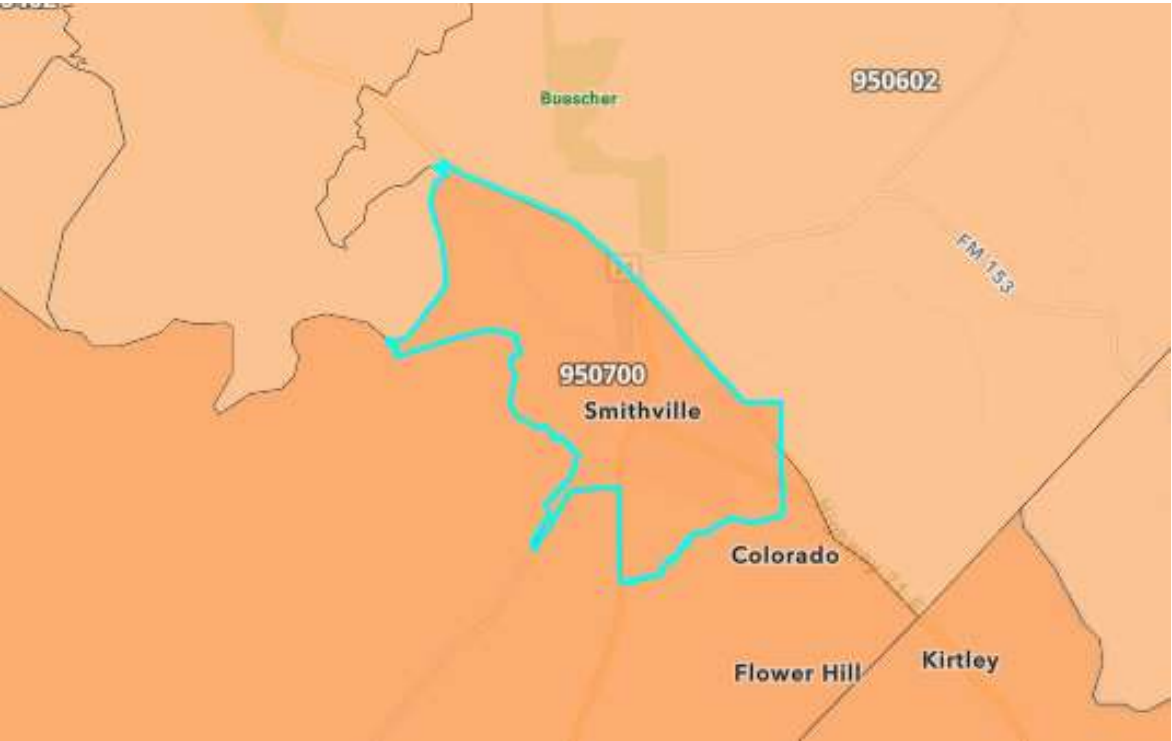
Risk Factor Breakdown

Hazard Type	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
Riverine Flooding	\$367,231	Relatively High	Relatively Low	1.28	\$469,683	96.2
Tornado	\$307,903	Relatively High	Relatively Low	1.28	\$393,803	91.6
Hurricane	\$63,180	Relatively High	Relatively Low	1.28	\$80,806	59.1
Heat Wave	\$26,442	Relatively High	Relatively Low	1.28	\$33,819	75.8
Strong Wind	\$19,850	Relatively High	Relatively Low	1.28	\$25,388	70.1
Lightning	\$15,113	Relatively High	Relatively Low	1.28	\$19,329	82.4
Winter Weather	\$14,400	Relatively High	Relatively Low	1.28	\$18,417	92.4
Cold Wave	\$12,944	Relatively High	Relatively Low	1.28	\$16,555	83.3
Ice Storm	\$5,805	Relatively High	Relatively Low	1.28	\$7,425	72.1
Wildfire	\$4,567	Relatively High	Relatively Low	1.28	\$5,842	81.3
Hail	\$4,454	Relatively High	Relatively Low	1.28	\$5,696	65.6
Earthquake	\$2,046	Relatively High	Relatively Low	1.28	\$2,616	19.2
Landslide	\$1,466	Relatively High	Relatively Low	1.28	\$1,875	75
Drought	\$450	Relatively High	Relatively Low	1.28	\$575	81.9

Hazard Type	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
Avalanche	--	Relatively High	Relatively Low	1.28	--	--
Coastal Flooding	--	Relatively High	Relatively Low	1.28	--	--
Tsunami	--	Relatively High	Relatively Low	1.28	--	--
Volcanic Activity	--	Relatively High	Relatively Low	1.28	--	--

Expected Annual Loss

In **Census tract 48021950700**, expected loss each year due to natural hazards is **Relatively Moderate** when compared to the rest of the U.S.



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

\$845,850.54

Composite Expected Annual Loss Rate National Percentile		66.6	
Building EAL	\$318,244.83	Population EAL	0.05 fatalities
Building EAL Rate	\$1 per \$3.08K of building value	Population EAL Rate	1 per 100.38K people
Agriculture EAL	\$2,404.78	Population Equivalence EAL	\$525,200.93
Agriculture EAL Rate	\$1 per \$266.76 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 **Census tract 48021950700**.

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Riverine Flooding	Relatively High	\$367,231	95.9
Tornado	Relatively High	\$307,903	89.7
Hurricane	Relatively Low	\$63,180	57.0
Heat Wave	Relatively Moderate	\$26,442	73.8
Strong Wind	Relatively Moderate	\$19,850	67.5
Lightning	Relatively High	\$15,113	79.7

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Winter Weather	Relatively High	\$14,400	91.4
Cold Wave	Relatively Moderate	\$12,944	81.5
Ice Storm	Relatively Low	\$5,805	69.4
Wildfire	Relatively Low	\$4,567	80.5
Hail	Relatively Low	\$4,454	64.5
Earthquake	Very Low	\$2,046	16.5
Landslide	Relatively Moderate	\$1,466	71.6
Drought	Relatively Low	\$450	81.6
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	--	--	--	--	--

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Cold Wave	\$12,944	\$170	\$12,505	0.00	\$269
Drought	\$450	n/a	n/a	n/a	\$450
Earthquake	\$2,046	\$1,515	\$531	0.00	n/a
Hail	\$4,454	\$99	\$3,906	0.00	\$449
Heat Wave	\$26,442	\$11	\$26,431	0.00	\$0
Hurricane	\$63,180	\$61,925	\$893	0.00	\$361
Ice Storm	\$5,805	\$1,681	\$4,125	0.00	n/a
Landslide	\$1,466	\$333	\$1,133	0.00	n/a
Lightning	\$15,113	\$38	\$15,075	0.00	n/a
Riverine Flooding	\$367,231	\$133,923	\$232,513	0.02	\$795
Strong Wind	\$19,850	\$11,099	\$8,684	0.00	\$66
Tornado	\$307,903	\$102,356	\$205,536	0.02	\$11
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	\$4,567	\$4,063	\$505	0.00	\$0
Winter Weather	\$14,400	\$1,032	\$13,364	0.00	\$3

Exposure Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	--	--	--	--	--
Coastal Flooding	--	--	--	--	--
Cold Wave	\$53,701,867,609	\$979,233,147	\$52,721,992,955	4,545.00	\$641,508
Drought	\$73,671	n/a	n/a	n/a	\$73,671
Earthquake	\$53,805,620,000	\$979,220,000	\$52,826,400,000	4,554.00	n/a
Hail	\$53,701,874,704	\$979,233,196	\$52,722,000,000	4,545.00	\$641,508
Heat Wave	\$53,701,867,609	\$979,233,147	\$52,721,992,955	4,545.00	\$641,508
Hurricane	\$53,681,407,147	\$978,839,931	\$52,701,925,707	4,543.27	\$641,508
Ice Storm	\$53,701,226,101	\$979,233,147	\$52,721,992,955	4,545.00	n/a
Landslide	\$2,660,190,674	\$49,436,608	\$2,610,754,066	225.07	n/a
Lightning	\$53,701,233,196	\$979,233,196	\$52,722,000,000	4,545.00	n/a
Riverine Flooding	\$2,078,085,979	\$79,665,772	\$1,998,151,764	172.25	\$268,442
Strong Wind	\$53,701,874,704	\$979,233,196	\$52,722,000,000	4,545.00	\$641,508
Tornado	\$53,701,874,704	\$979,233,196	\$52,722,000,000	4,545.00	\$641,508
Tsunami	--	--	--	--	--

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Volcanic Activity	--	--	--	--	--
Wildfire	\$3,938,298,671	\$39,217,141	\$3,899,022,321	336.12	\$59,209
Winter Weather	\$53,701,867,609	\$979,233,147	\$52,721,992,955	4,545.00	\$641,508

Annualized Frequency Values

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Avalanche	--	--	--
Coastal Flooding	--	--	--
Cold Wave	0.1 events per year	2	2005-2021 (16 years)
Drought	49.6 events per year	1,092	2000-2021 (22 years)
Earthquake	0.010% chance per year	n/a	2021 dataset
Hail	2.6 events per year	90	1986-2021 (34 years)
Heat Wave	0.4 events per year	6	2005-2021 (16 years)
Hurricane	0.1 events per year	6	East 1851-2021 (171 years) / West 1949-2021 (73 years)
Ice Storm	0.7 events per year	46	1946-2014 (67 years)
Landslide	0 events per year	0	2010-2021 (12 years)
Lightning	63.5 events per year	1,396	1991-2012 (22 years)

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Riverine Flooding	2.9 events per year	69	1996-2019 (24 years)
Strong Wind	1.3 events per year	45	1986-2021 (34 years)
Tornado	0 events per year	7	1950-2021 (72 years)
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	0.032% chance per year	n/a	2021 dataset
Winter Weather	1.1 events per year	17	2005-2021 (16 years)

Historic Loss Ratios

Hazard Type	Overall Rating
Avalanche	--
Coastal Flooding	--
Cold Wave	Relatively Low
Drought	Relatively Low
Earthquake	Very Low
Hail	Relatively Low
Heat Wave	Relatively High

Hazard Type	Overall Rating
Hurricane	Relatively Low
Ice Storm	Relatively Low
Landslide	Relatively Moderate
Lightning	Relatively Moderate
Riverine Flooding	Relatively Moderate
Strong Wind	Relatively Moderate
Tornado	Relatively Low
Tsunami	--
Volcanic Activity	--
Wildfire	Very Low
Winter Weather	Relatively High

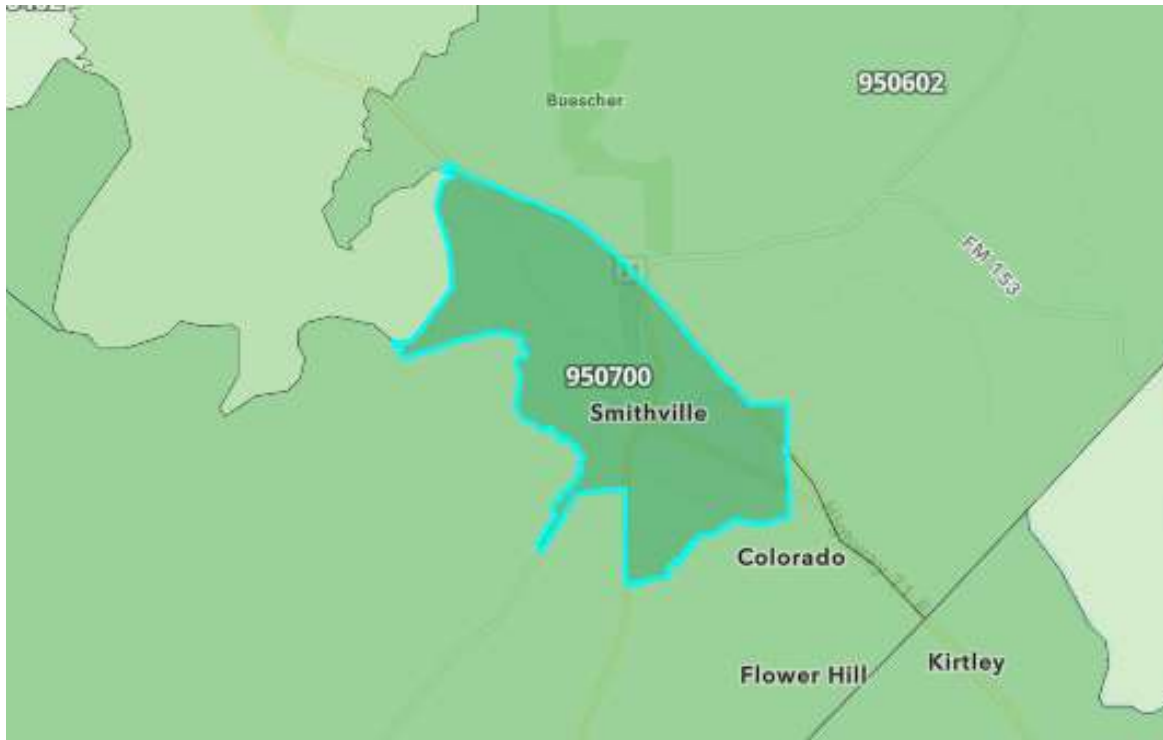
Expected Annual Loss Rate

Hazard Type	Building EAL Rate (per building value)	Population EAL Rate (per population)	Agriculture EAL Rate (per agriculture value)
Avalanche	--	--	--
Coastal Flooding	--	--	--

Hazard Type	Building EAL Rate (per building value)	Population EAL Rate (per population)	Agriculture EAL Rate (per agriculture value)
Cold Wave	\$1 per \$5.76M	1 per 4.22M	\$1 per \$2.39K
Drought	--	--	\$1 per \$1.43K
Earthquake	\$1 per \$646.57K	1 per 99.28M	--
Hail	\$1 per \$9.87M	1 per 13.50M	\$1 per \$1.43K
Heat Wave	\$1 per \$90.24M	1 per 1.99M	\$1 per \$2.97M
Hurricane	\$1 per \$15.81K	1 per 59.03M	\$1 per \$1.78K
Ice Storm	\$1 per \$582.58K	1 per 12.78M	--
Landslide	\$1 per \$2.94M	1 per 46.54M	--
Lightning	\$1 per \$25.56M	1 per 3.50M	--
Riverine Flooding	\$1 per \$7.31K	1 per 226.75K	\$1 per \$806.75
Strong Wind	\$1 per \$88.22K	1 per 6.07M	\$1 per \$9.66K
Tornado	\$1 per \$9.57K	1 per 256.51K	\$1 per \$56.40K
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	\$1 per \$241.04K	1 per 104.45M	\$1 per \$17.28M
Winter Weather	\$1 per \$948.95K	1 per 3.94M	\$1 per \$198.79K

Social Vulnerability

Social groups in **Census tract 48021950700** have a **Relatively High** susceptibility to the adverse impacts of natural hazards when compared to the rest of the U.S.



Score

63.71

National Percentile

63.71

Percentile Within Texas

49.20

0

100

64% of U.S. Census tracts have a lower Social Vulnerability

49% of Census tracts in Texas have a lower Social Vulnerability

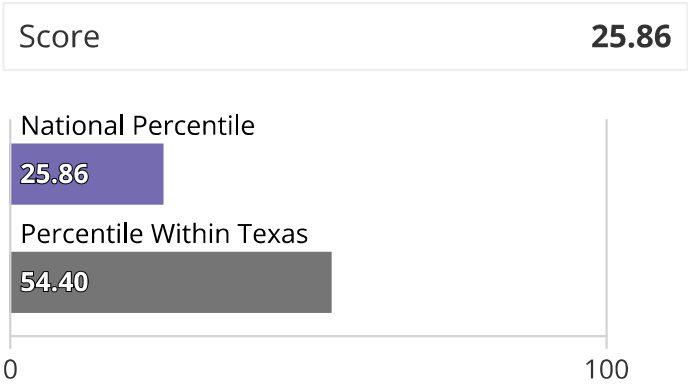
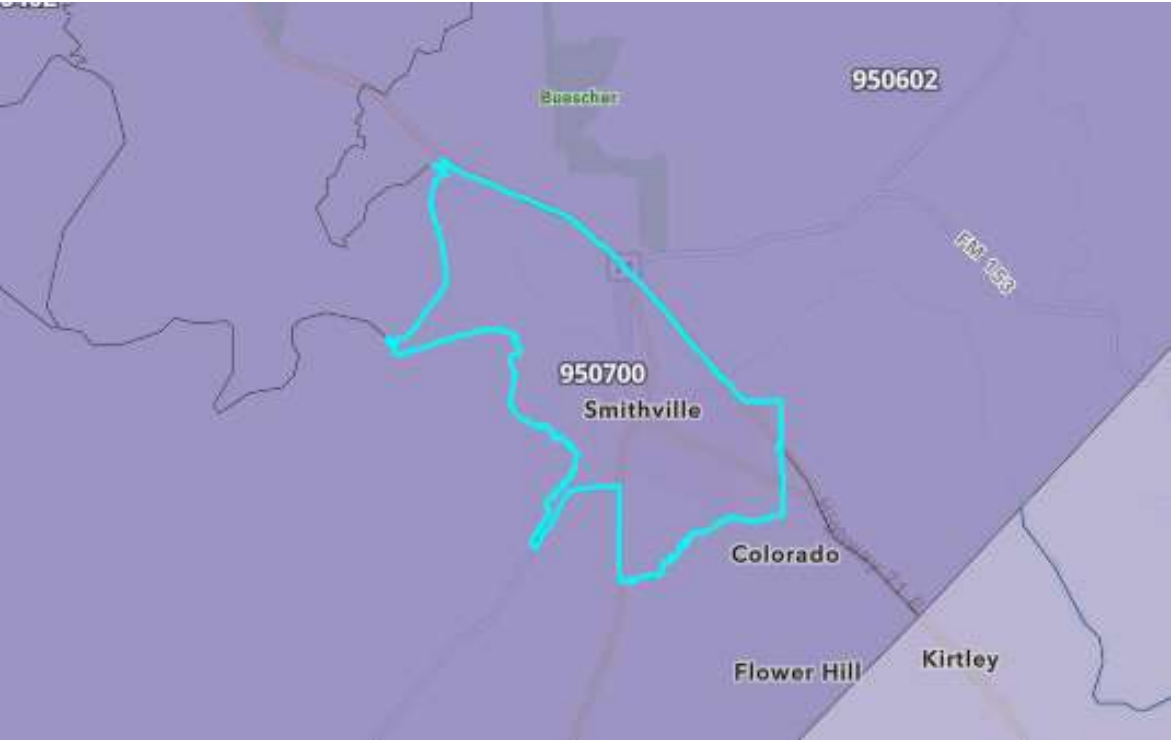
Social Vulnerability Legend

Very High Relatively High Relatively Moderate Relatively Low Very Low

Data Unavailable

Community Resilience

Communities in **Census tract 48021950700** have a **Relatively Low** 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.



74% of U.S. Census tracts have a higher Community Resilience

46% of Census tracts in Texas have a higher Community Resilience

Community Resilience Legend

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

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 values are calculated using an equation* that combines values for Expected Annual Loss (EAL) due to natural hazards, with the Community Risk Factor (CRF), which is a function of Social Vulnerability and Community Resilience:

Risk Index = **Expected Annual Loss** × Community Risk Factor

where Community Risk Factor = $f\left(\frac{\text{Social Vulnerability}}{\text{Community Resilience}}\right)$

*County-level risk values are derived by summing the risk values of all Census tracts within that county.

Risk is presented as a composite value and score for all 18 hazard types, as well as individual values and scores for each hazard type.

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

Calculating Expected Annual Loss

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

Expected Annual Loss = **Exposure** × **Annualized Frequency** × **Historic Loss Ratio**

*Excluding Avalanche, Drought, Earthquake, and Tornado, EAL values for each hazard are calculated at the Census block level and summed together to determine Census tract and county-level hazard type EAL values.

Expected Annual Loss is presented as a composite value and score for all 18 hazard types, as well as individual values and 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.

Values, Scores, and Ratings

The National Risk Index provides three different types of results for Risk and each component used to derive Risk: EAL, Social Vulnerability, and Community Resilience:

Values. Values for Risk and EAL are in units of dollars, representing the community's average economic loss from natural hazards each year. For Social Vulnerability and Community Resilience, values are the index values for the community provided by the source data sets.

Scores. Scores represent the national percentile ranking of the community's component value compared to all other communities at the same level (county or Census tract).

Ratings. Ratings refer to the qualitative terms that describe the relative risk of an area within the same geographic level. These rating categories range from “Very Low” to “Very High”. Ratings for Social Vulnerability and Community Resilience are based on quintiles of those components’ scores, while Risk and EAL ratings are based on more advanced statistical calculations on values . As a result, there is no fixed range of scores or values that correspond to the rating categories.

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 risk profiles for the vast majority of hazard types are based on historical frequency and loss data. They represent risk and expected annual loss based on average past conditions, not future predictions. The National Risk Index will be continuously updated as new data become available and improved methodologies are identified.

For comprehensive details about how the Risk Index can help you and its limitations, see the [National Risk Index Technical Documentation](#)

Assumption of Risk

In view of the identified limitations of the National Risk Index associated data, by using the data, you acknowledge and agree that FEMA makes no representations or warranties about the accuracy, completeness, or fitness for any particular purpose of the data; that the data is provided “as is” without warranty of any kind; that you assume full responsibility for any consequences that may arise, including financial losses, legal disputes, or other adverse outcomes; and that you release FEMA and the federal government from any liability that may arise to the extent allowable by law.

Attribution, No Endorsement

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