TOTAL RISK PERSPECTIVE:

HURRICANE RISK
AND THE COVID-19 EPIDEMIC

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On July 26th, Hurricane Hanna touched down in southeast Texas, devastating coastal communities from Corpus Christi to the Rio Grande Valley. Downed power lines and trees have caused road closures, compromising search and rescue efforts and the restoration of power to an estimated 60,000 homes and businesses. With record amounts of rainfall throughout the region, surging waters have breached the seawall of Corpus Christi and caused flash floods in Cameron county.
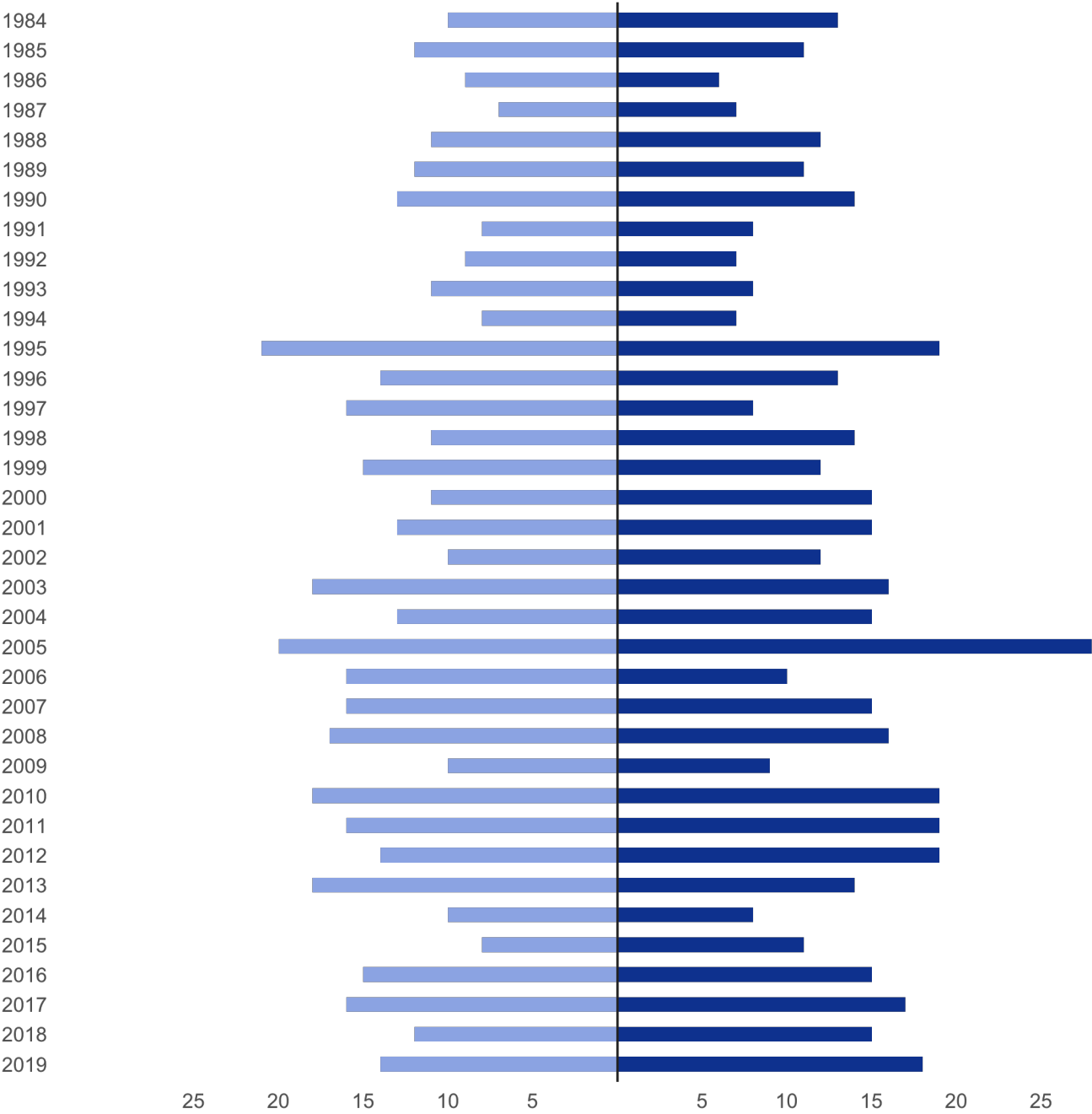
In recent weeks, reported cases of COVID-19 have surged in these coastal communities hit hardest by Hurricane Hanna. In Corpus Christi, an estimated 1 in 34 residents have been infected with disease. In the Rio Grande Valley where high levels of poverty and chronic illness prevail, the risk of death from COVID-19 is 3x higher than the state average. Worried of an additional uptick in COVID-19 cases, Governor Greg Abbot announced that emergency response efforts in southeast Texas will include mobile COVID-19 testing teams to limit infection risk among displaced persons in shelters and medical personnel provided by the Texas National Guard.

Hurricane Hanna is not only the first major storm of the Atlantic season, but foreshadows a world where hurricane destruction is amplified by the COVID-19 epidemic. In this report, Pinkerton data scientists identify hot spots of combined high hurricane and COVID-19 risk. This total risk perspective provides targeted guidance to the planning efforts of both public and private sector actors in the months ahead.
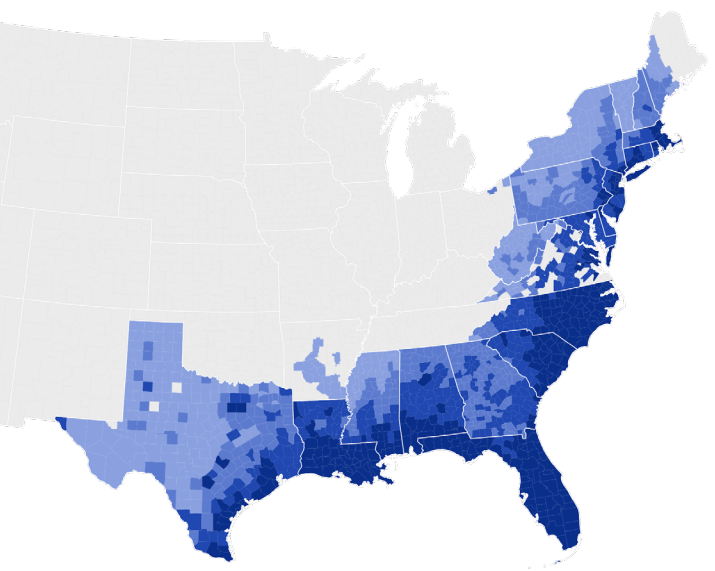
FORECASTING THE 2020 HURRICANE SEASON

With an established record of forecast accuracy, the Colorado State University Tropical Weather & Climate Research Center predicts that twenty named storms will emerge this season, including nine hurricanes, and four major hurricanes. This above-average forecast threatens communities already grappling with ongoing economic fallout from COVID-19.

CSU FORECASTED VS OBSERVED ATLANTIC NAMED STORMS

| Year	Forecasted	Observed
1984		
1985		
1986		
1987		
1988		
1989		
1990		
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1993		
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2017		
2018		
2019		

25 20 15 10 5   5 10 15 20 25

HURRICANE RISK

Our Hurricane Index combines the historic record of presidential disaster declarations and population density on a county level to assess which communities are at greatest risk of being impacted by a hurricane. Hurricane risk is calculated as a percentile, with 100% reflecting the county with the highest risk.

- 0-25%
- 50-75%
- 25-50%
- 75-100%
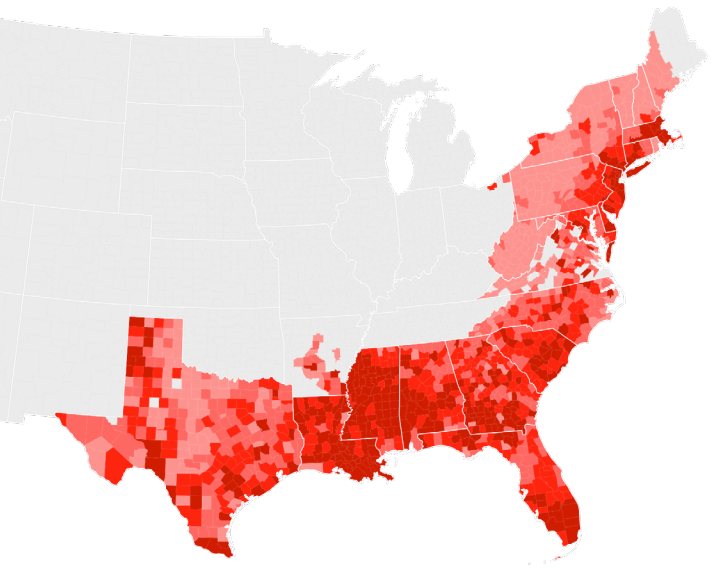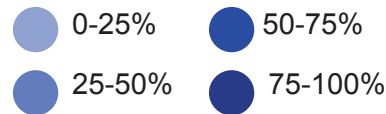
COVID-19 RISK

This map takes the same area of hurricane affected counties and gauges the severity of their COVID-19 outbreak. The index combines data on both confirmed cases and COVID-19 deaths. Similar to our Hurricane Risk Index, the map displays risk as a percentile, with 100% reflecting the highest risk county.

- 0-25%
- 50-75%
- 25-50%
- 75-100%
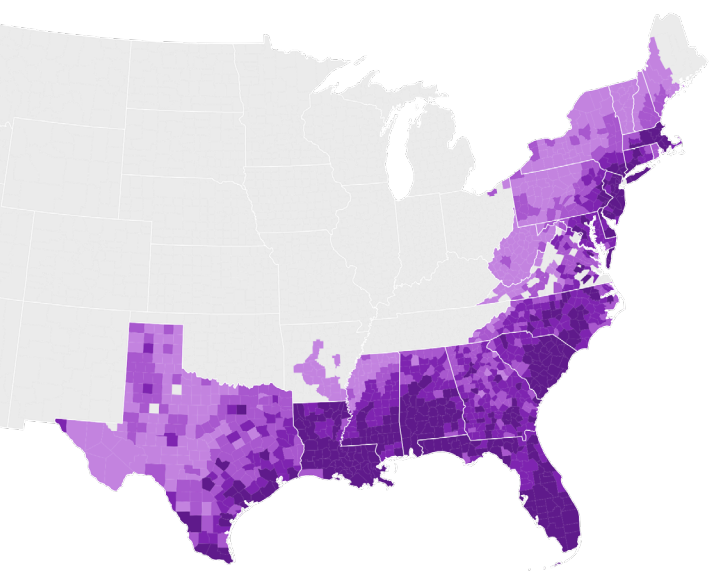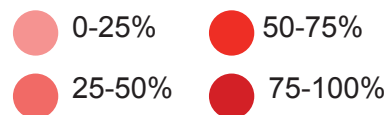
JOINT RISK

This final map combines hurricane and COVID-19 risks. A percentile of 100% reflects the county with the highest combined score on both dimensions.

- 0-25%
- 50-75%
- 25-50%
- 75-100%

3
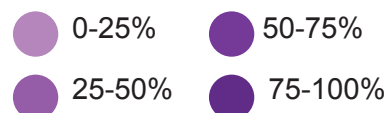
RANKING THE RISKIEST COUNTIES

Using the methodology from the previous page, we identify the top thirty counties in terms of hurricane risk, COVID-19 risk and their combined score.

HURRICANE RISK		COVID-19 RISK		JOINT RISK	
New Hanover, NC	1	New York, NY	1	Jefferson Parish , LA	1
Broward, FL	2	Lincoln, AR	2	St. John the Parish, LA	2
Jefferson Parish , LA	3	Lowndes, AL	3	Orleans Parish , LA	3
Palm Beach, FL	4	Holmes, MS	4	Iberia Parish , LA	4
Mobile, AL	5	Neshoba, MS	5	Acadia Parish , LA	5
Brunswick, NC	6	Rockland, NY	6	Miami-Dade, FL	6
Orleans Parish , LA	7	Randolph, GA	7	Duplin, NC	7
St. Lucie, FL	8	Claiborne, MS	8	St. James Parish, LA	8
Martin, FL	9	Hancock, GA	9	St. Charles Parish, LA	9
Carteret, NC	10	Terrell, GA	10	St. Mary Parish, LA	10
Escambia, FL	11	Passaic, NJ	11	Lafourche Parish , LA	11
Bay, FL	12	Butler, AL	12	Nassau, NY	12
Dare, NC	13	Bullock, AL	13	New York, NY	13
Brevard, FL	14	Early, GA	14	St. Martin Parish, LA	14
St. Charles Parish, LA	15	East Carroll Parish, LA	15	Nueces, TX	15
Pinellas, FL	16	Westchester, NY	16	Suffolk, NY	16
Baldwin, AL	17	Moore, TX	17	Suffolk, MA	17
Craven, NC	18	Madison Parish , LA	18	East Baton Rouge, LA	18
Onslow, NC	19	Union, NJ	19	Allen Parish , LA	19
St. John the Parish, LA	20	Stewart, GA	20	Washington Parish , LA	20
Monroe, FL	21	Hendry, FL	21	Broward, FL	21
Iberia Parish , LA	22	Acadia Parish , LA	22	Iberville Parish , LA	22
St. Tammany Parish, LA	23	St. John the Parish, LA	23	Jefferson Davis Parish, LA	23
East Baton Rouge, LA	24	Nassau, NY	24	Union, NJ	24
Okaloosa, FL	25	Grenada, MS	25	Terrebonne Parish , LA	25
Collier, FL	26	Iberville Parish , LA	26	Assumption Parish , LA	26
Harrison, MS	27	Hudson, NJ	27	Pointe Coupee Parish, LA	27
Lafourche Parish , LA	28	Allen Parish , LA	28	Hudson, NJ	28
Terrebonne Parish , LA	29	Noxubee, MS	29	Essex, NJ	29
Livingston Parish , LA	30	Wilcox, AL	30	Calcasieu Parish , LA	30

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