PHILADELPHIA REGIONAL HOUSE PRICE INDICES

February 5, 2018

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Sponsored By:

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Philadelphia Regional House Price Indices 1980-2017
1980Q1=100
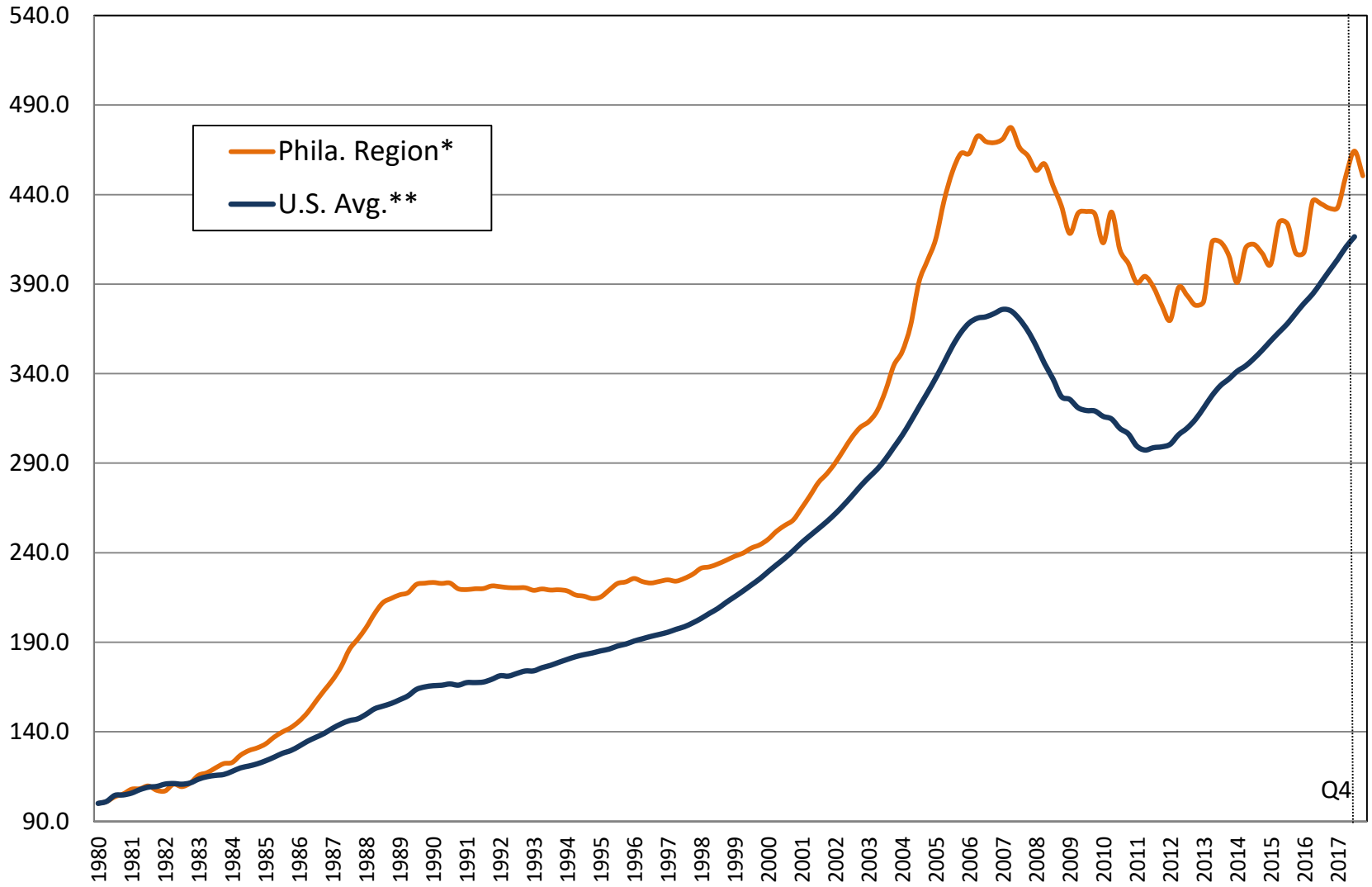
*Empirically estimated by Kevin C. Gillen, PhD   **Courtesy Federal Housing Finance Agency (FHFA)

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House Price Appreciation 1987-2017:
Philadelphia Region v. 10-City U.S. Composite

% Change	10-City	Philadelphia
1998 to Peak:	+172%	+106%
From Peak:	-3.6%	-5.7%

Legend:
- 10-City Composite*
- Philadelphia Region
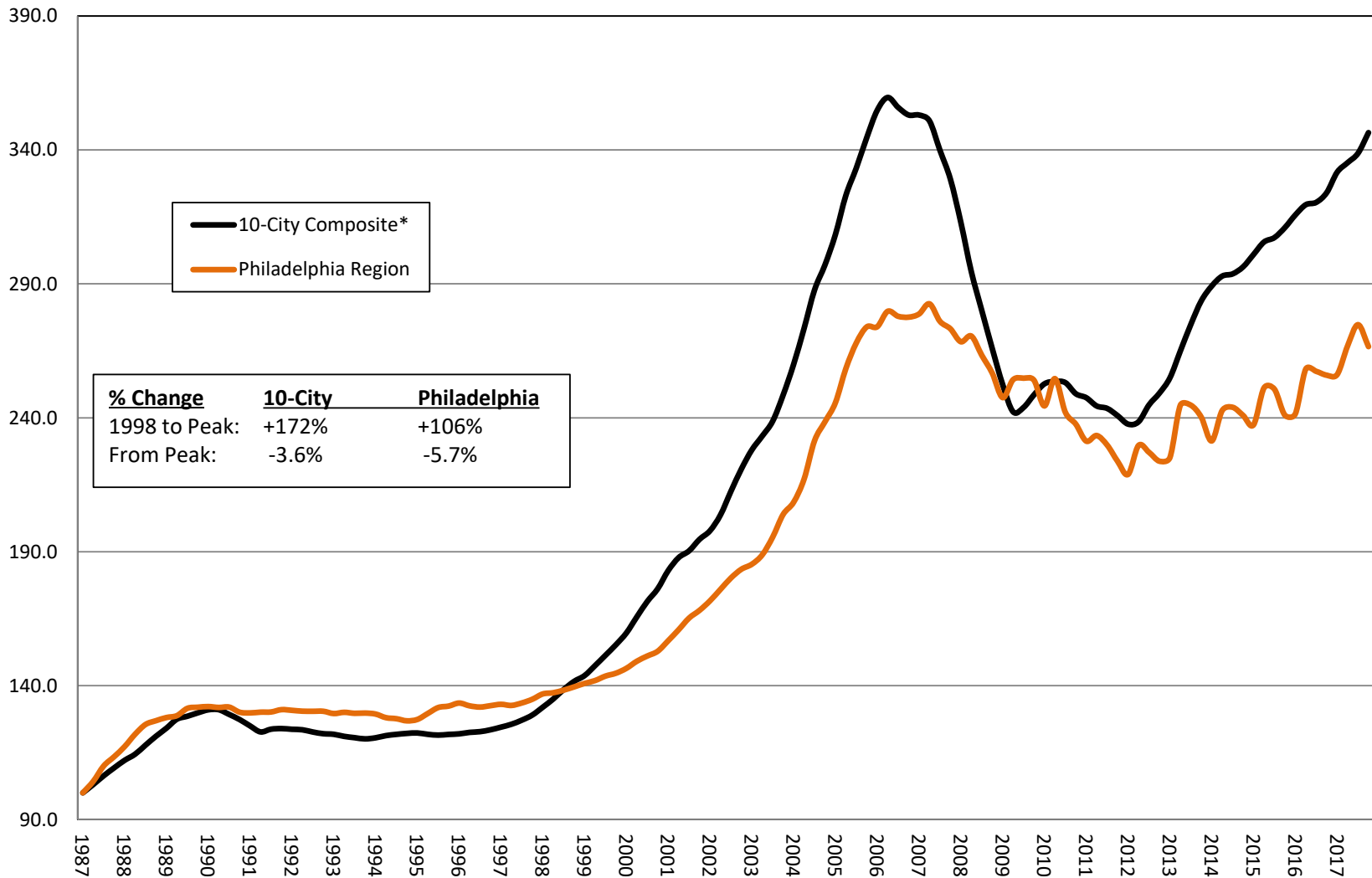
*Source: Case-Shiller MacroMarkets LLC. The 10-City Composite Index includes Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco and Washington DC. It does not include Philadelphia.

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Philadelphia Regional House Price Indices 1980-2017
by Philadelphia Region and State: 1980Q1=100
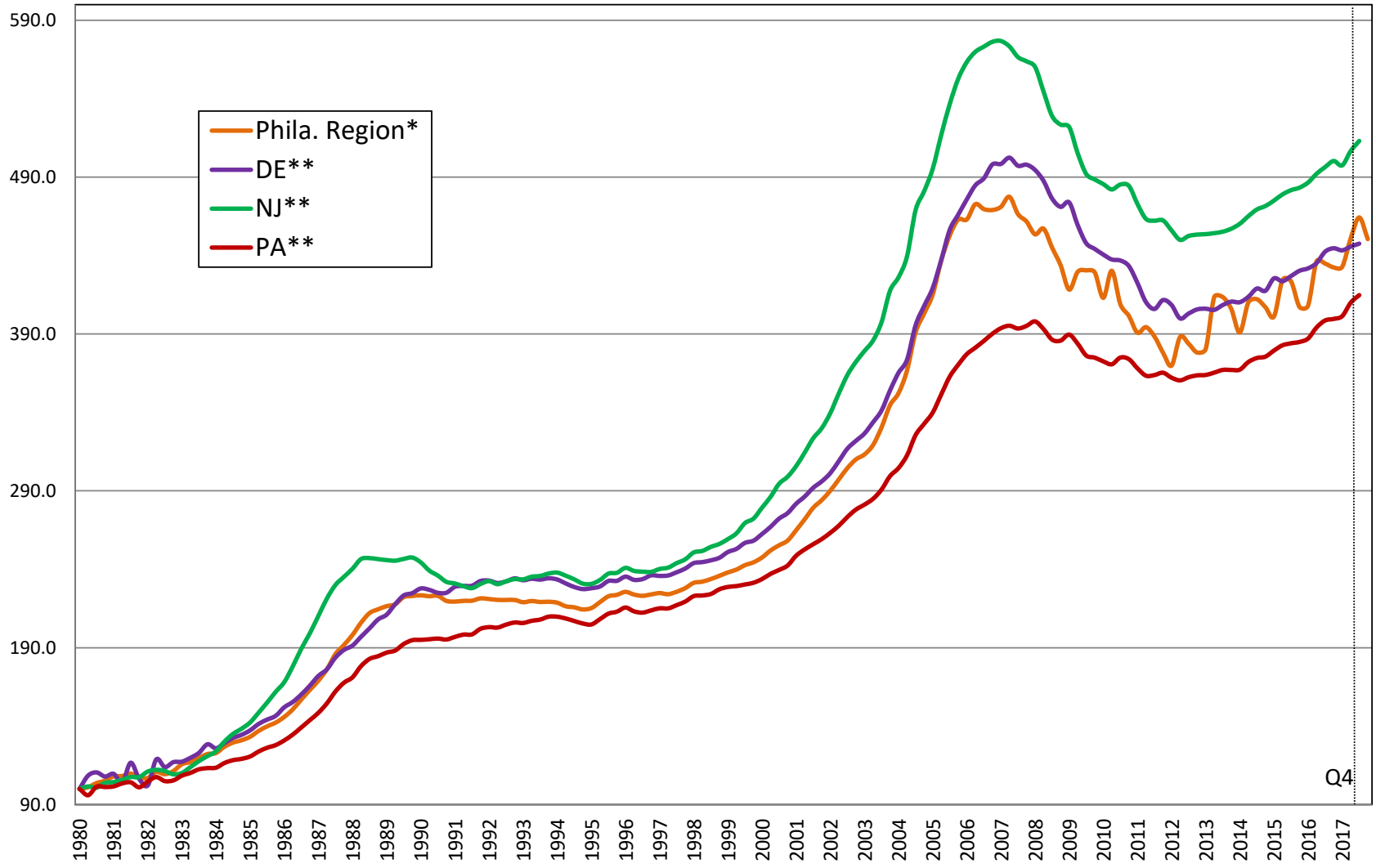
*Empirically estimated by Kevin C. Gillen, Ph.D.   **Courtesy Federal Housing Finance Agency (FHFA)

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Philadelphia Regional House Price Indices 1980-2017
City v. Suburb v. U.S. Average.: 1980Q1=100
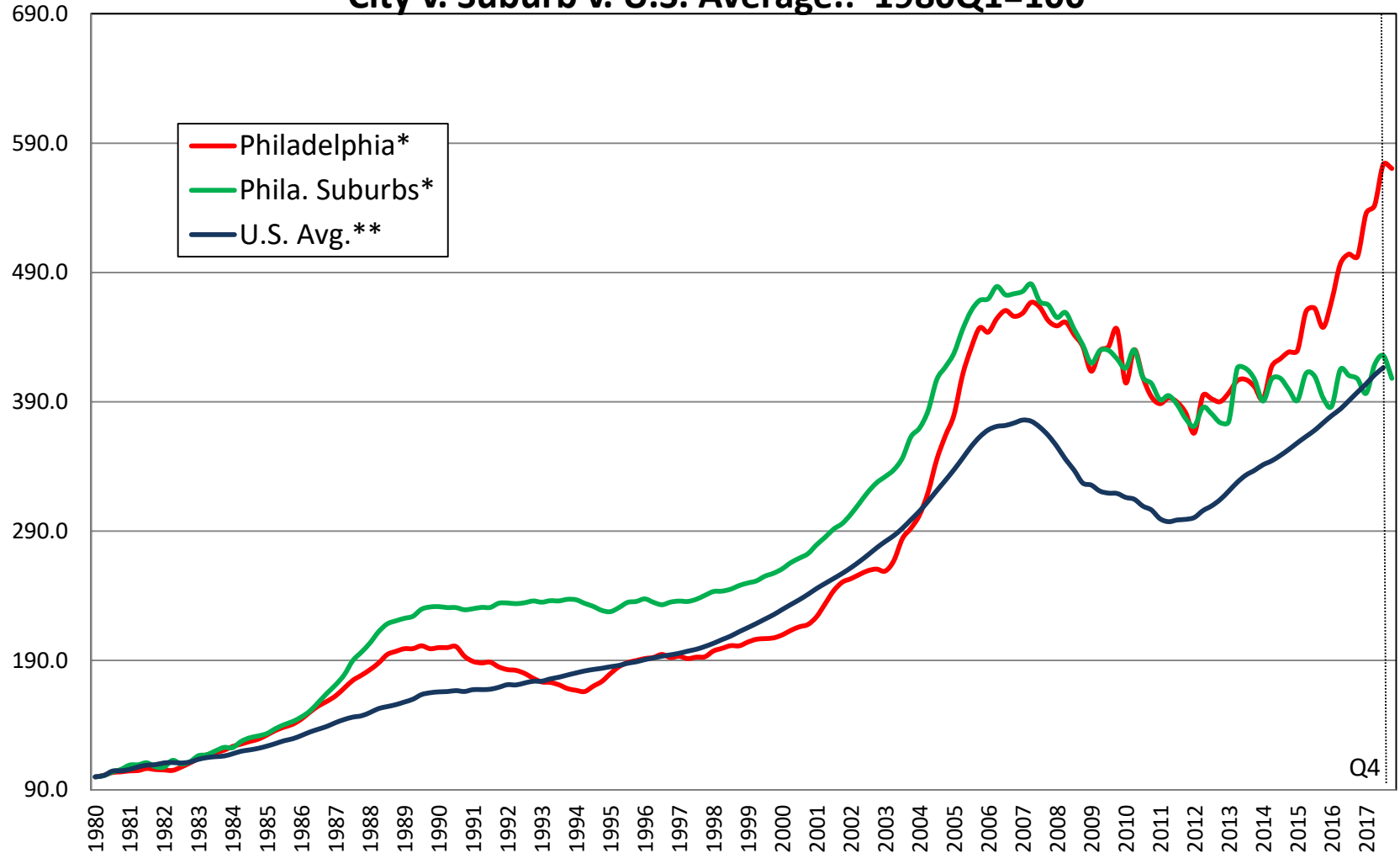
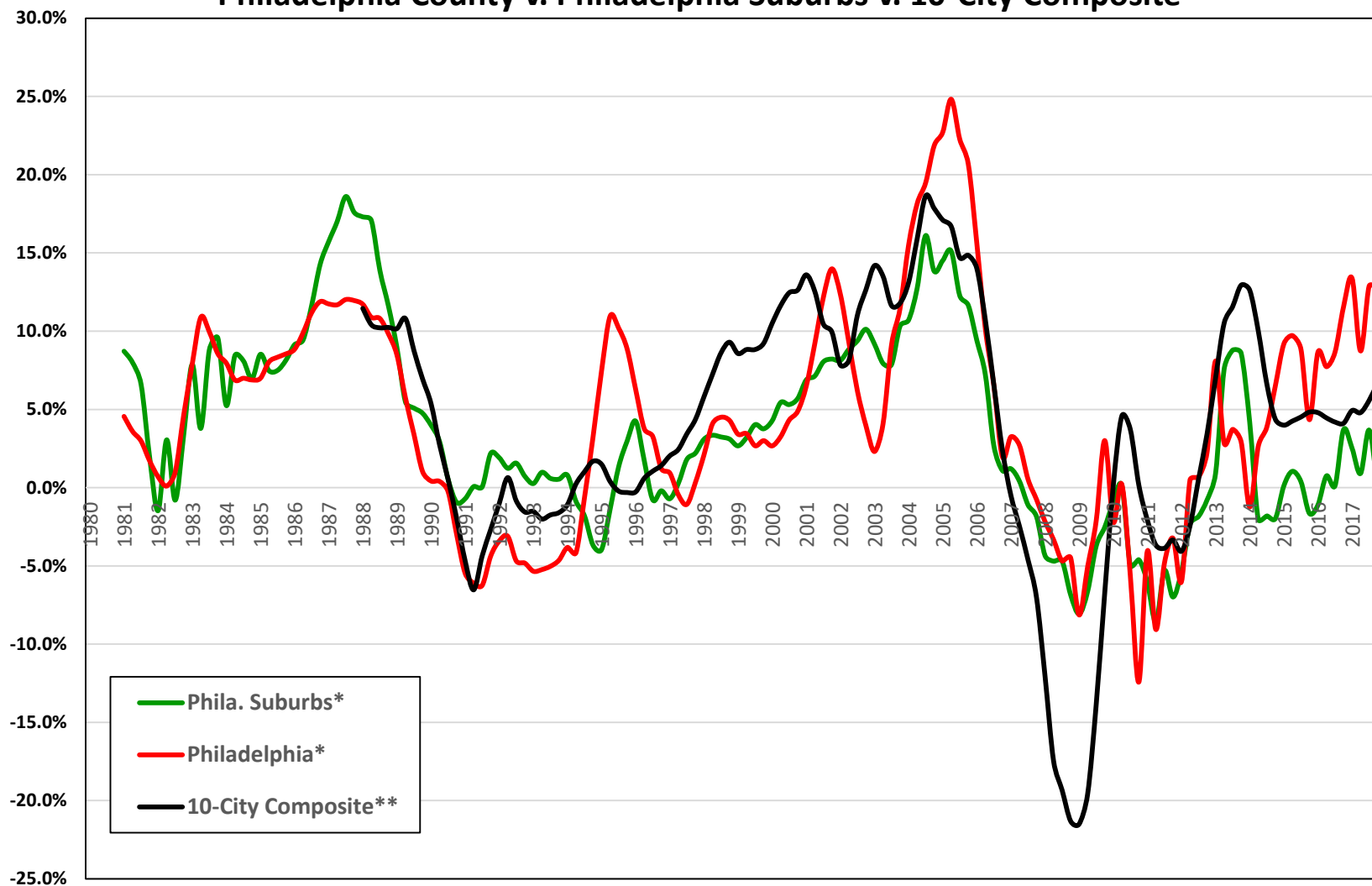*Empirically estimated by Kevin C. Gillen, PhD   **Courtesy Federal Housing Finance Agency (FHFA)

Note: The suburban index includes all counties in the regional index, except for Philadelphia county.

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YoY Change in Average House Prices: 1980-2017
Philadelphia County v. Philadelphia Suburbs v. 10-City Composite

Legend:
- Phila. Suburbs*
- Philadelphia*
- 10-City Composite**

*Empirically estimated by Kevin C. Gillen, Ph.D.

**Empirically estimated by Case-Shiller. The 10-City Composite reflects average annual house price changes in ten large US cities, including: Boston Chicago, Denver, Las Vegas, Los Angeles, Miami, New York, San Diego, San Francisco and Washington DC. It does not include Philadelphia.

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Total House Price Appreciation Rates by Philadelphia Area Submarket and U.S.

Period	Philadelphia County*	Philadelphia Suburbs*	U.S.A.**
38-Year	**174.1%**	**140.6%**	**142.7%**
10-Year	**23.1%**	**-13.0%**	**11.7%**
1-Year	**12.7%**	**0.1%**	**6.3%**
1-Quarter	**-0.5%**	**-4.2%**	**1.4%**

*Empirically estimated by Kevin C. Gillen Ph.D.

**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2017Q3 only. "MSA"="Metropolitan Statistical Area", which is the entire 10-county region.

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Philadelphia Region House Price Appreciation Rates by County

Period	Philadelphia	Bucks	Chester	Delaware	Montgomery	New Castle	Mercer	Burlington	Camden	Gloucester	Salem
38-Year	174%	164%	160%	137%	150%	133%	161%	120%	114%	133%	93%
10-Year	23.1%	-1.1%	2.4%	-10.4%	-5.4%	-15.6%	-11.2%	-25.3%	-31.4%	-19.5%	-60.7%
1-Year	12.7%	6.2%	5.2%	5.7%	4.7%	1.0%	4.0%	1.1%	0.1%	0.4%	-15.2%
1-Quarter	-0.5%	-0.5%	0.5%	-0.5%	-0.8%	-3.5%	-1.9%	-3.3%	-4.7%	-1.0%	-19.2%

All county-level indices and appreciation rates estimated by Kevin C. Gillen, Ph.D.

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Philadelphia Region:
County Boundary Definitions

PA

NJ

MD

DE

Bucks

Mercer

Montgomery

Chester

Philadelphia

Delaware

Burlington

Camden

New Castle

Gloucester

Salem

2017 Q4 House Price Rate of Change by County

Montgomery: -0.8%

Bucks: -0.5%

Philadelphia: -0.5%

Mercer: -1.9%

Chester: +0.5%

Delaware: -0.5%

Burlington: -3.3%

New Castle: -3.5%
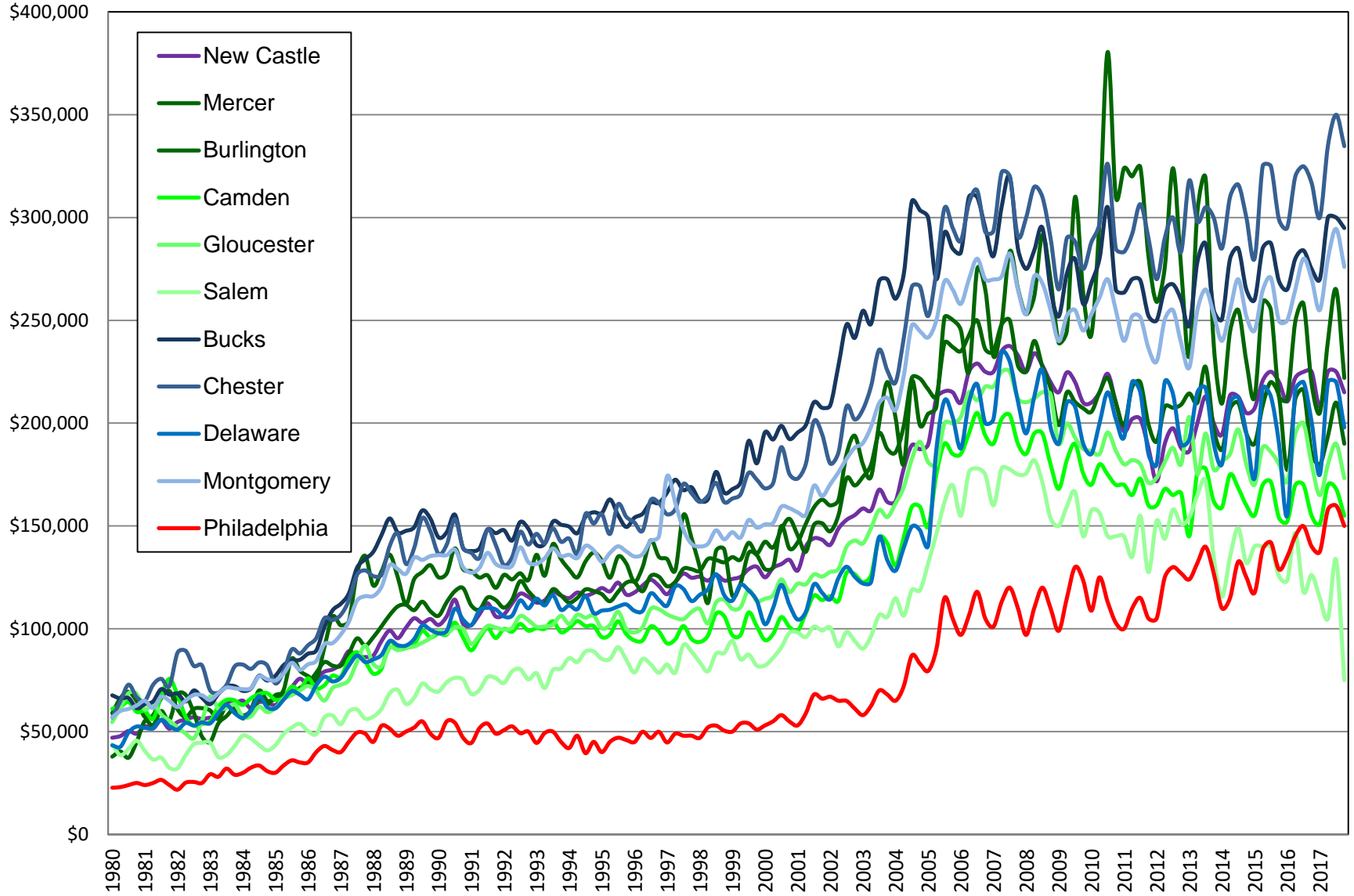
Camden: -4.7%

Gloucester: -1.0%

Salem: -19.2%
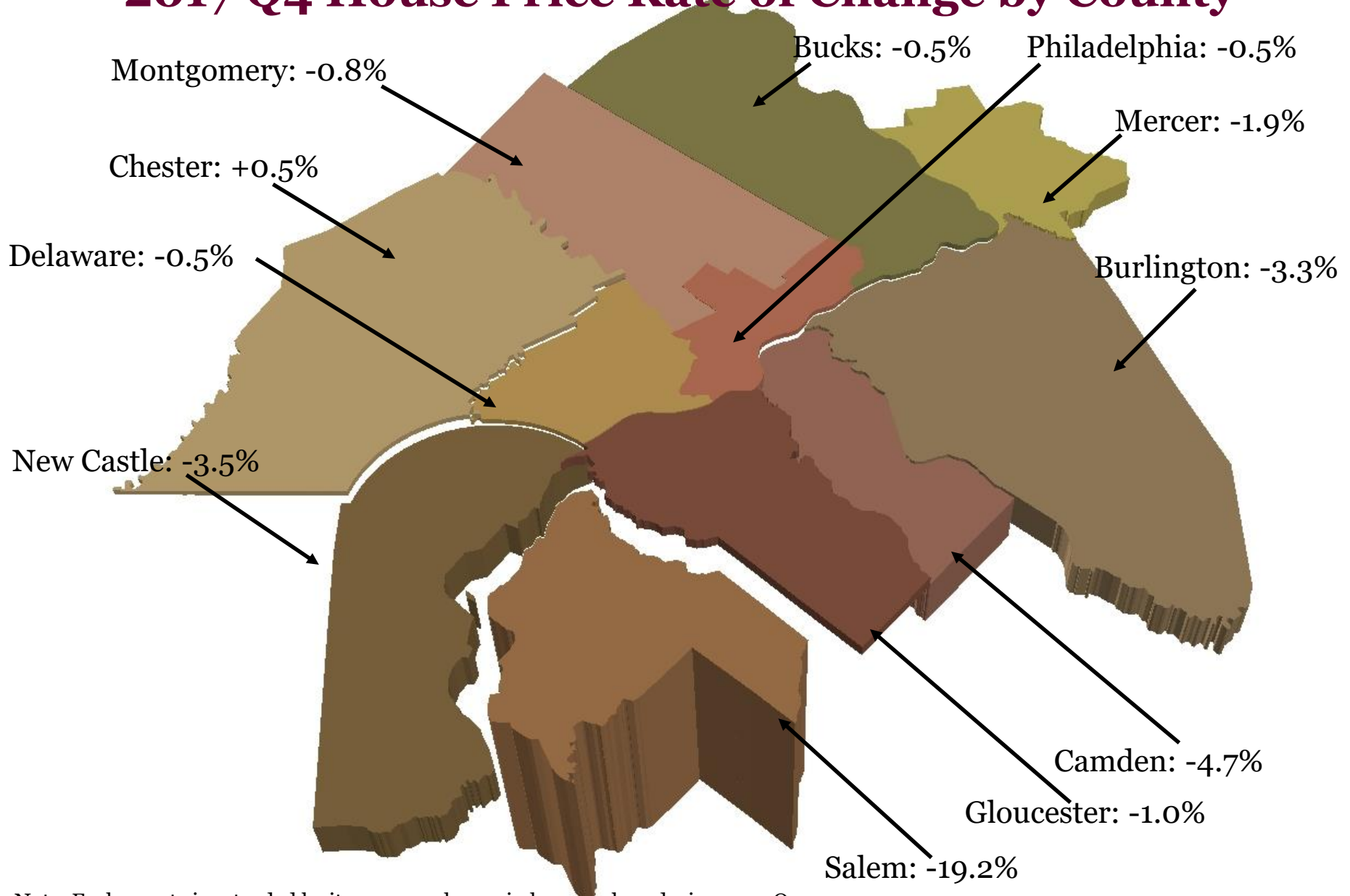
Note: Each county is extruded by its average change in house values during 2017 Q4 in order to reflect its growth (or depreciation) rate relative to other counties.

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Median Regional House Price v. Indexed Regional House Price: 1980-2017

*Empirically estimated by Kevin C. Gillen, Ph.D.

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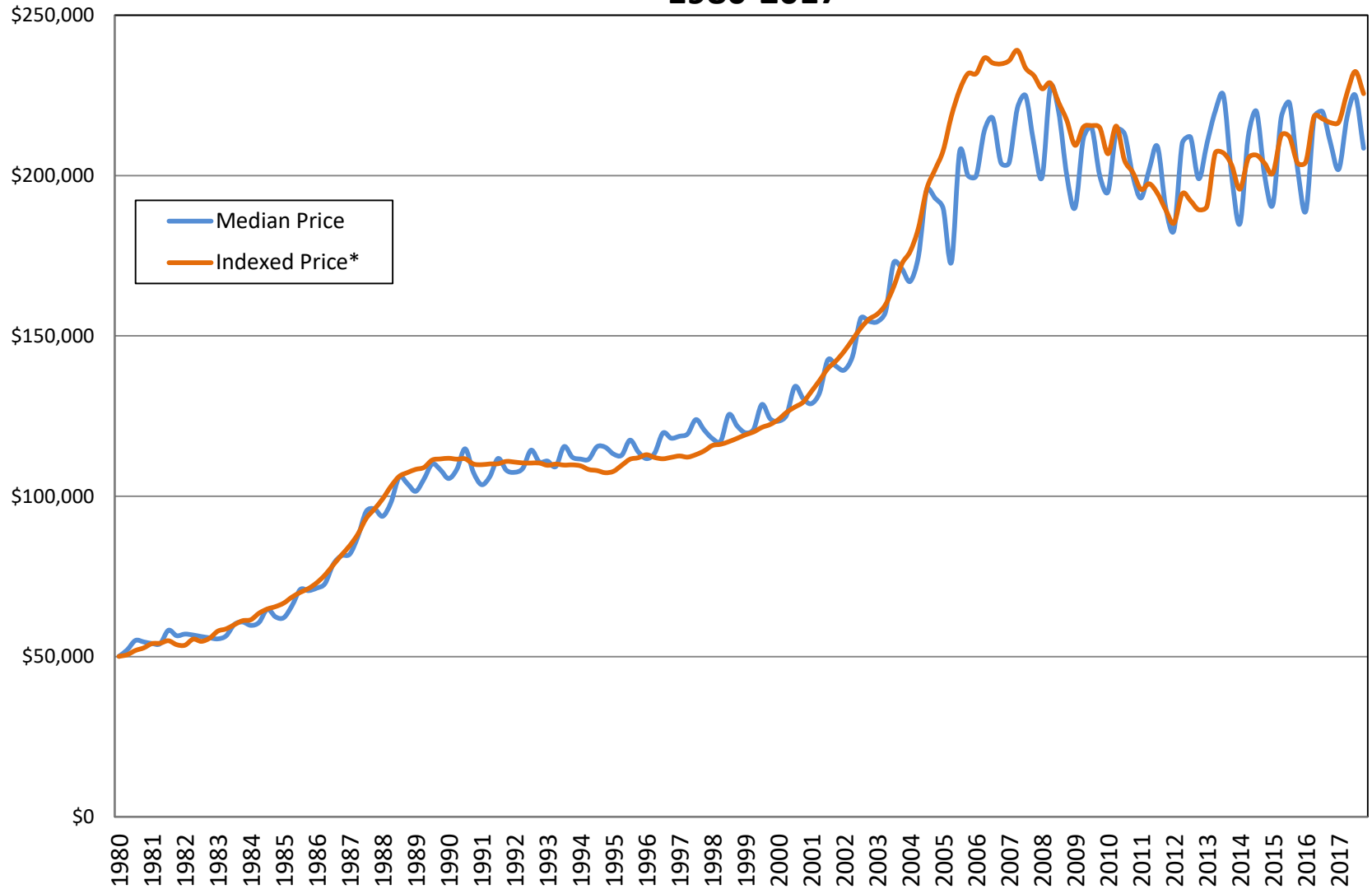
Median House Price by County: 1980-2017

Legend:
- New Castle
- Mercer
- Burlington
- Camden
- Gloucester
- Salem
- Bucks
- Chester
- Delaware
- Montgomery
- Philadelphia

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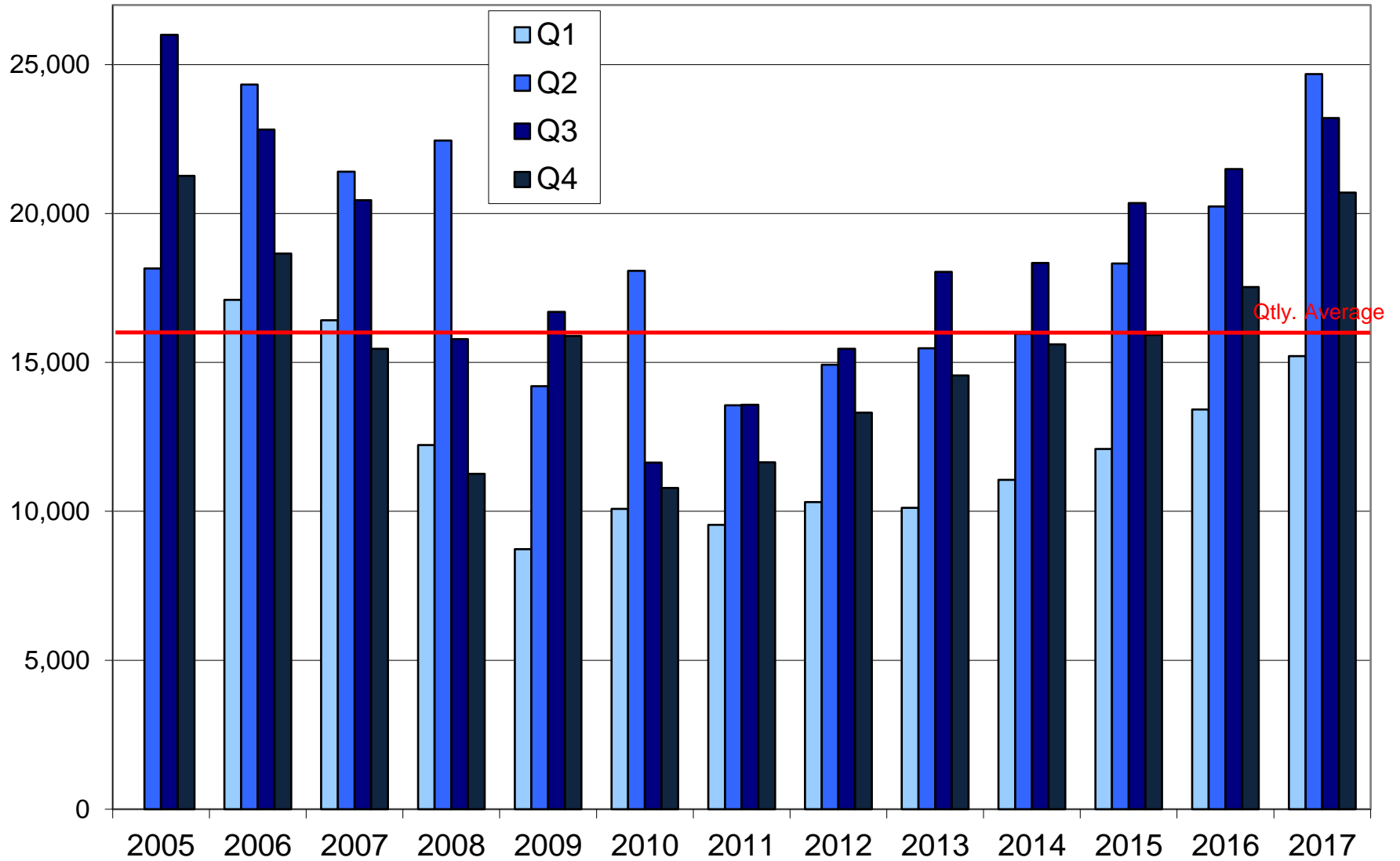for Urban Innovation

Median House Price by County, Smoothed*: 1980-2017
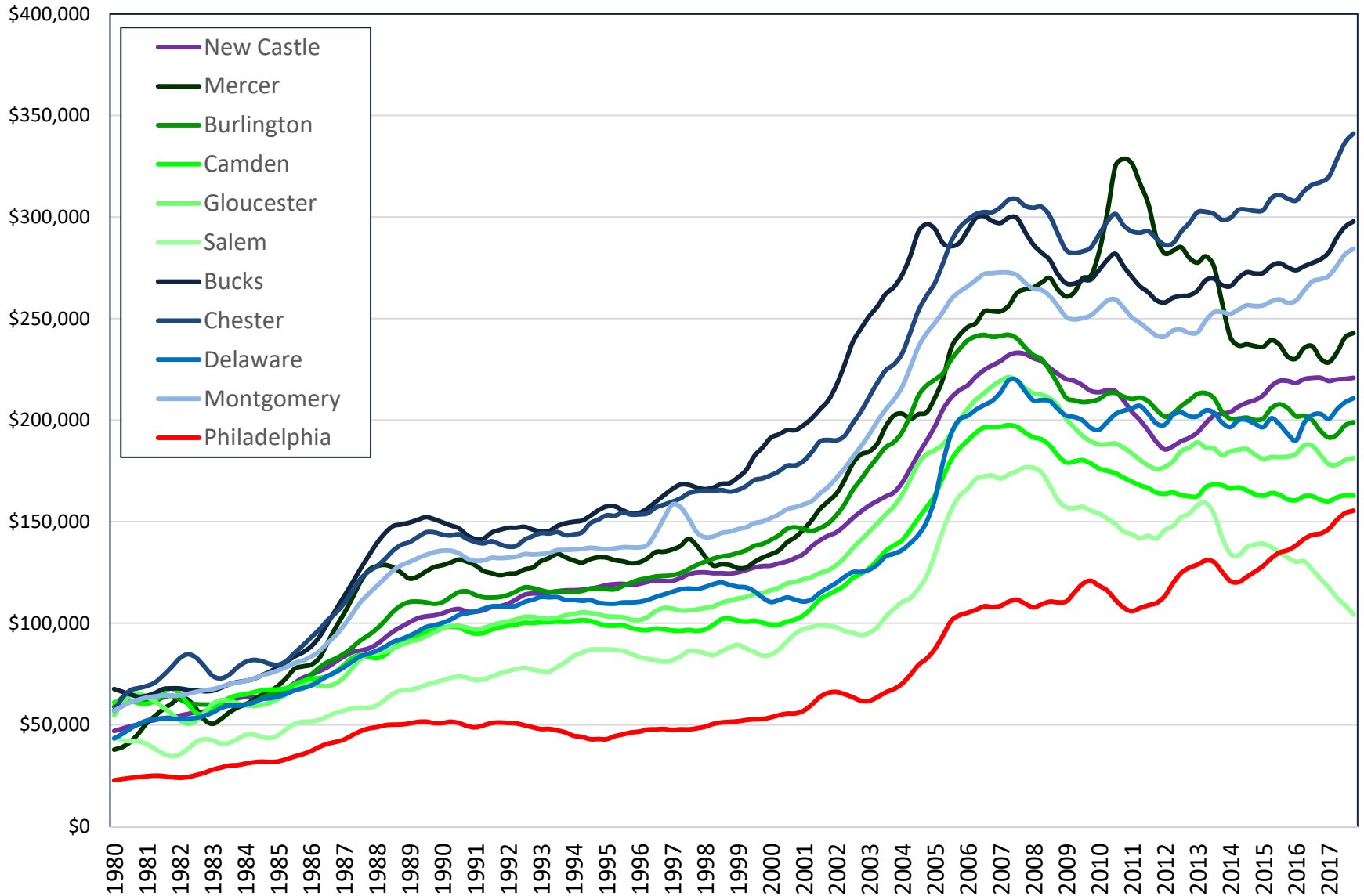
*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.

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Number of Regional House Sales per Quarter: 2005-2017

Legend:
- Q1
- Q2
- Q3
- Q4

Qtly. Average

Number of Regional House Sales 2005-2017 with Price>=$1m

Qtly. Average

Legend: Q1, Q2, Q3, Q4

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Philadelphia Region House Sales in 2017 Q4
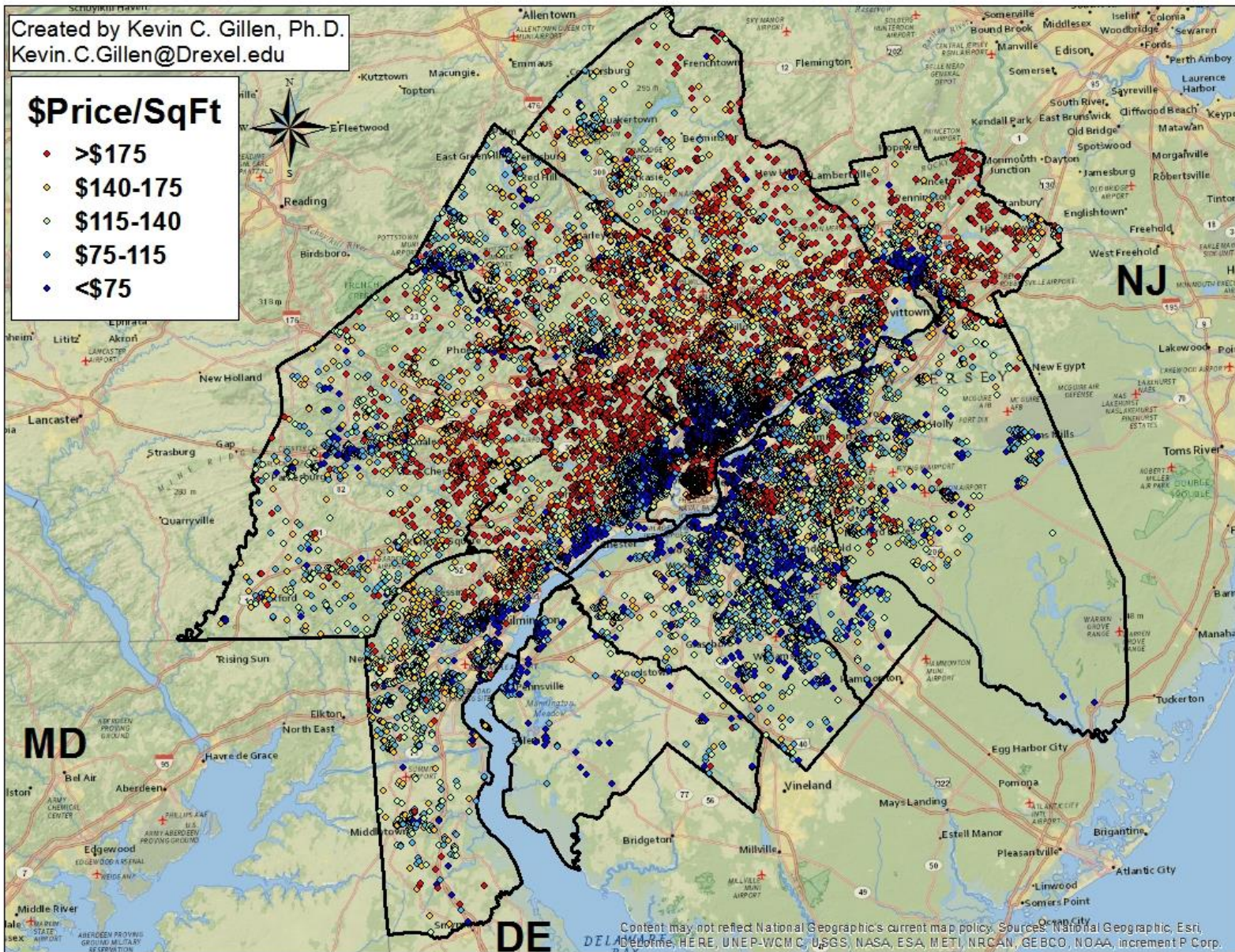
Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu

$Price/SqFt
- ◆ >$175
- ◇ $140-175
- ◇ $115-140
- ◆ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Philadelphia County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
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$Price/SqFt

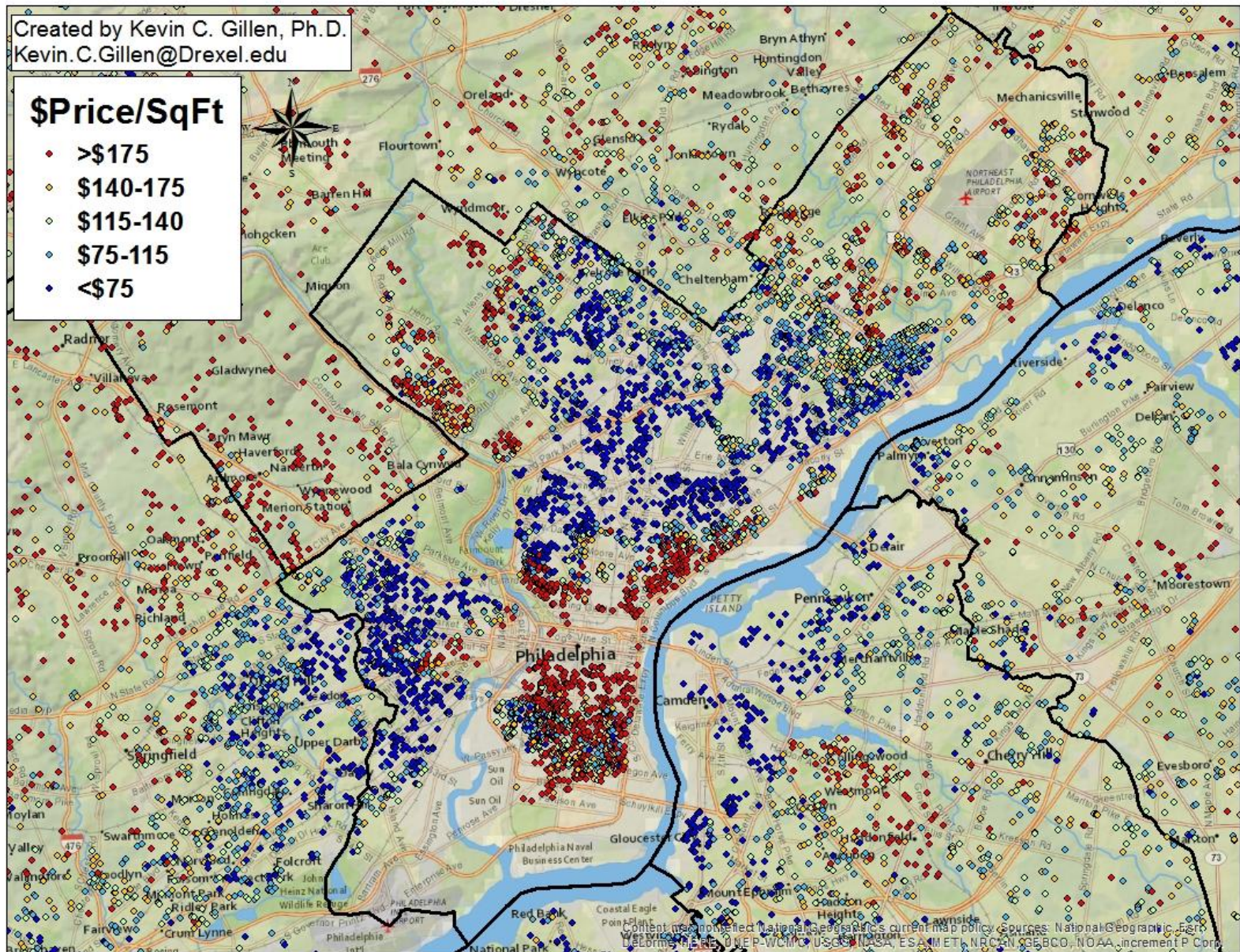- ◆ >$175
- ◇ $140-175
- ◇ $115-140
- ◆ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Bucks County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu

$Price/SqFt

- >$175
- $140-175
- $115-140
- $75-115
- <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Montgomery County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu

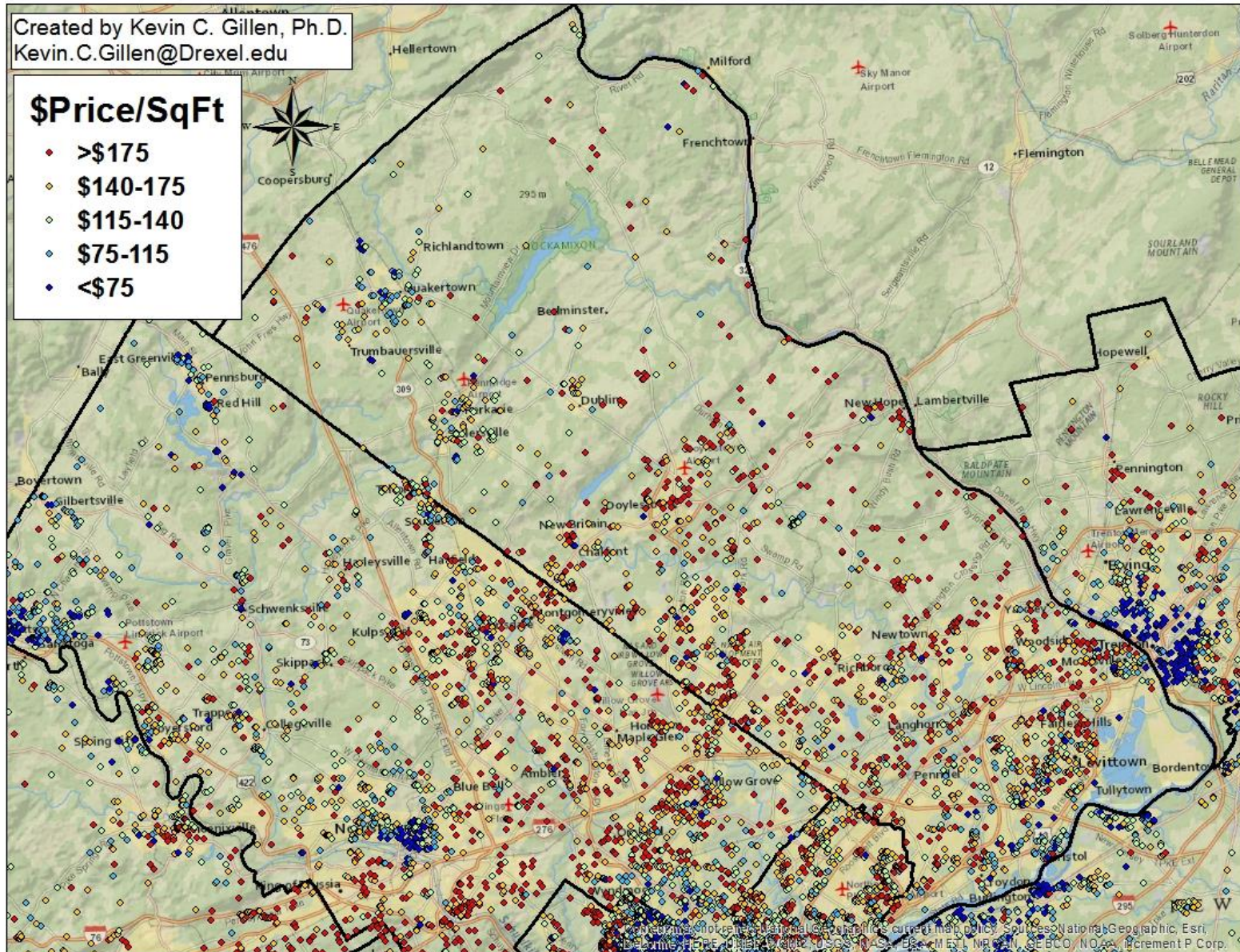**$Price/SqFt**
- >$175
- $140-175
- $115-140
- $75-115
- <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Chester County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu

$Price/SqFt
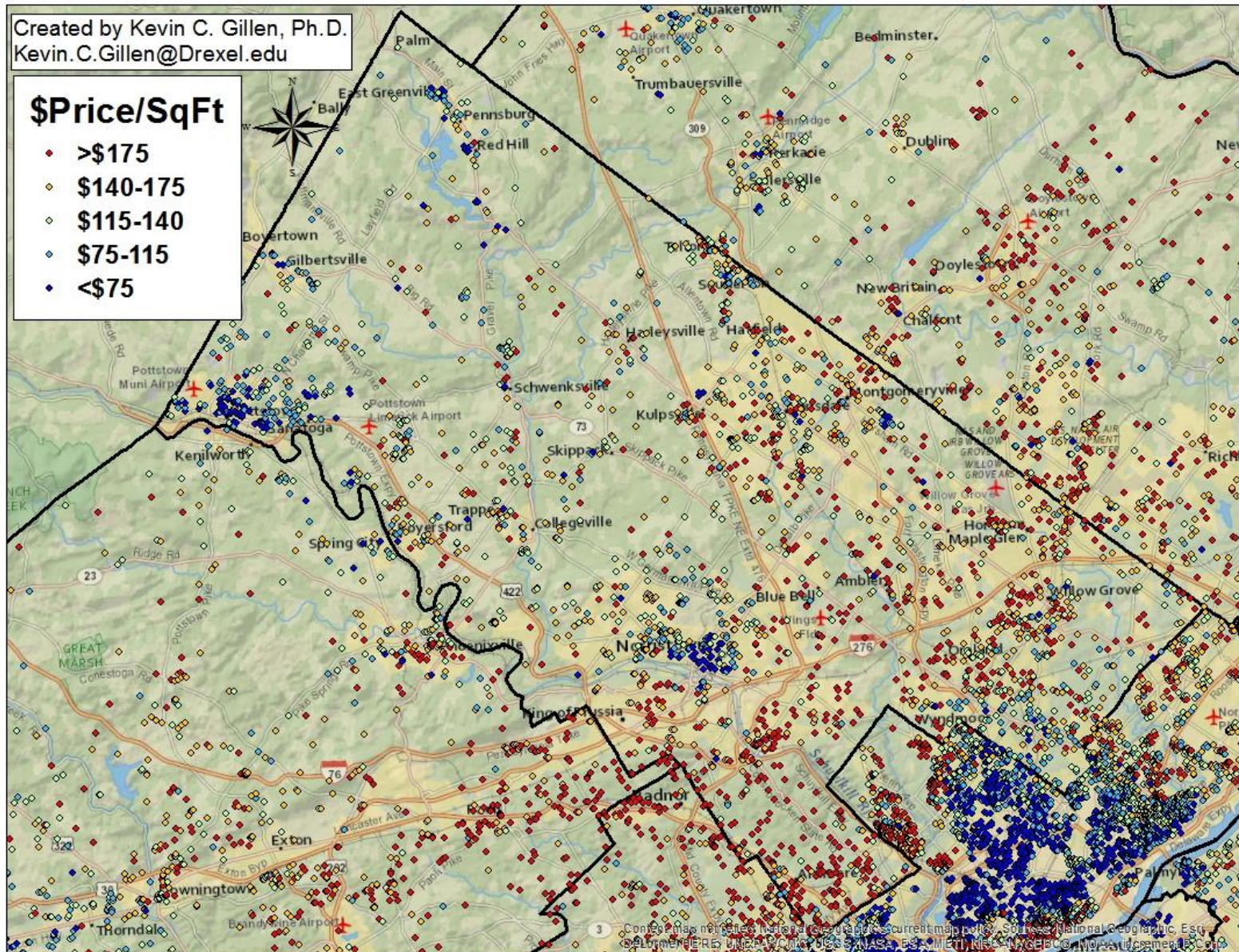- ◆ >$175
- ◇ $140-175
- ◇ $115-140
- ◇ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Delaware County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
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$Price/SqFt
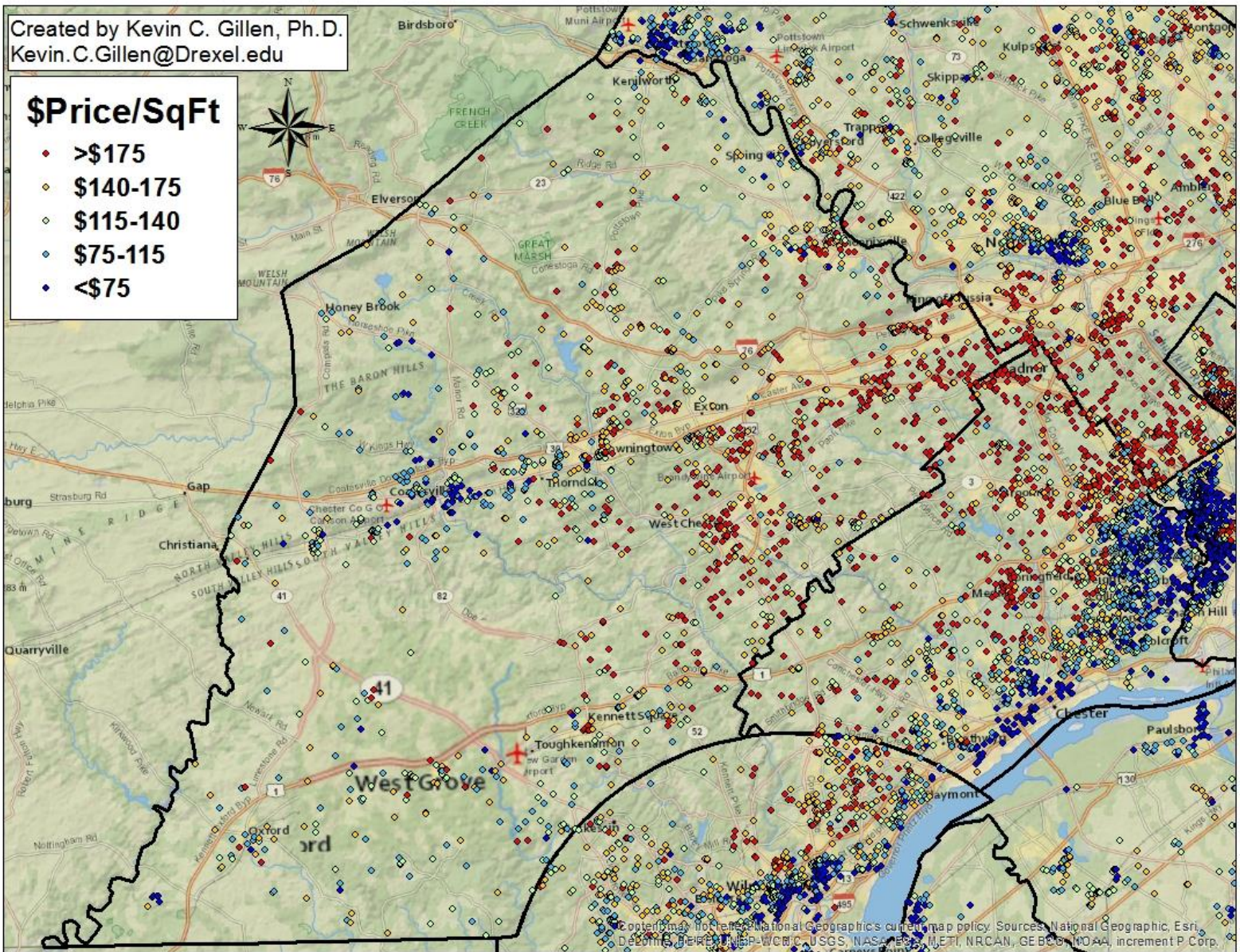
- ◆ >$175
- ◆ $140-175
- ◇ $115-140
- ◆ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution. Hence, exactly 20% of all sales fall into each one of the five categories.

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New Castle County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
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$Price/SqFt
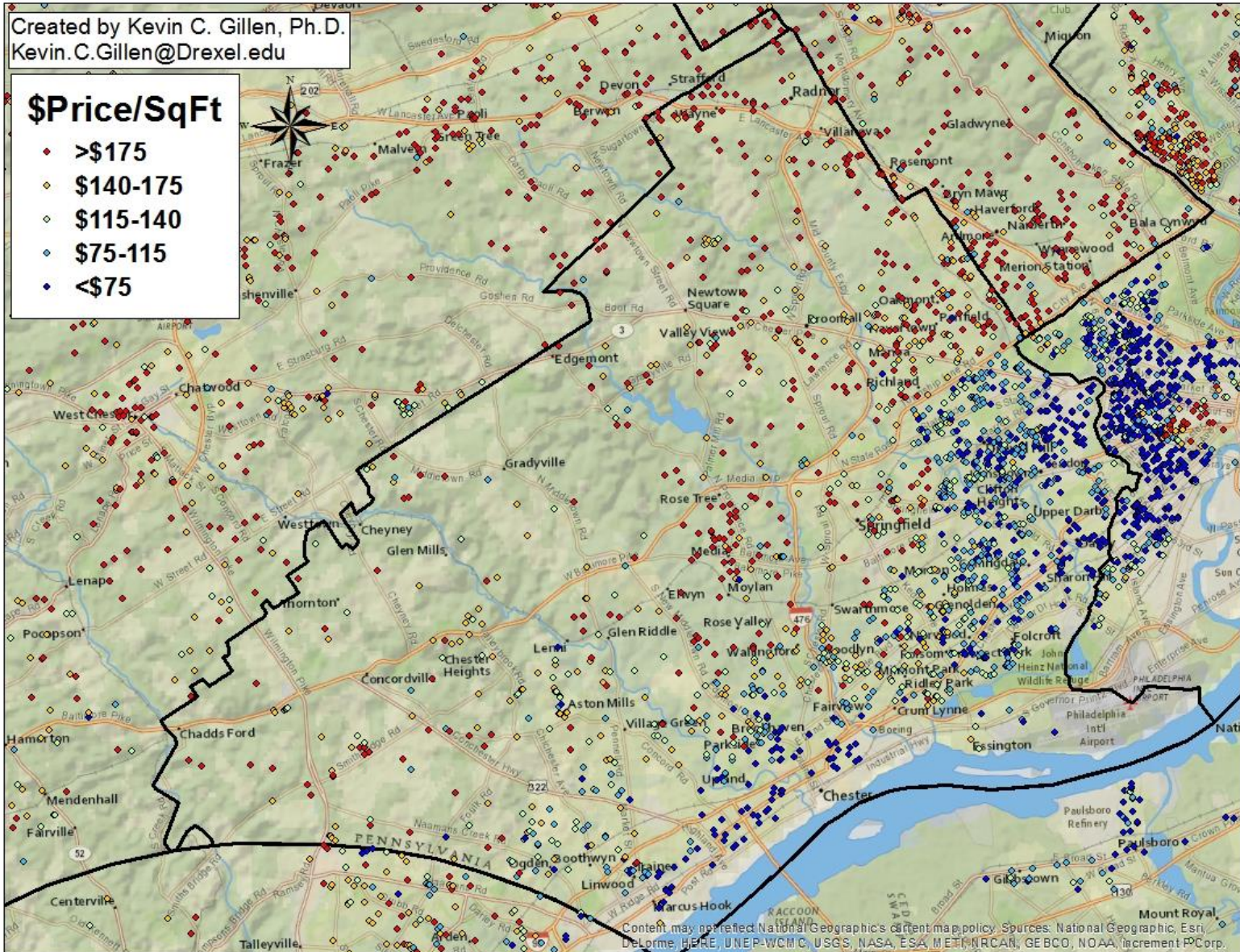- ● >$175
- ◇ $140-175
- ◇ $115-140
- ◇ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Mercer County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
Kevin.C.Gillen@Drexel.edu

$Price/SqFt

- >$175
- $140-175
- $115-140
- $75-115
- <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution. Hence, exactly 20% of all sales fall into each one of the five categories.

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Burlington County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
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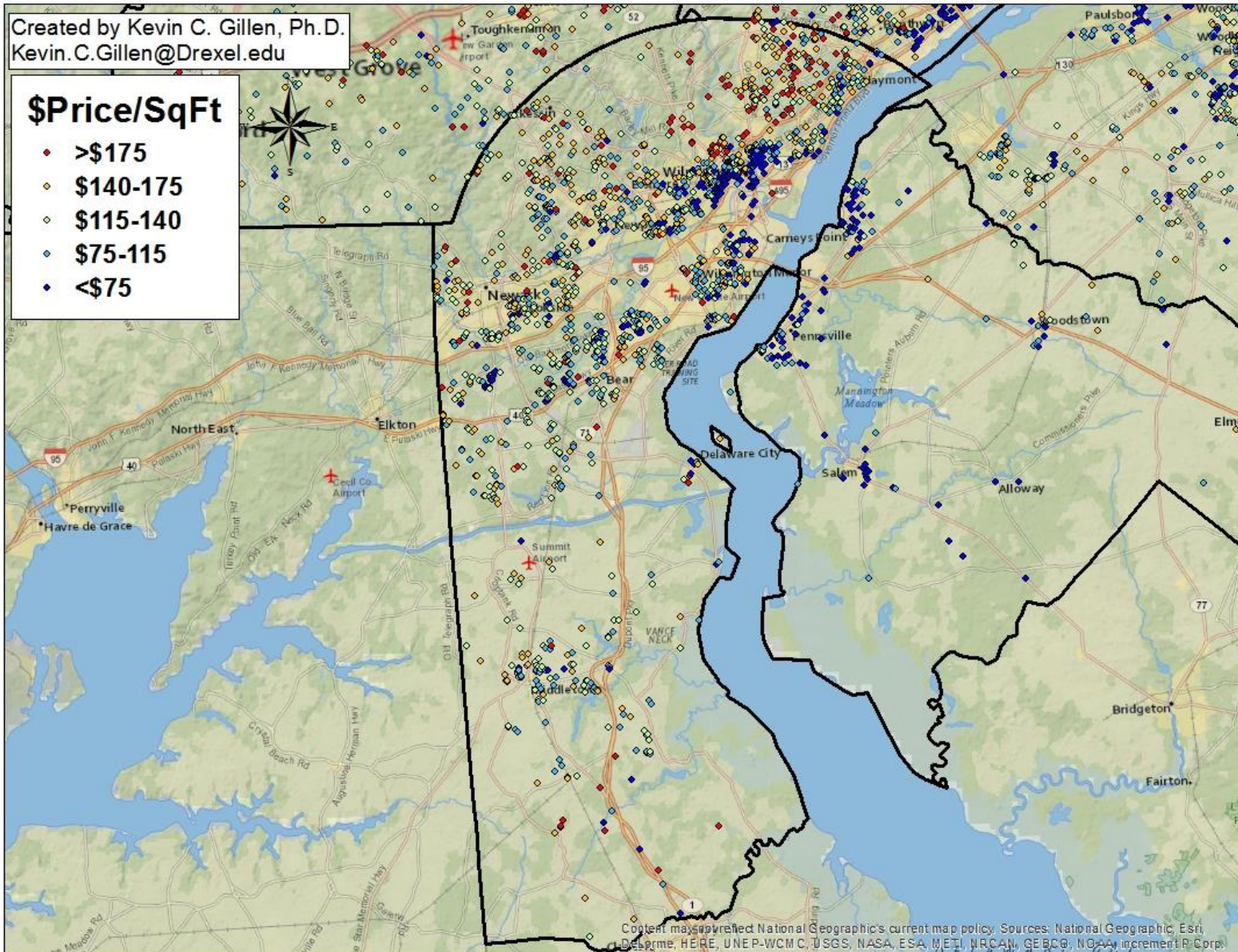**$Price/SqFt**
- >$175
- $140-175
- $115-140
- $75-115
- <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Camden County House Sales in 2017 Q4

Created by Kevin C. Gillen, Ph.D.
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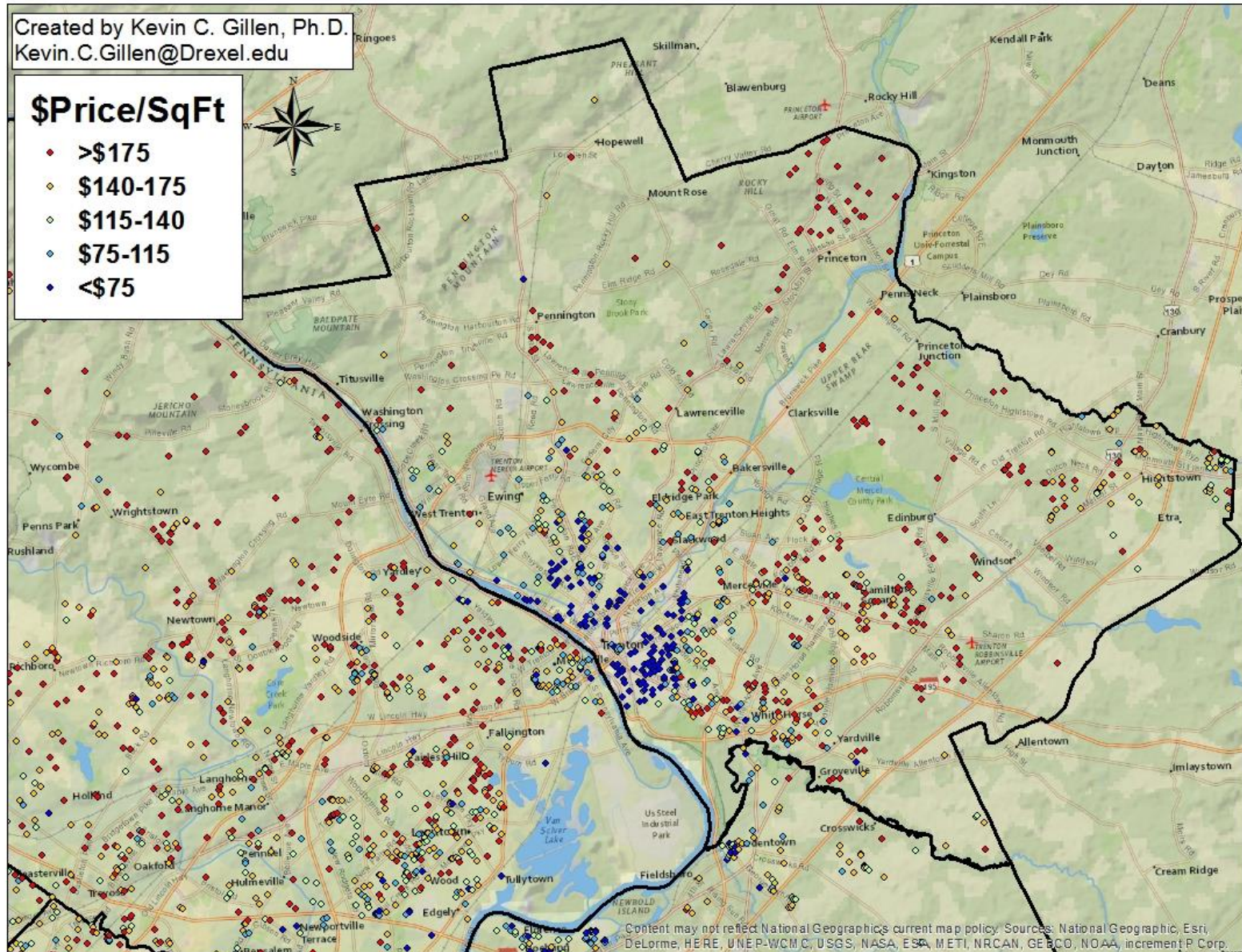**$Price/SqFt**
- >$175
- $140-175
- $115-140
- $75-115
- <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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Gloucester County House Sales in 2017 Q3

Created by Kevin C. Gillen, Ph.D.
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$Price/SqFt
- ◆ >$175
- ◇ $140-175
- ◇ $115-140
- ◇ $75-115
- ◆ <$75

Note: the categories for $price/sqft are based upon the quintiles of its distribution.
Hence, exactly 20% of all sales fall into each one of the five categories.

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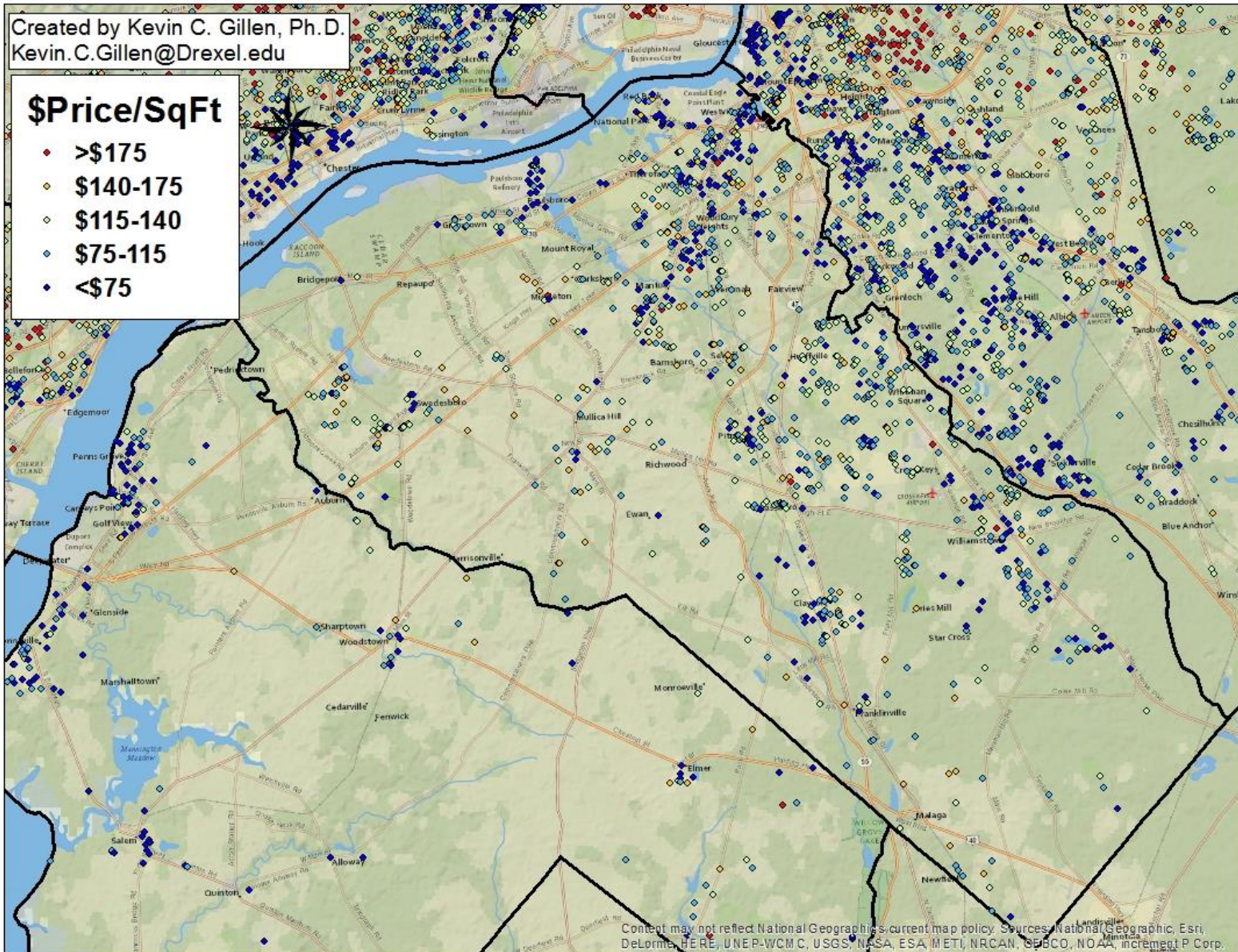
Salem County House Sales in 2017 Q4

Note: the categories for $price/sqft are based upon the quintiles of its distribution. Hence, exactly 20% of all sales fall into each one of the five categories.

+$1 Million Dollar House Sales in 2017 Q4

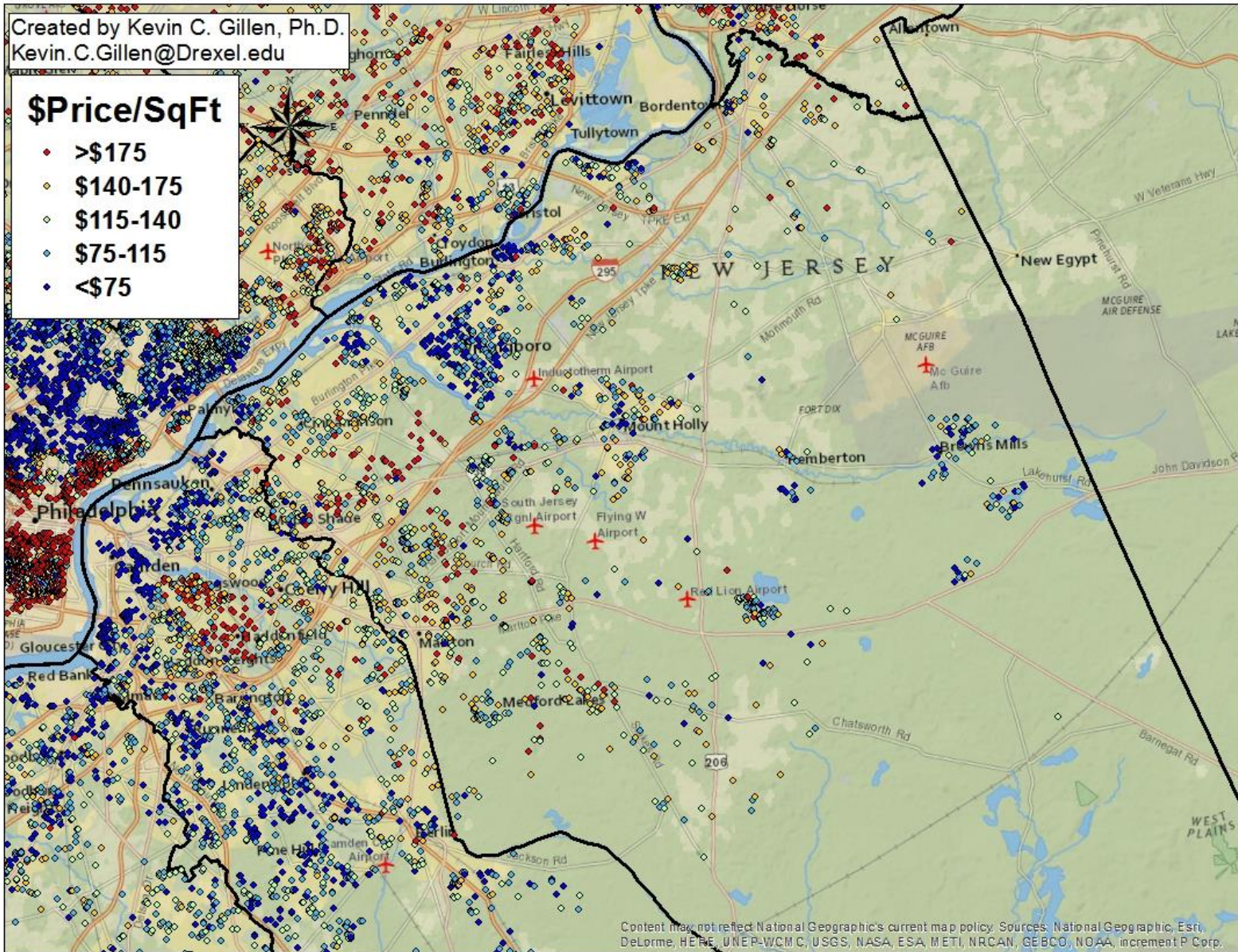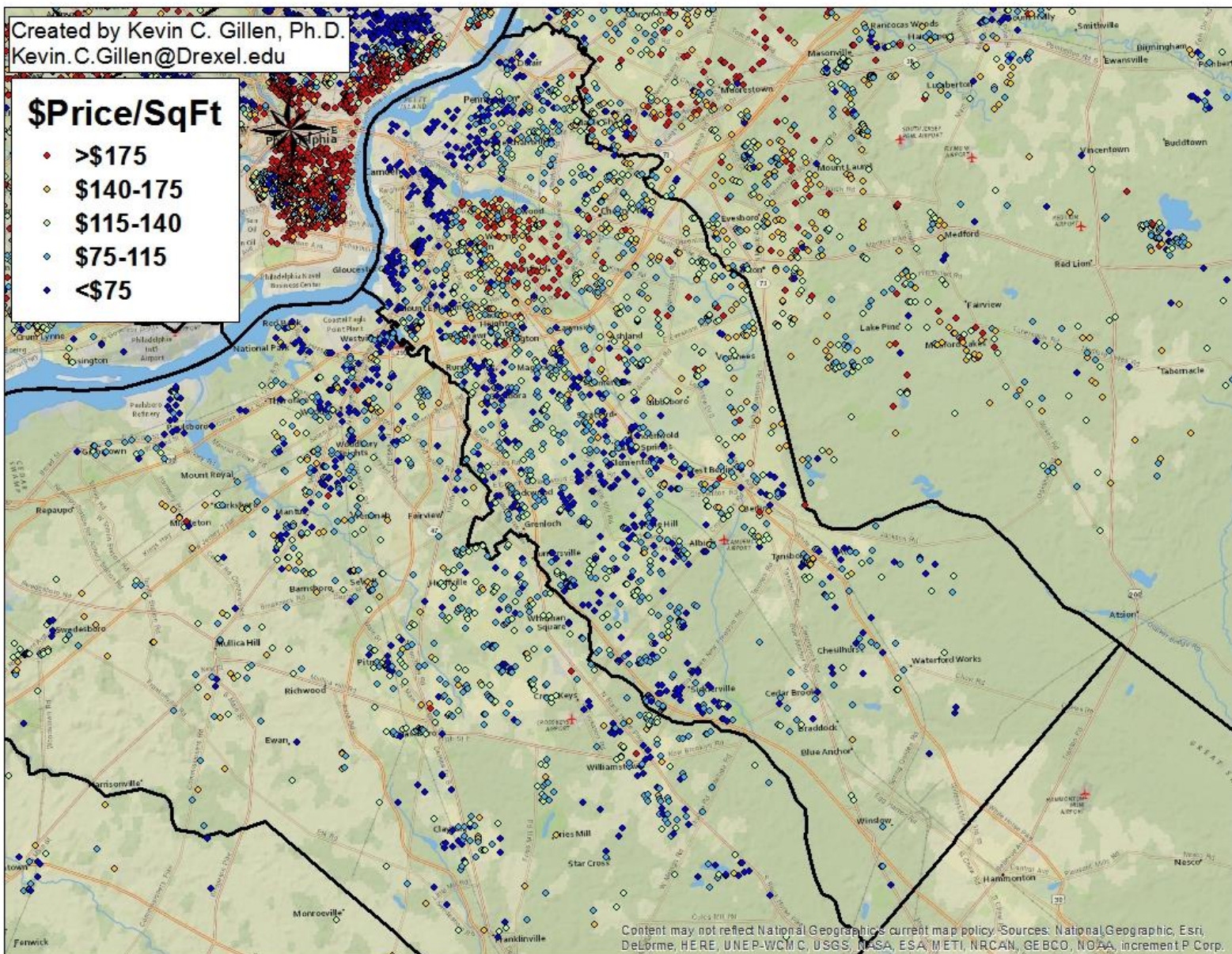Created by Kevin C. Gillen, Ph.D.
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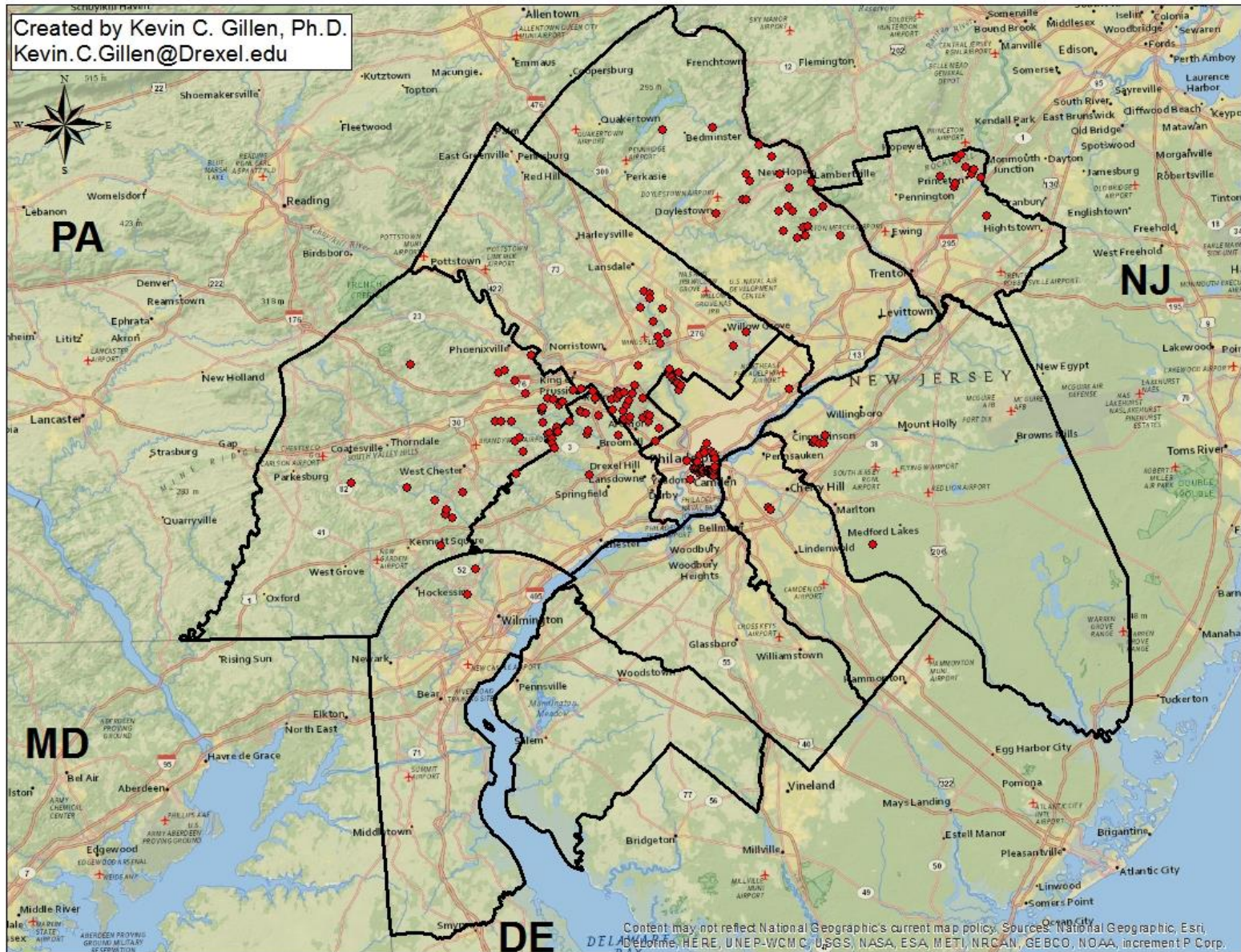
Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

Legend:
- # Houses Listed For Sale
- % Absorbed

Y-axis (left): # Houses Listed "For Sale" — 0 to 14,000

Y-axis (right): %Absorbed=(#Sales/#Listings) — 0.0% to 40.0%

X-axis: 2001 – 2017

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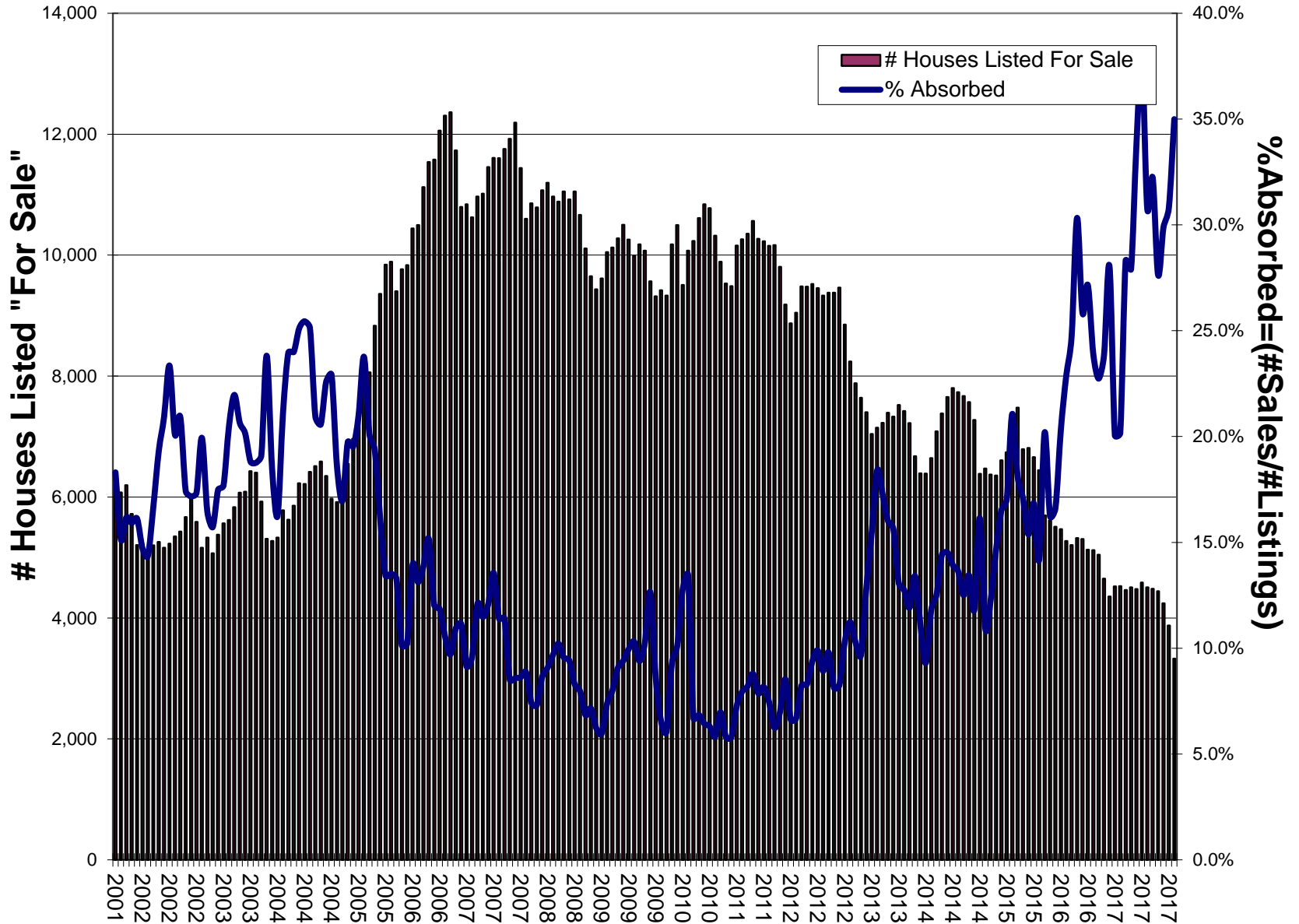
Philadelphia Suburb's Houses Listed For Sale:
Inventory v. Sales Rate

Source: TrendMLS

Legend:
- # Houses Listed For Sale
- % Absorbed

Y-axis (left): # Homes Listed "For Sale" — 0 to 35,000
Y-axis (right): %Sold = (#Sales/#Listings) — 0% to 30%
X-axis: 2010 to 2017

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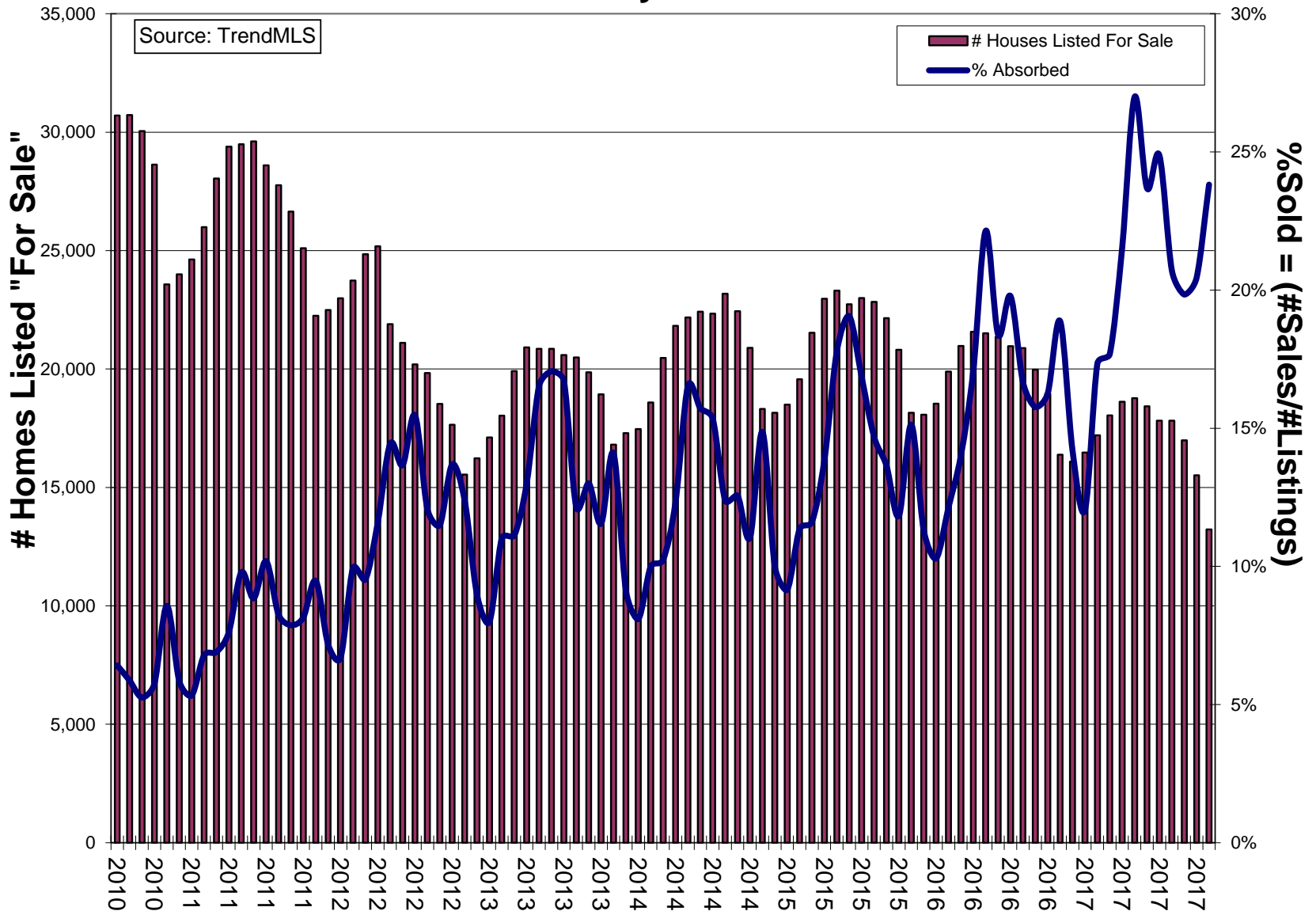
Average Days-on-Market* for Home Sales

Legend:
- DOM-Region
- DOM-City
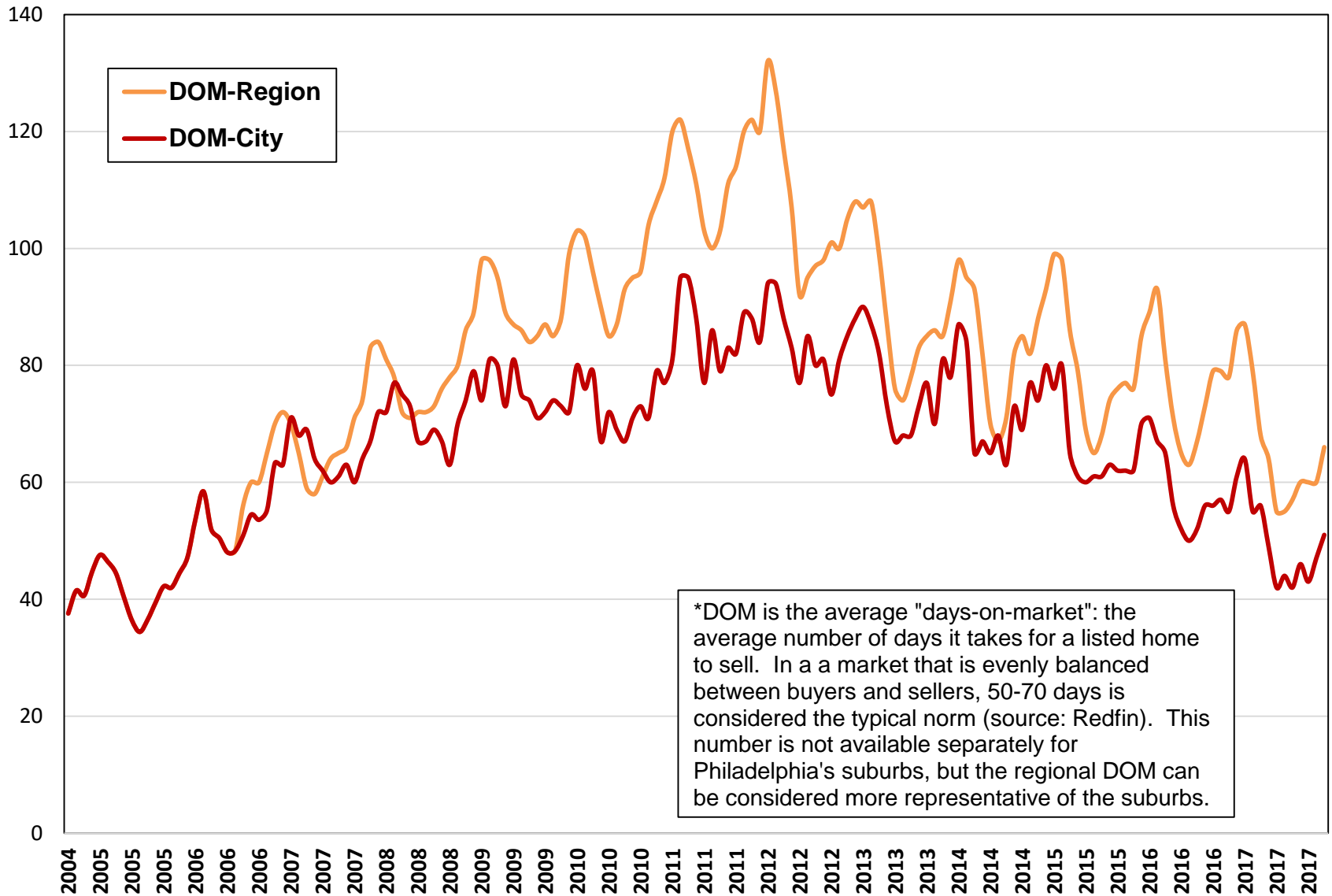
*DOM is the average "days-on-market": the average number of days it takes for a listed home to sell. In a a market that is evenly balanced between buyers and sellers, 50-70 days is considered the typical norm (source: Redfin). This number is not available separately for Philadelphia's suburbs, but the regional DOM can be considered more representative of the suburbs.

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Months Supply of Inventory in Philadelphia

Months Supply of Inventory measures how many months it would take to completely burn off the existing inventory of homes currently listed for sale, given their current pace of sales. 5-7 months is considered a normal, balanced market. More than 7 months indicates a Buyer's market, and less than 5 months indicates a Seller's market.

Buyer's Market

Balanced Market

Seller's Market

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Months Supply of Inventory in Philadelphia Suburbs

Months Supply of Inventory measures how many months it would take to completely burn off the existing inventory of homes currently listed for sale, given their current pace of sales. 5-7 months is considered a normal, balanced market. More than 7 months indicates a Buyer's market, and less than 5 months indicates a Seller's market.

Buyer's Market

Balanced Market

Seller's Market

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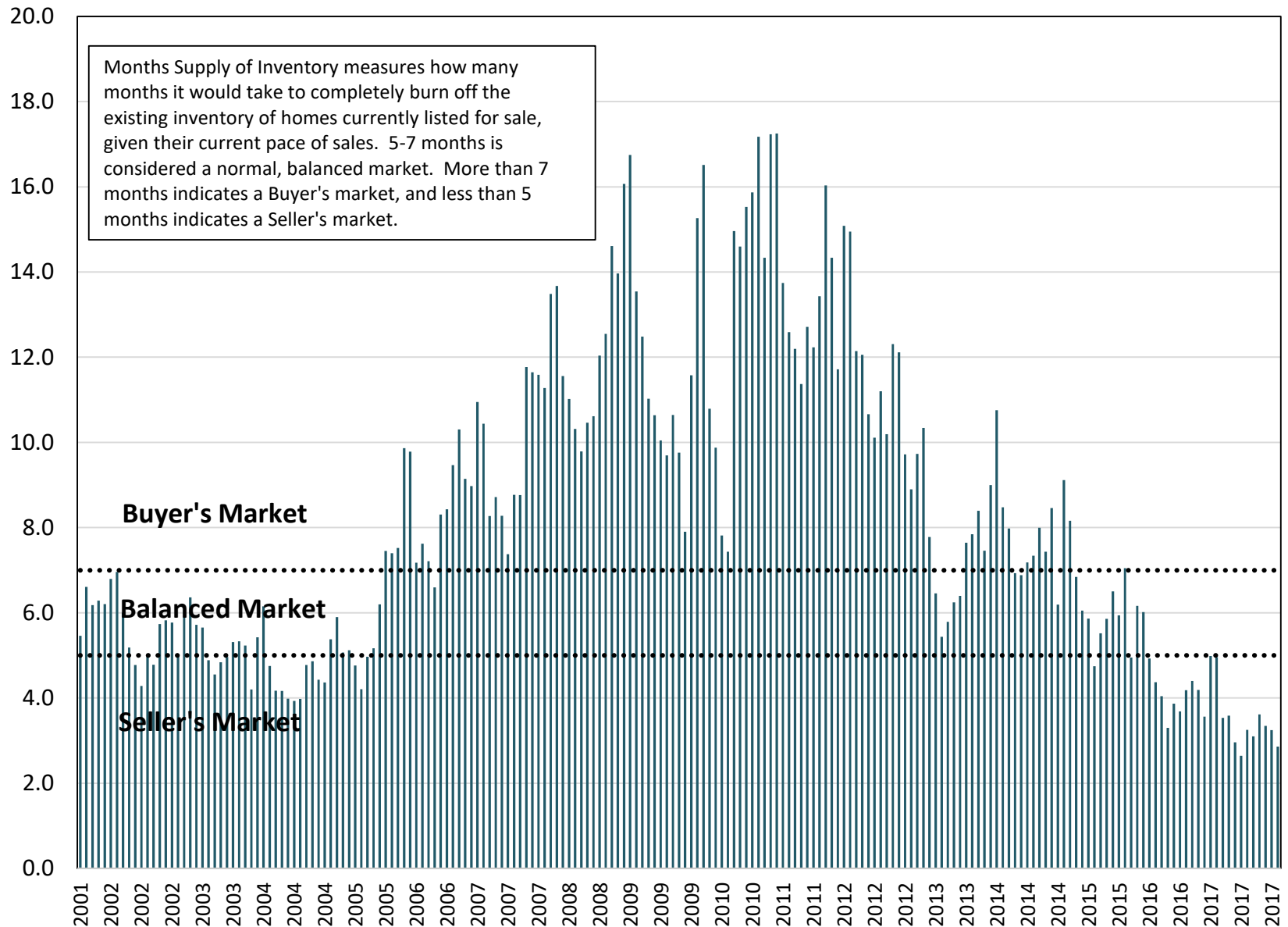
Pennsylvania Foreclosure Rates

FORECLOSURE RATES FOR PENNSYLVANIA   December 2017

Pennsylvania
1 in every 1767

Top 5 Counties

Delaware
1 in every 767

Berks
1 in every 920

Lackawanna
1 in every 948

Philadelphia
1 in every 1084

Dauphin
1 in every 1097

Add this map to your website.

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Foreclosure Actions to Housing Units

1 in 767 Housing Units   1 in 31,781 Housing Units

High   Med   Low
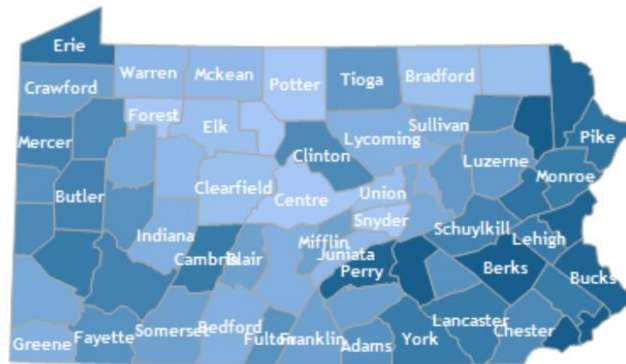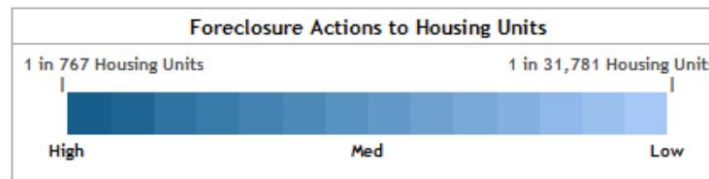
1 out of every 1,084 homes in Philadelphia is currently in the process of foreclosure, which is up from 1 out of every 1,105 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,767 homes in Pennsylvania is in the process of foreclosure, which is also up from 1 out of every 1,912 homes in the previous quarter.

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New Jersey Foreclosure Rates

FORECLOSURE RATES FOR NEW JERSEY   December 2017

New Jersey
1 in every 734

Top 5 Counties

Atlantic
1 in every 373

Sussex
1 in every 383

Salem
1 in every 410

Camden
1 in every 416

Gloucester
1 in every 445

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Foreclosure Actions to Housing Units

1 in 373 Housing Units   1 in 1,561 Housing Units

High   Med   Low
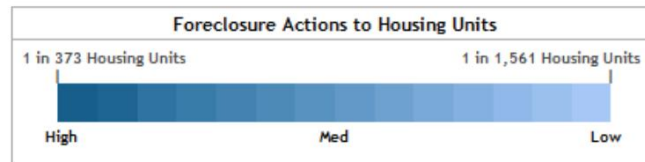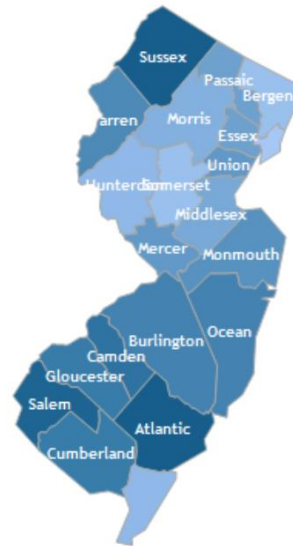
South Jersey's foreclosure rate continues to remain the highest in the region, but showed significant improvement this quarter.

The six counties in Southern NJ (excluding Cape May) collectively have a foreclosure rate averaging one in every 450 homes. This is well above the statewide average of 1 in every 734 homes.

But, the foreclosure rate for South Jersey dropped substantially this quarter, from its previous level of 1 in every 285 homes in the previous quarter.

Source: http://www.realtytrac.com/statsandtrends/foreclosuretrends/nj

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Delaware Foreclosure Rates

FORECLOSURE RATES FOR DELAWARE   December 2017

Delaware
1 in every 1010

Top 3 Counties

Kent
1 in every 724

New Castle
1 in every 904

Sussex
1 in every 1725

Add this map to your website.

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Foreclosure Actions to Housing Units

1 in 724 Housing Units   1 in 1,725 Housing Units

High   Med   Low
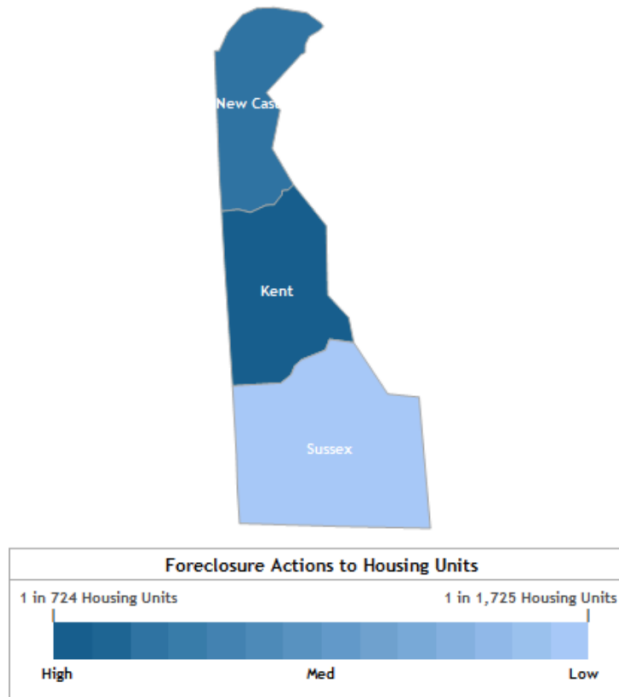
Kent county in central Delaware leads the state with the highest foreclosure rate, with one in every 724 homes.

Next is New Castle county, with one in every 904 homes, followed by Sussex county with one in every 1,725 homes being in the process of foreclosure.

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Housing's Road to Recovery: %Lost v. %Recovered by Metro Area

The length of each bar below the horizontal axis represents the total % decline in house prices in each major U.S. metro area from peak to trough. The total rebound (to date) in house prices is represented by the blue component of each bar, with the remainder represented by the red component. A red bar that is above the horizontal axis indicates a metro area which has fully erased its losses and whose house price levels are now above their peak during the bubble. For example, Philadelphia County's house prices fell by an average of 22% from peak to trough. To date, they have rebounded by 44% and are now 22% higher than their previous peak. By contrast, Philadelphia's suburbs fell by a similar amount, yet have only recovered 8% and thus need to rise another 15% to completely erase their losses.

Metro Areas (left to right): Dallas, Denver, Boston, Charlotte, Phila. County*, Phila. Suburbs*, Cleveland, New York, Portland, Seattle, Washington, Chicago, Minneapolis, Atlanta, Los Angeles, San Diego, San Francisco, Tampa, Detroit, Miami, Phoenix, Las Vegas

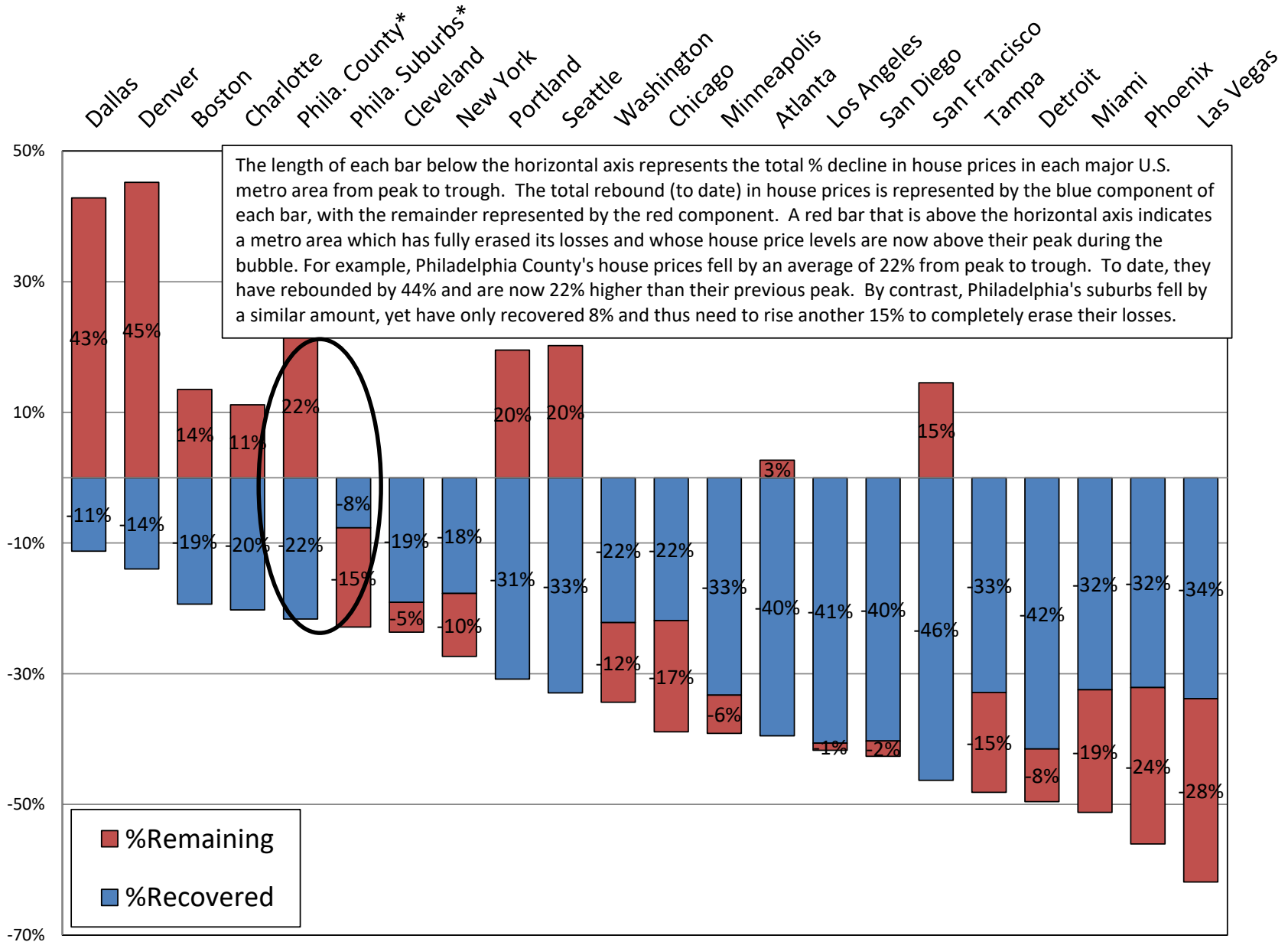| Metro	%Remaining (red)	%Recovered (blue)
Dallas	43%	-11%
Denver	45%	-14%
Boston	14%	-19%
Charlotte	11%	-20%
Phila. County*	22%	-22%
Phila. Suburbs*	-8% / -15%	
Cleveland	-5%	-19%
New York	20% / -10%	-31%
Portland	20%	-33%
Seattle	-12%	-22%
Washington	-17%	-22%
Chicago	-6%	-33%
Minneapolis	3%	-40%
Atlanta	-1%	-41%
Los Angeles	-2%	-40%
San Diego	15%	-46%
San Francisco	-15%	-33%
Tampa	-8%	-42%
Detroit	-19%	-32%
Miami	-24%	-32%
Phoenix	-28%	-34%
Las Vegas		

Legend:
- ■ %Remaining (red)
- ■ %Recovered (blue)

*Empirically estimated by Kevin C. Gillen, Ph.D. All other metros courtesy of S&P Case-Shiller.

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