

Americans that live in these cities are most likely to suffer from floods



- Global warming and rising sea levels are making it riskier to live or own a home on the coast.
- The US cities most at risk to global flooding are New York, Seattle and San Francisco — the country's centers for financial and technology industries.
- Florida is the state with the most people living in areas that could flood with rising sea levels.
- The most expensive properties at risk are in Riverside and Darien, Connecticut where the median home costs almost \$2 million.

King tides, like this one in Hollywood, FL, bring in unusually high water levels and can cause local tidal flooding.

On one hand, living near the sea has a host of obvious advantages. You can walk to the beach, soak in unparalleled ocean views from your balcony, or maybe even take up a coastal hobby like boating or surfing. On the other hand, your house could flood or be demolished entirely by nature. Hurricanes, tidal waves, and tropical storms have long made living by the beach almost as risky as it is pleasurable.

But with global warming and the long documented trend of rising sea levels, there's a new risk for owning a home by the sea: your plot of land will simply become part of the seascape and never be habitable again. With some of the most populated and desirable locations in America located near the sea, just how many people will be displaced when the sea levels rise?

A rising high tide covers roads in Hampton, NH



We decided to analyze data from Priceonomics customer GAVOP, an insurance data and research company -- ***how many people in America live near the sea to see where devastation from rising sea levels will be the greatest?*** We started with the United States Census data on coastal tracts of land, and calculated which of these zones were most populated in areas likely to be vulnerable to rising sea levels. We also looked at how much homes cost in these zones and how much home insurance premiums cost.

The state with the most people living in coastal zones susceptible to rising sea levels is Florida, where almost 1.8 million people live near the water. **The US cities most at risk to global flooding are New York, Seattle and San Francisco, the nerve centers of the financial and technology industries.**

However, the two areas with the most expensive properties that are at risk to rising sea levels are both in Connecticut: Riverside and Darien are both high risk zones where the median home costs almost \$2 million. Lastly, though homeowners insurance does not typically cover flooding, comparable home owners insurance is much more expensive closer to the sea, especially in Texas.

23 of the 50 states in America have some level of their population living in coastal zones. Florida, however, has by far the most people living in areas that could flood with rising sea levels.

Since the state is a peninsula surrounded by the Atlantic Ocean and the Gulf of Mexico, much of the development is near the beaches. California and Washington, both of which abutt the Pacific Ocean rank as the places with the second and third most people at risk to rising sea levels.

The Cities Most At Risk to Rising Sea Levels

Population by city that lives in a coastal zone

Rank	Place	Population (K)
1	New York, NY	364
2	Seattle, WA	104
3	San Francisco, CA	82
4	Corpus Christi, TX	78
5	St. Petersburg, FL	73
6	Tampa, FL	69
7	Anchorage, AK	66
8	Miami, FL	62
9	San Diego, CA	53
10	Virginia Beach, VA	51
11	Los Angeles, CA	49
12	Norfolk, VA	47
13	Miami Beach, FL	43
14	Newport News, VA	42
15	Baltimore, MD	42
16	Huntington Beach, CA	42
17	Alameda, CA	41
18	Galveston, TX	41
19	Camp Pendleton, CA	41
20	Panama City, FL	36
21	Laguna Beach, CA	35
22	Santa Barbara, CA	34
23	Long Beach, NY	34
24	Texas City, TX	33
25	Warwick, RI	32

Rank	Place	Population (K)
26	Quincy, MA	32
27	Lynn Haven, FL	31
28	Long Beach, CA	31
29	Boston, MA	30
30	Homestead, FL	30
31	Bellingham, WA	30
32	Midway, FL	30
33	Niceville, FL	29
34	Clearwater, FL	29
35	Santa Monica, CA	29
36	Stamford, CT	28
37	Monterey, CA	28
38	Tacoma, WA	27
39	Half Moon Bay, CA	27
40	Hampton, VA	26
41	Santa Cruz, CA	25
42	Key West, FL	25
43	Fort Walton Beach, FL	25
44	Milford City, CT	24
45	Oxnard, CA	24
46	Salem, MA	24
47	Mount Pleasant, SC	24
48	West Haven, CT	24
49	Baytown, TX	24
50	Everett, WA	23

Data source: US Census coastal zone tracts

GAVOP

Diving deeper into the data, *which cities are most populated in places where the sea levels may someday rise?*

New York City, a place completely surrounded by water has 346,000 people living near the coast. Some of the most notable cities in America will be hugely impacted by global warming if projections of higher sea levels hold true: Seattle, San Francisco, St. Petersburg, Miami, and San Diego all make the top ten list of flood-risk cities.

From the prior list, one can't help but notice that many of these places that are vulnerable to elevated sea levels are also desirable places to live and as a result have expensive real estate. To investigate further, we next looked at which places in coastal zones had the most expensive median home prices.

The Cities with the Most Expensive Homes with Flooding Risk

Price of homes in flood prone areas

Rank	Place	Median Home Value (\$K)
1	Riverside, CT	\$1,924
2	Darien, CT	\$1,850
3	Topanga, CA	\$1,838
4	Belvedere, CA	\$1,739
5	Old Greenwich, CT	\$1,732
6	Kings Point, NY	\$1,725
7	East Hampton, NY	\$1,635
8	Palos Verdes Estates, CA	\$1,611
9	Newport Beach, CA	\$1,548
10	Strawberry, CA	\$1,524
11	Oyster Bay Cove, NY	\$1,518
12	Kailua, HI	\$1,516
13	Malibu, CA	\$1,509
14	Manhattan Beach, CA	\$1,479
15	Coronado, CA	\$1,447
16	Laguna Beach, CA	\$1,434
17	Manalapan, FL	\$1,383
18	Lloyd Harbor, NY	\$1,373
19	Kentfield, CA	\$1,353
20	Plandome, NY	\$1,333
21	Spring Lake, NJ	\$1,314
22	Rancho Palos Verdes, CA	\$1,287
23	Bay Head, NJ	\$1,279
24	Key Biscayne, FL	\$1,274
25	Bridgehampton, NY	\$1,243
26	Mill Neck, NY	\$1,238
27	Stinson Beach, CA	\$1,236
28	Sea Girt, NJ	\$1,227
29	Sullivan's Island, SC	\$1,218
30	Hermosa Beach, CA	\$1,216
31	Burlingame, CA	\$1,212
32	Stone Harbor, NJ	\$1,191
33	Rye, NY	\$1,182
34	Sausalito, CA	\$1,182
35	Great Neck Plaza, NY	\$1,179
36	Sands Point, NY	\$1,166
37	Southampton, NY	\$1,166
38	Carmel-by-the-Sea, CA	\$1,148
39	Corte Madera, CA	\$1,128
40	Coral Gables, FL	\$1,127
41	Westport, CT	\$1,123
42	Hewlett Bay Park, NY	\$1,097
43	Santa Barbara, CA	\$1,096
44	Dillon Beach, CA	\$1,092
45	Seal Beach, CA	\$1,090
46	Del Monte Forest, CA	\$1,070
47	Fisher Island, FL	\$1,063
48	Larchmont, NY	\$1,061
49	Los Angeles, CA	\$1,061
50	Avalon, NJ	\$1,061

Data source: US Census coastal zone tracts



Riverside, CT (a section of the town Greenwich and near New York City) has the most expensive homes in America that are at risk to flooding.

The case of Riverside illustrates a common phenomenon that takes place when governments try to regulate building in flood zones: the residents fight back against the added cost. **Even with some of the most expensive homes in the world at risk, residents of Riverside and Old Greenwich have fought against new zoning laws requiring homes to become compliant with best practices like raising the homes above levels of flooding.**

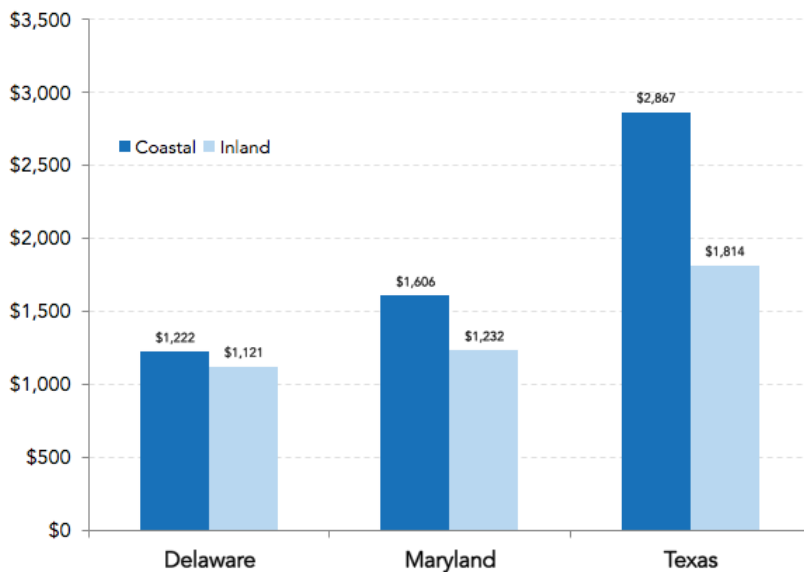
Many of the most expensive suburbs of California, New York and Los Angeles have homes at risk to rising sea levels. For many years, people have paid a premium to live in such beautiful locations like Malibu or East Hampton, but with global warming the homes now face an ever present risk of flooding.

We decided to investigate further to see if the insurance markets are somehow pricing for the risk of rising sea levels. It's important to note that homeowners insurance does not cover flooding (that's a different policy typically sold through the government). Nevertheless, are homes near the coast riskier from the insurance companies' perspective?

The chart below shows the annual homeowners' insurance premium in Delaware, Maryland and Texas for homes that are inland versus on the coast.

Homeowners Insurance is More Expensive on the Coast

Average annual premium of coastal vs inland homes for comparable policies



Note: Comparable home price for Texas \$200K, for Delaware \$350K, for Maryland \$400K

GAVOP

In each of the states, but particularly Texas, the home owners insurance policies can be 40% more expensive on the coast than inland.

Because there was such a discrepancy in prices in Texas, we decided to dig further. As a next step, we analyzed at homes that were valued at \$200K and looked at their annual homeowners' premium depending on how far away from the coast the home was.

Even for homes of the same value, the cost to insure the home drops significantly the further you are from the coast. While a home in a coastal zone costs \$2,868 to insure, one that is 50

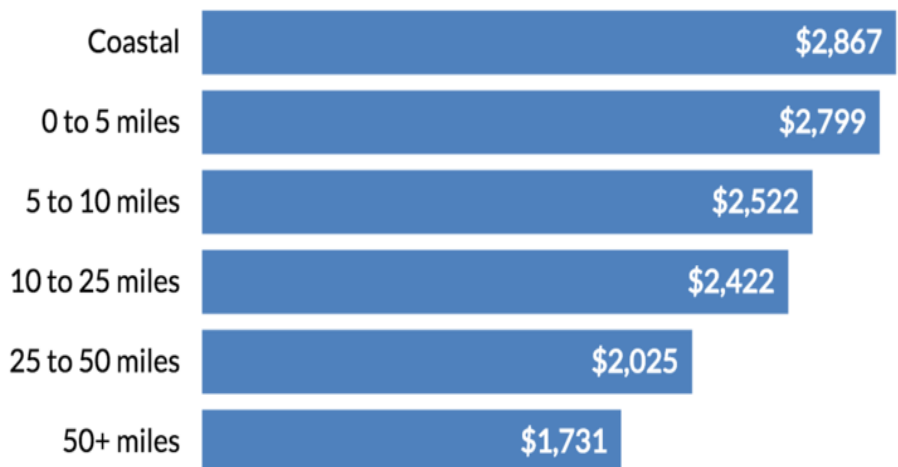
miles or more away costs just \$1,731, a savings of 40%.

America's coastline offers us great opportunities for leisure and enjoyment, but increasingly greater risks.

While hurricanes and storms have always posed a threat to coastal cities, those threats are becoming more frequent and severe. Not only that, but **in the not so distant future some of the most beautiful (and expensive) real estate in America may be eviscerated by rising sea levels. These rising sea levels may affect all Americans in one way or another, but they'll be felt especially in Florida, California, Washington, and New York, where huge numbers of people live in the shadow of this ever present threat of flooding.**

Home Insurance Premiums in Texas Are General More Expensive Near the Coast

Home insurance premiums by distance to the coast



Data source: US Census coastal zone tracts

GAVOP

Data Source: GAVOP July 9,2018