

PHILADELPHIA REGIONAL HOUSE PRICE INDICES

March 3, 2017



DREXEL UNIVERSITY

Lindy Institute

for Urban Innovation

KEVIN C. GILLEN, Ph.D.

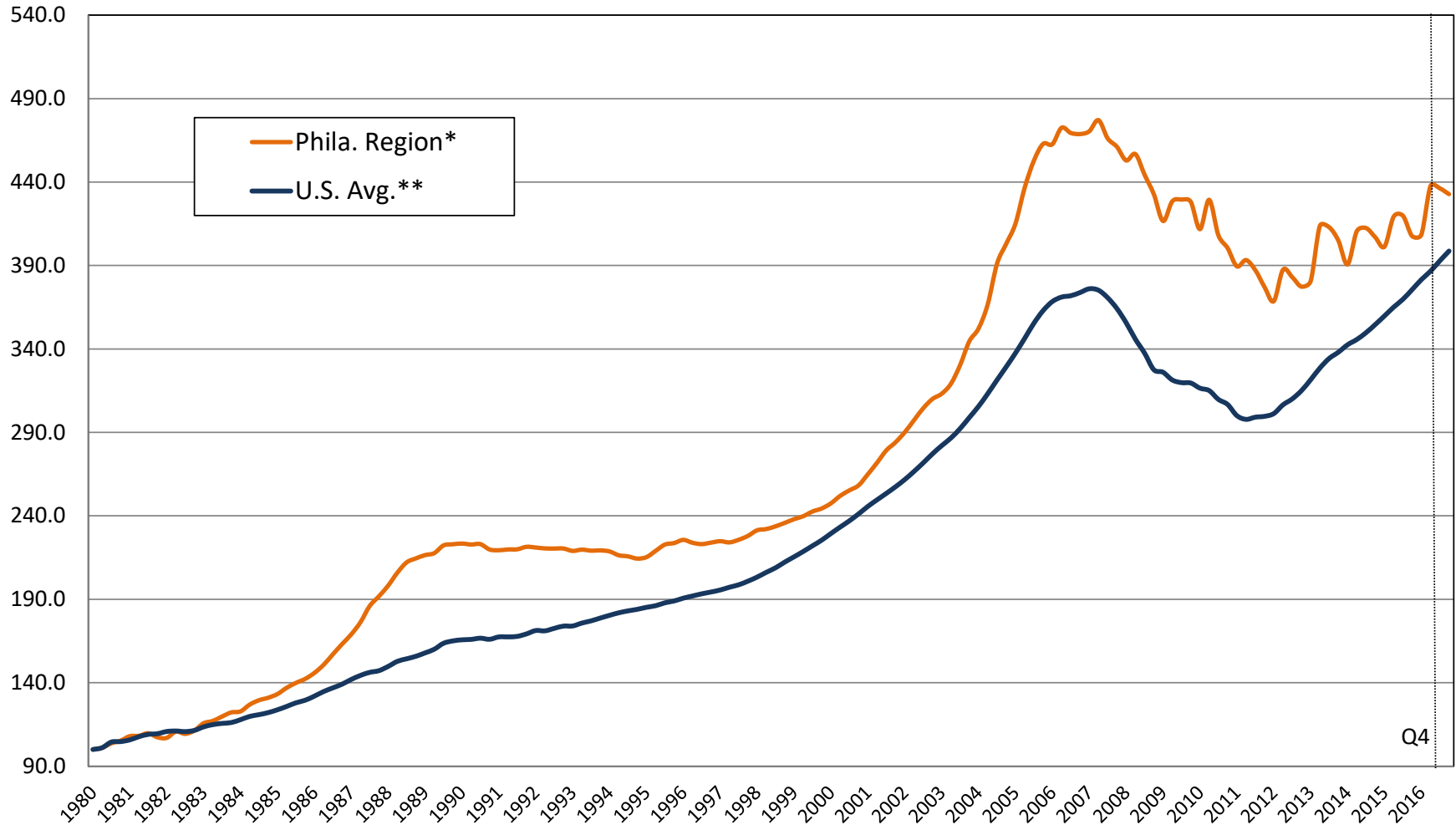
Kevin.C.Gillen@Drexel.edu

***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Lindy Senior Research Fellow Kevin Gillen. The author thanks Berkshire Hathaway Home Services, Azavea.com, the Philadelphia Office of Property Assessment, the Federal Housing Finance Agency, Case-Shiller MacroMarkets LLC, RealtyTrac, Zillow.com, Trulia.com and the NAHB for making their data available for this report. © 2017, Drexel University, All Rights Reserved.*



Philadelphia Regional House Price Indices 1980-2016

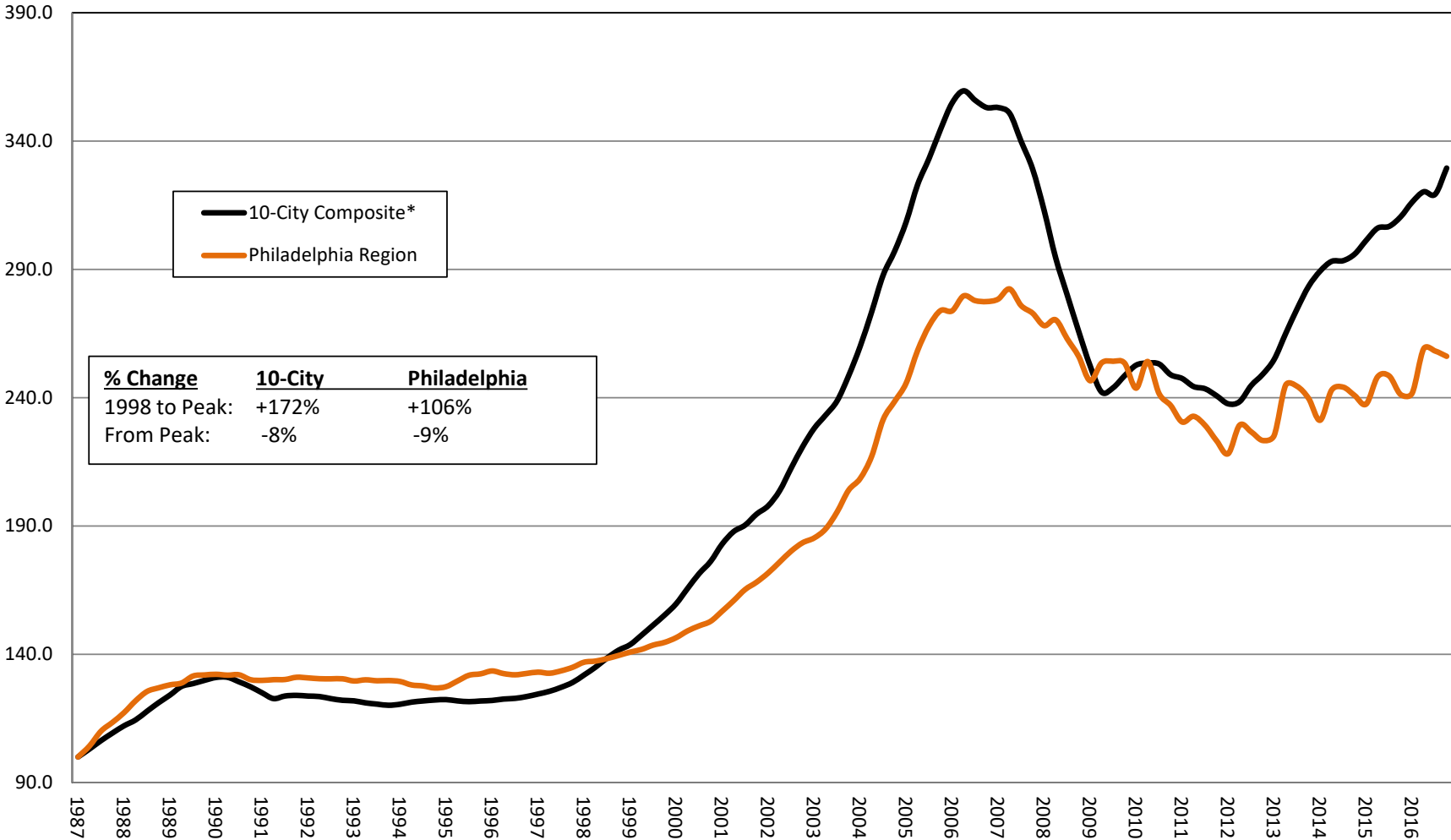
1980Q1=100



*Empirically estimated by Kevin C. Gillen, PhD

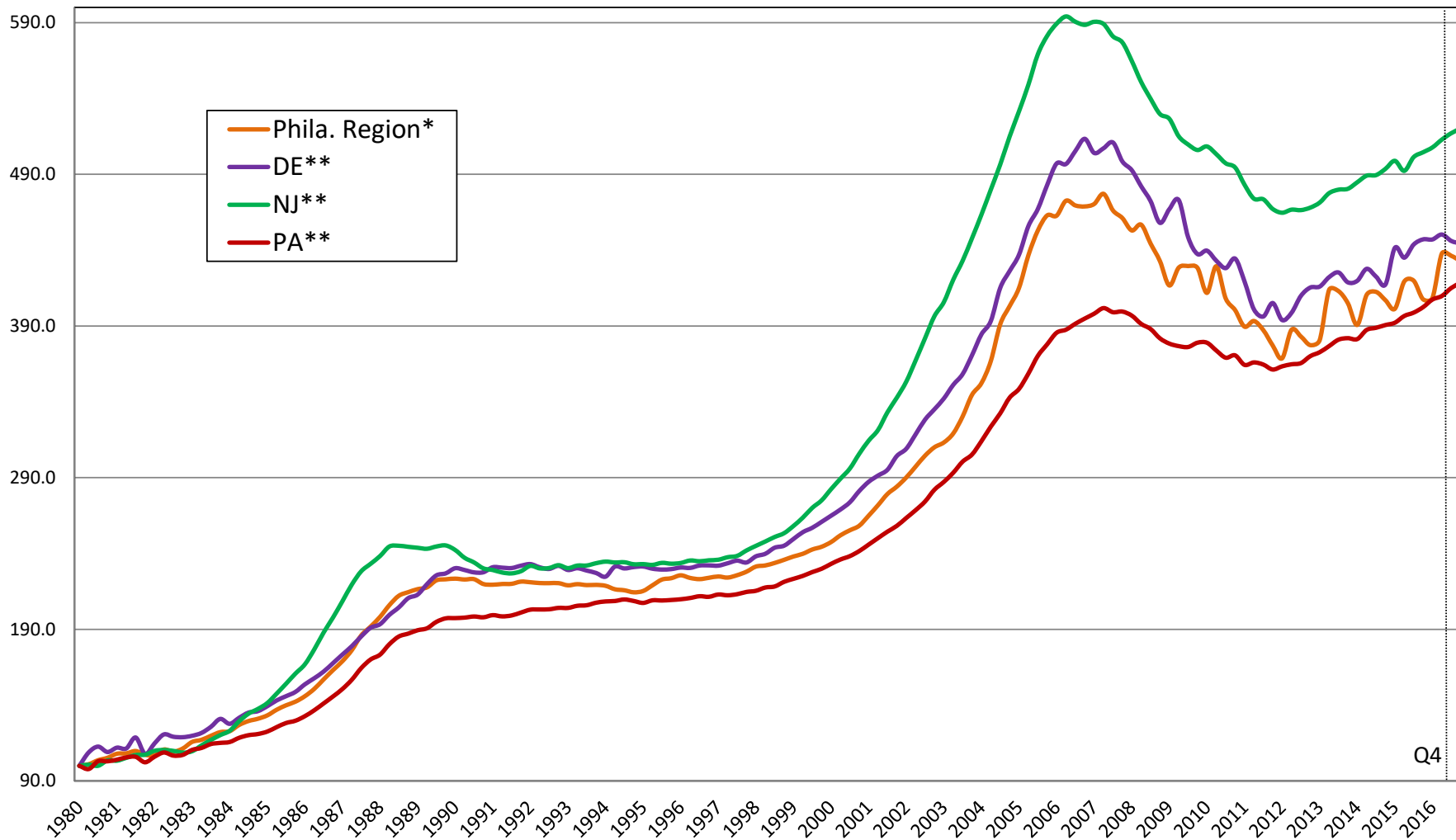
**Courtesy Federal Housing Finance Agency (FHFA)

House Price Appreciation 1987-2016: Philadelphia Region v. 10-City U.S. Composite



*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.

Philadelphia Regional House Price Indices 1980-2016 by Philadelphia Region and State: 1980Q1=100



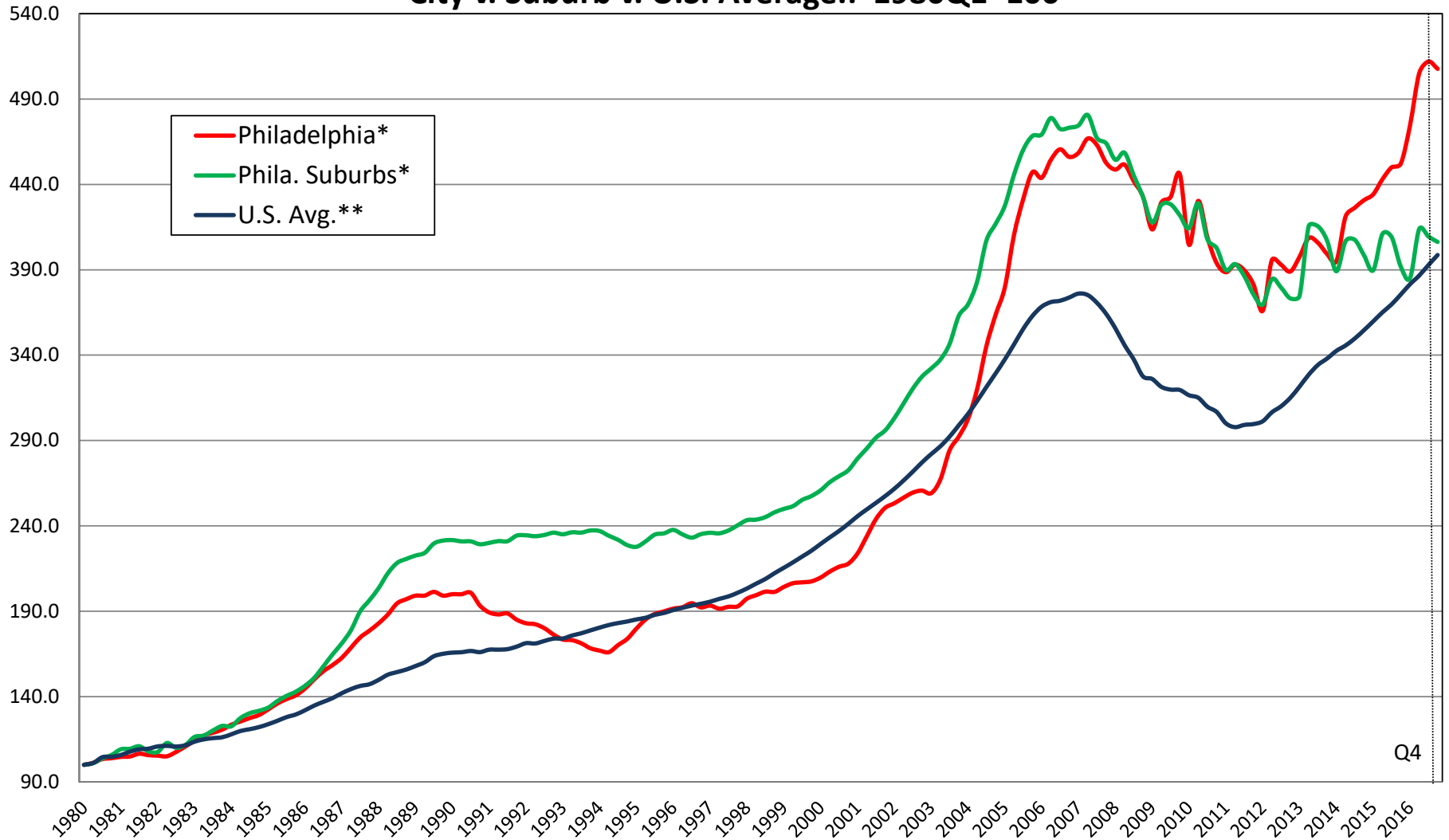
*Empirically estimated by Kevin C. Gillen, Ph.D.

**Courtesy Federal Housing Finance Agency (FHFA)

Q4

Philadelphia Regional House Price Indices 1980-2016

City v. Suburb v. U.S. Average.: 1980Q1=100



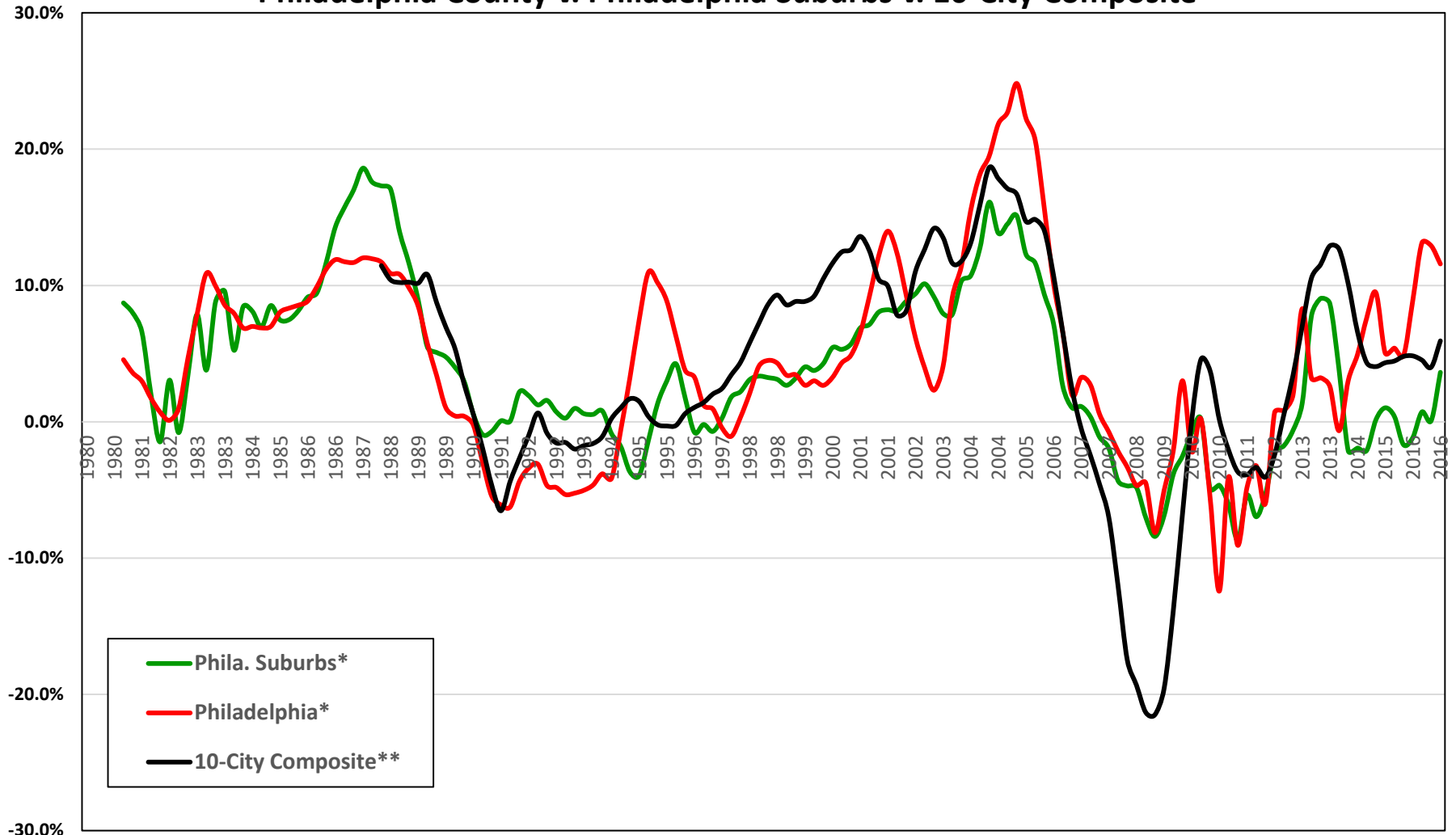
*Empirically estimated by Kevin C. Gillen, PhD

**Courtesy Federal Housing Finance Agency (FHFA)

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

YoY Change in Average House Prices: 1980-2016

Philadelphia County v. Philadelphia Suburbs v. 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.

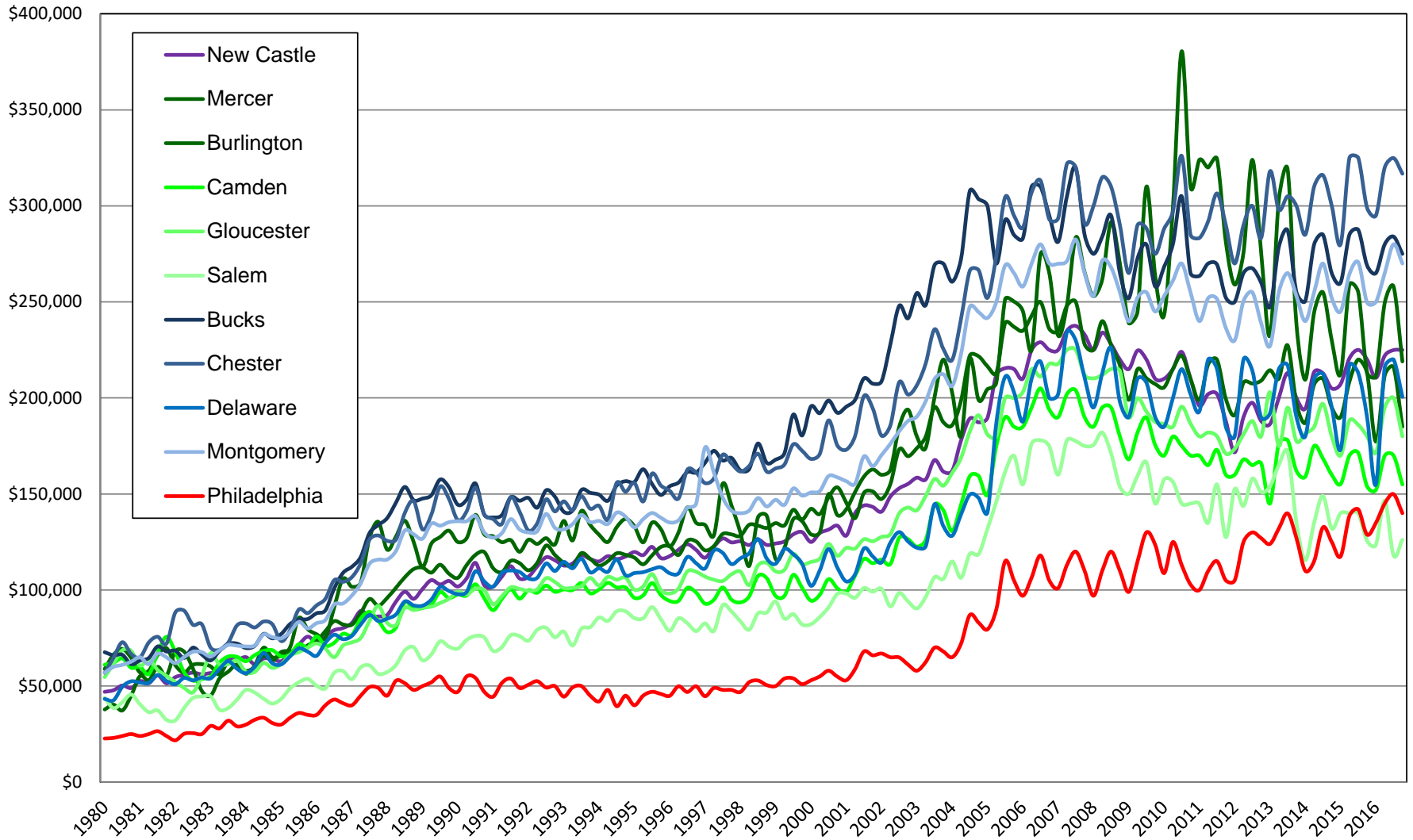
Total House Price Appreciation Rates by Philadelphia Area Submarket and U.S.

Period	Philadelphia Region*	Philadelphia County*	Philadelphia Suburbs*	U.S.A.**
37-Year	146.5%	162.5%	140.2%	138.3%
10-Year	-8.0%	10.7%	-15.3%	6.4%
1-Year	6.0%	11.6%	3.6%	6.0%
1-Quarter	-0.8%	-0.8%	-0.8%	1.5%

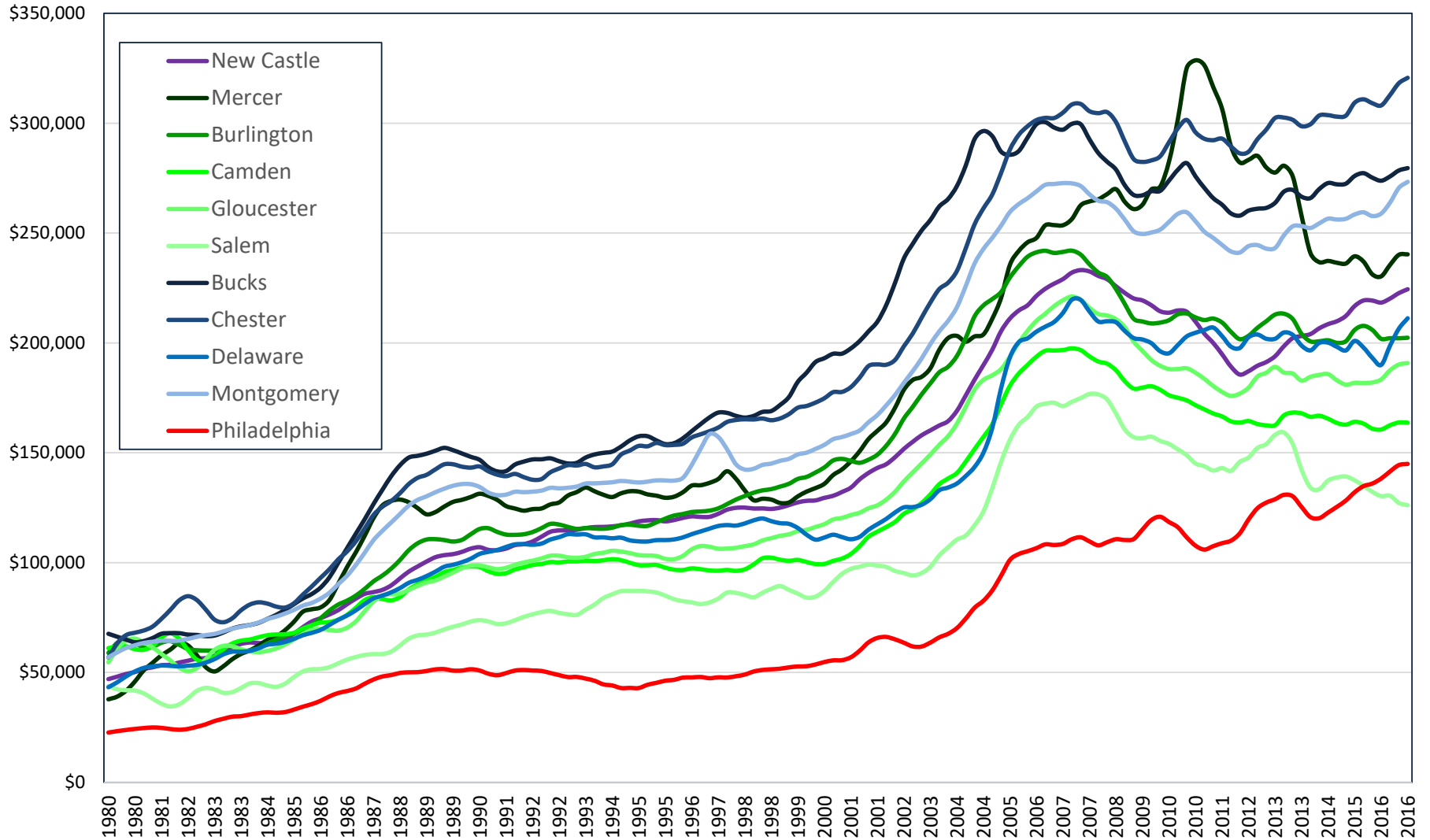
*Empirically estimated by Kevin C. Gillen Ph.D.

**Source: Federal Housing Finance Agency (FHFA). FHFA numbers are through 2016 Q4.

Median House Price by County: 1980-2016



Median House Price by County, Smoothed*: 1980-2016



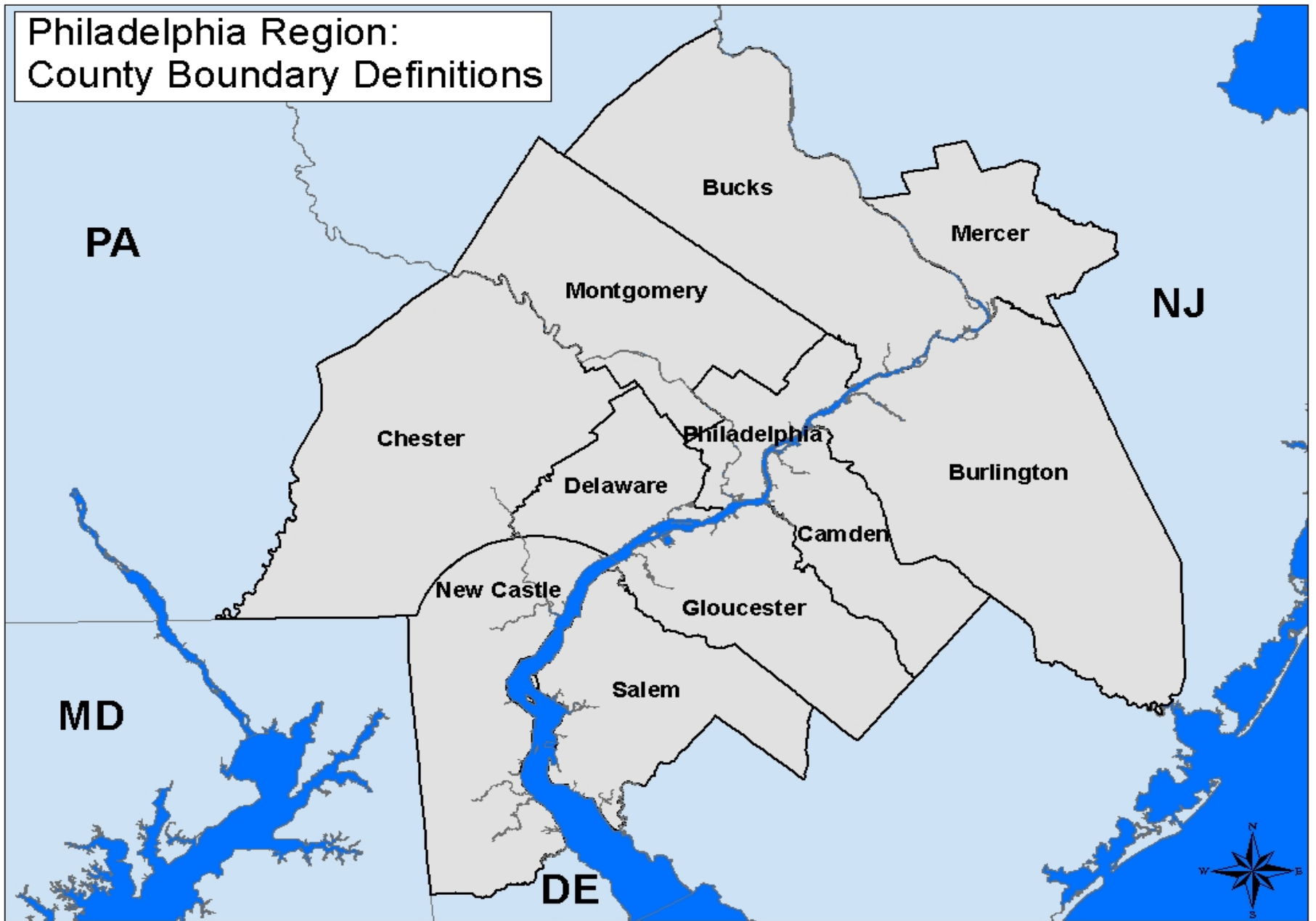
*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.

Philadelphia Region House Price Appreciation Rates by County

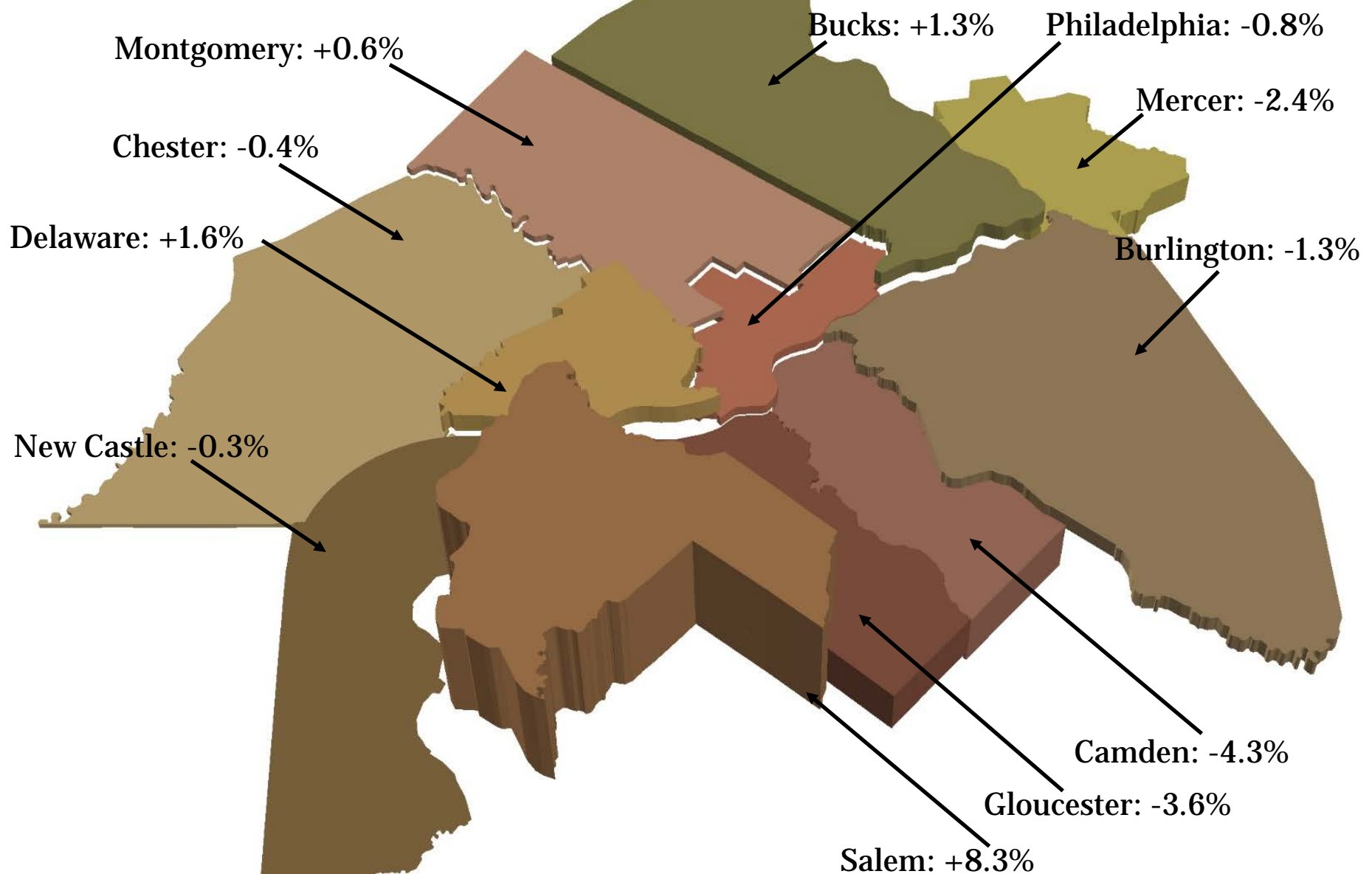
Period	Philadelphia	Bucks	Chester	Delaware	Montgomery	New Castle	Mercer	Burlington	Camden	Gloucester	Salem
37-Year	162.5%	158.2%	154.8%	134.0%	144.8%	132.6%	156.4%	120.7%	112.1%	133.5%	110.8%
10-Year	10.7%	-11.4%	-4.2%	-14.7%	-12.0%	-16.7%	-19.3%	-28.7%	-35.7%	-23.6%	-43.5%
1-Year	11.6%	3.5%	2.4%	8.1%	5.1%	2.7%	-1.1%	8.5%	3.7%	7.7%	0.6%
1-Quarter	-0.8%	1.3%	-0.4%	1.6%	0.6%	-0.3%	-2.4%	-1.3%	-4.3%	-3.6%	8.3%

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

Philadelphia Region: County Boundary Definitions

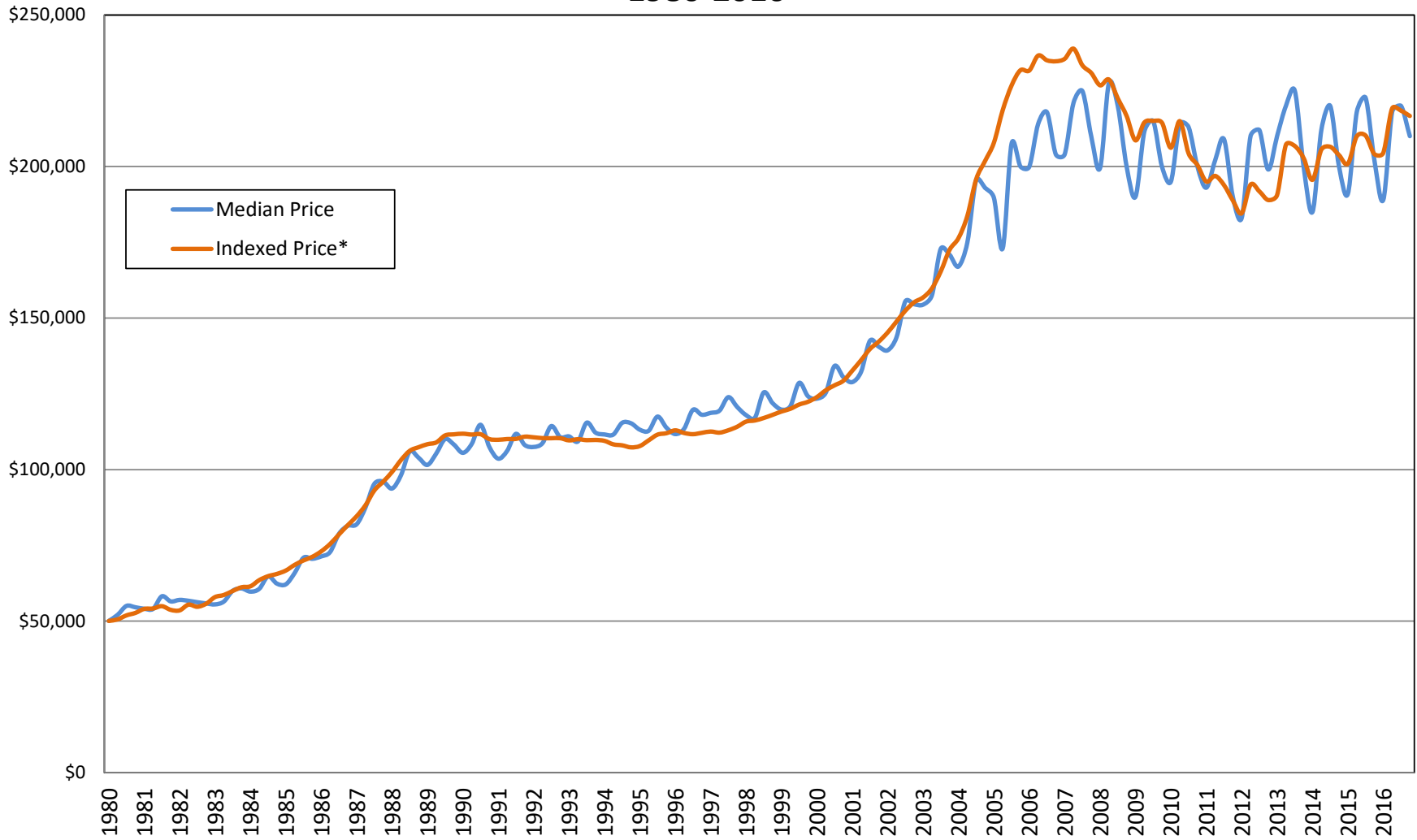


2016 Q4 House Price Rate of Change by County



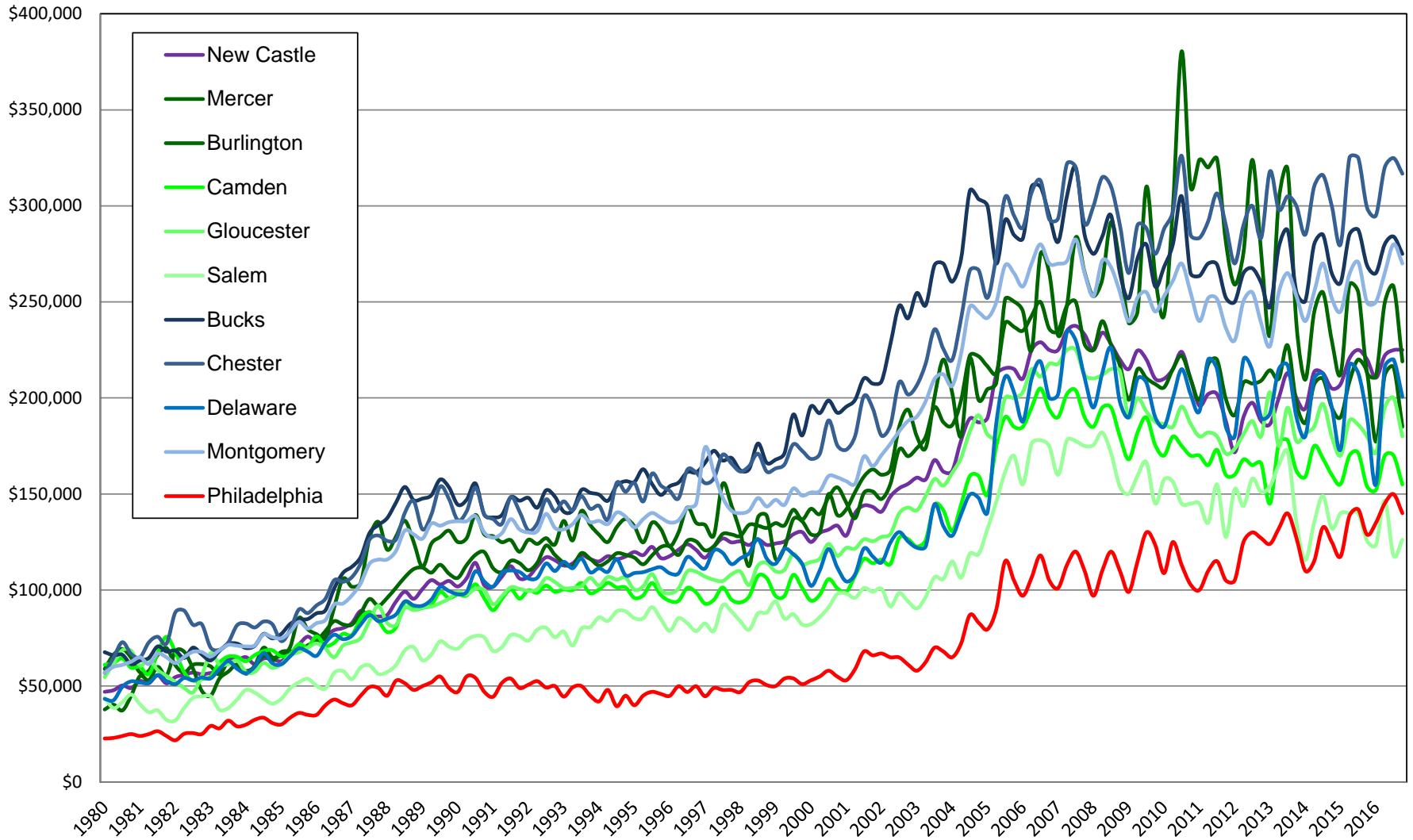
Note: Each county is extruded by its average change in house values during 2016 Q4 in order to reflect its growth (or depreciation) rate relative to other counties.

Median Regional House Price v. Indexed Regional House Price: 1980-2016

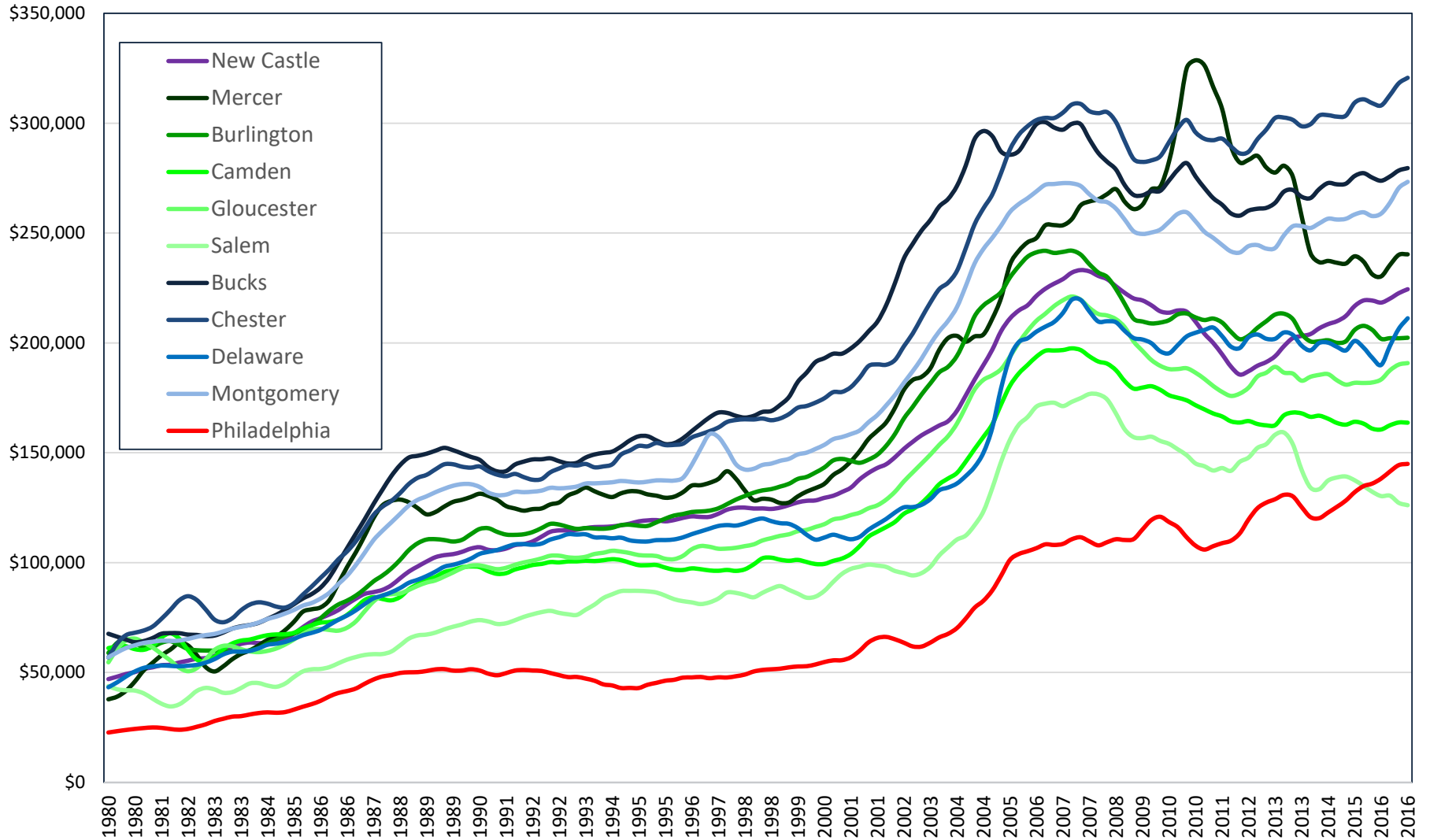


*Empirically estimated by Kevin C. Gillen, Ph.D.

Median House Price by County: 1980-2016

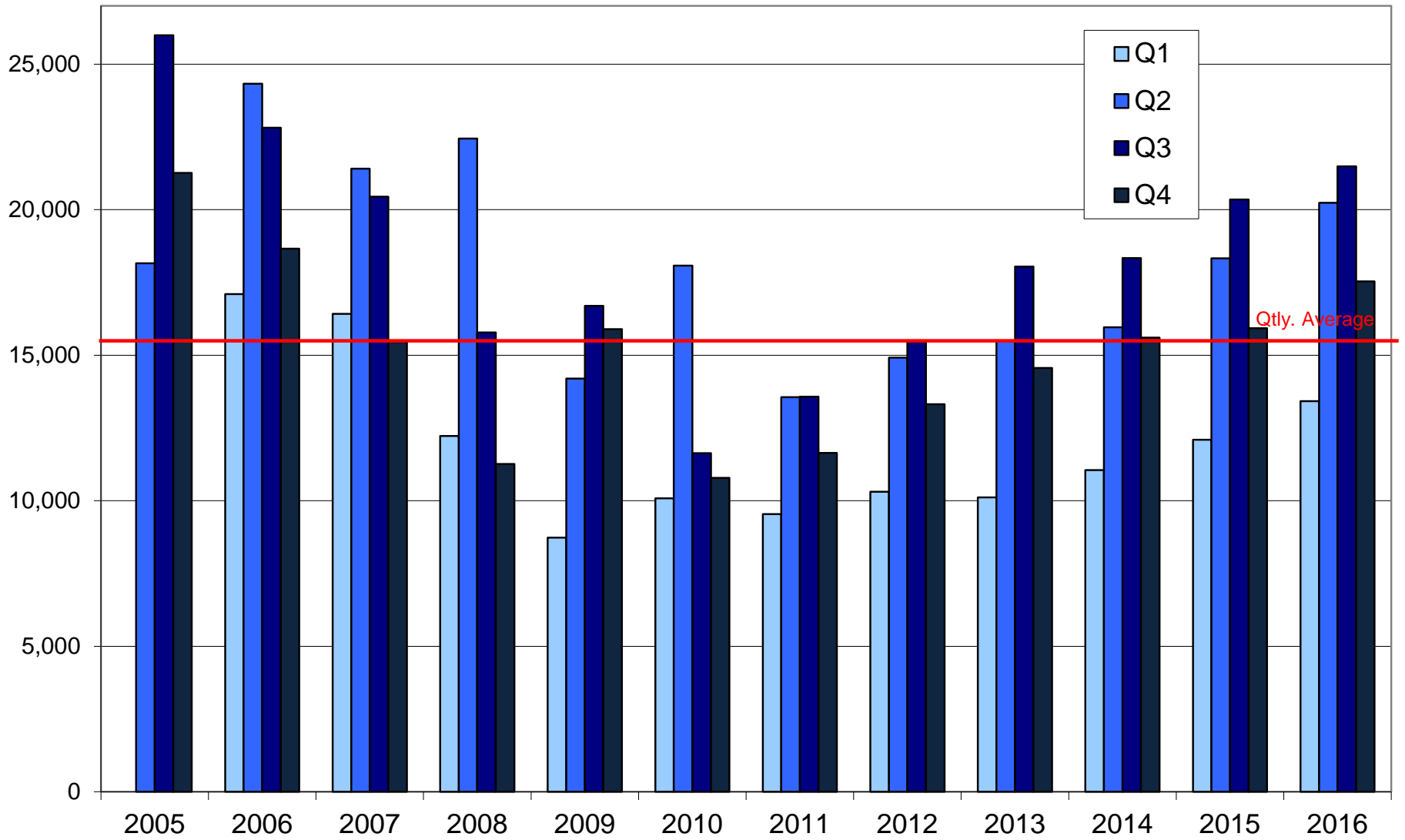


Median House Price by County, Smoothed*: 1980-2016

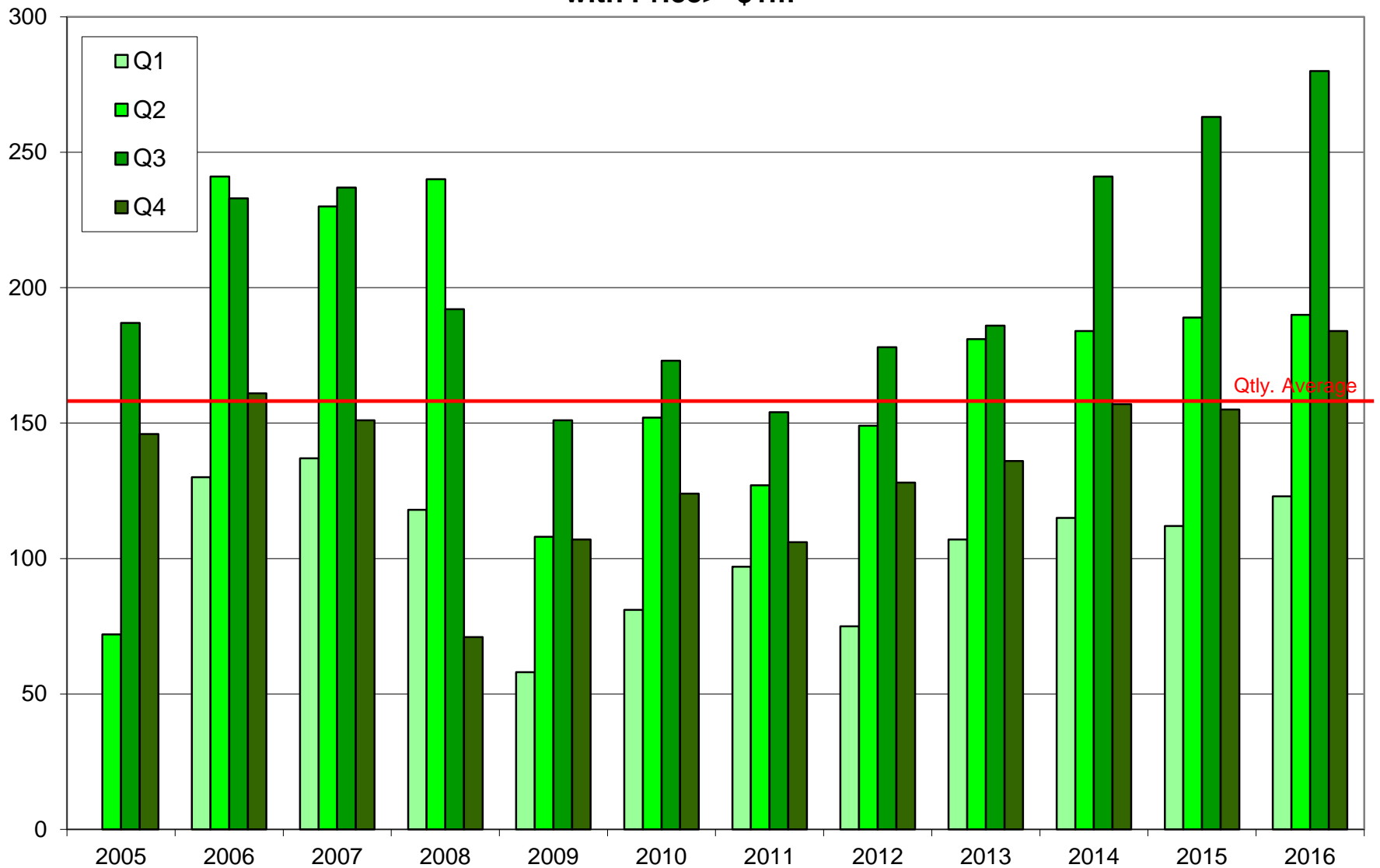


*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.

Number of Regional House Sales per Quarter: 2005-2016



Number of Regional House Sales 2005-2016 with Price >=\$1m



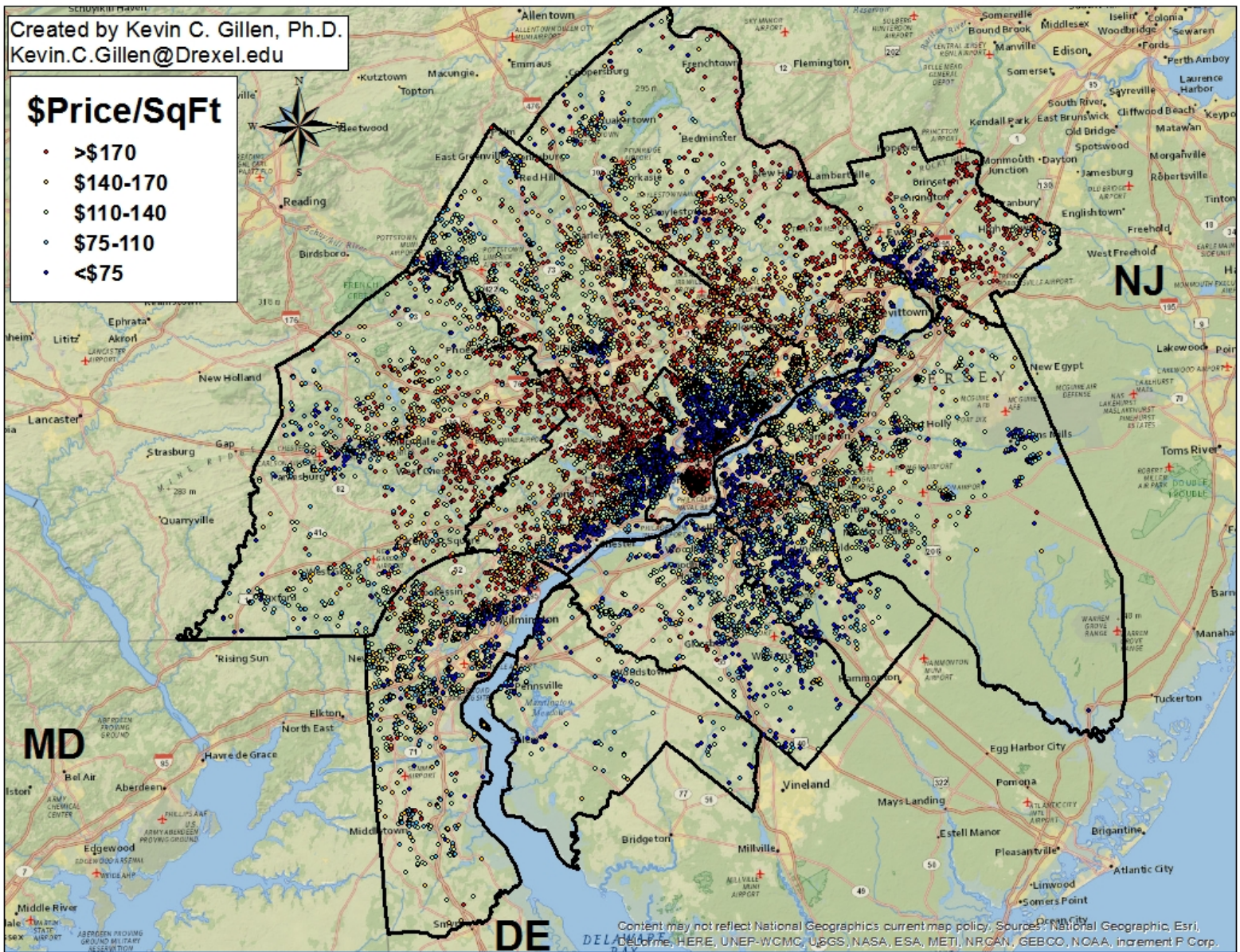
Qtly. Average

Philadelphia Region House Sales in 2016 Q4

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

\$Price/SqFt

- >\$170
- \$140-170
- \$110-140
- \$75-110
- <\$75



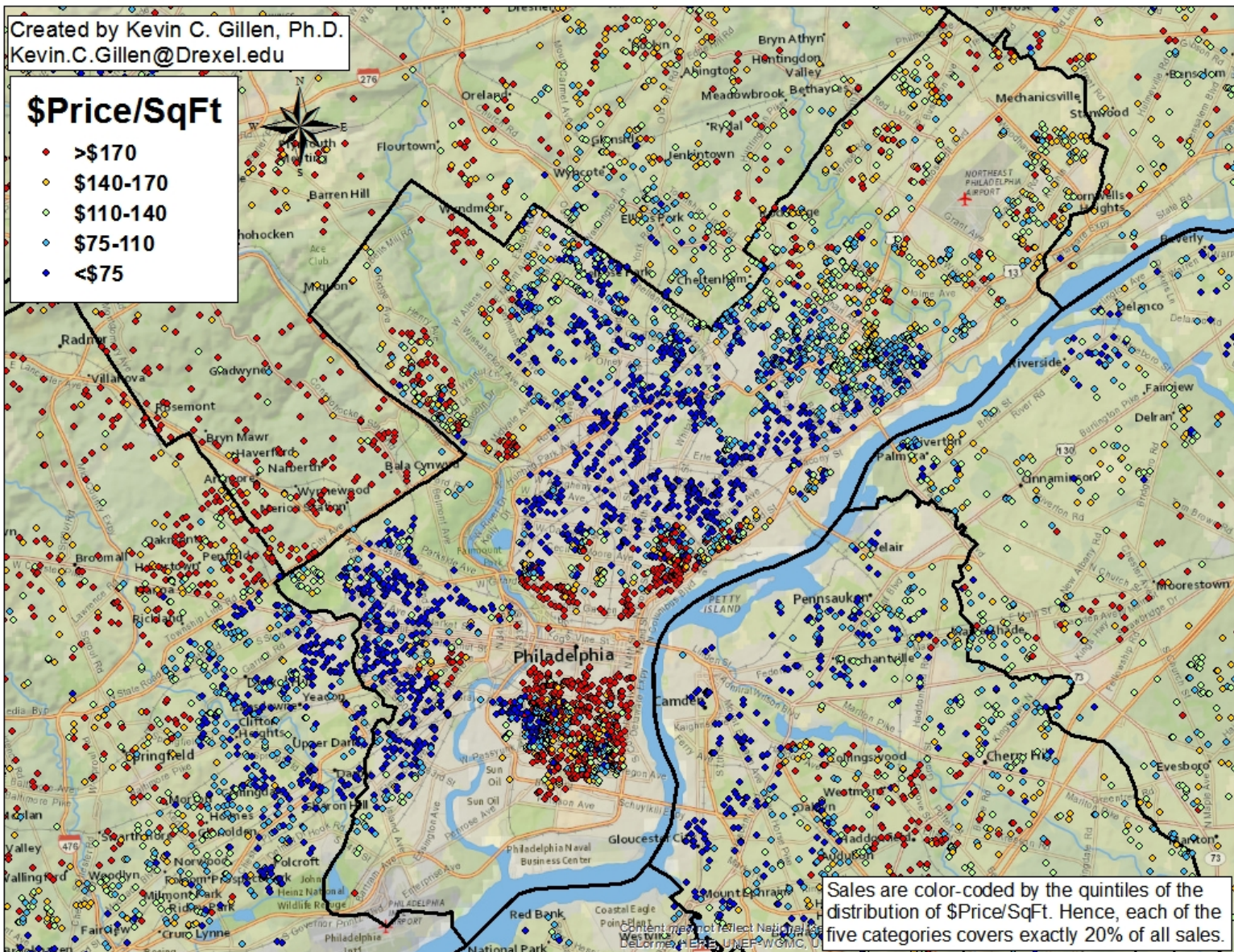
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Philadelphia County House Sales in 2016 Q4

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

\$Price/SqFt

- >\$170
- \$140-170
- \$110-140
- \$75-110
- <\$75



Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

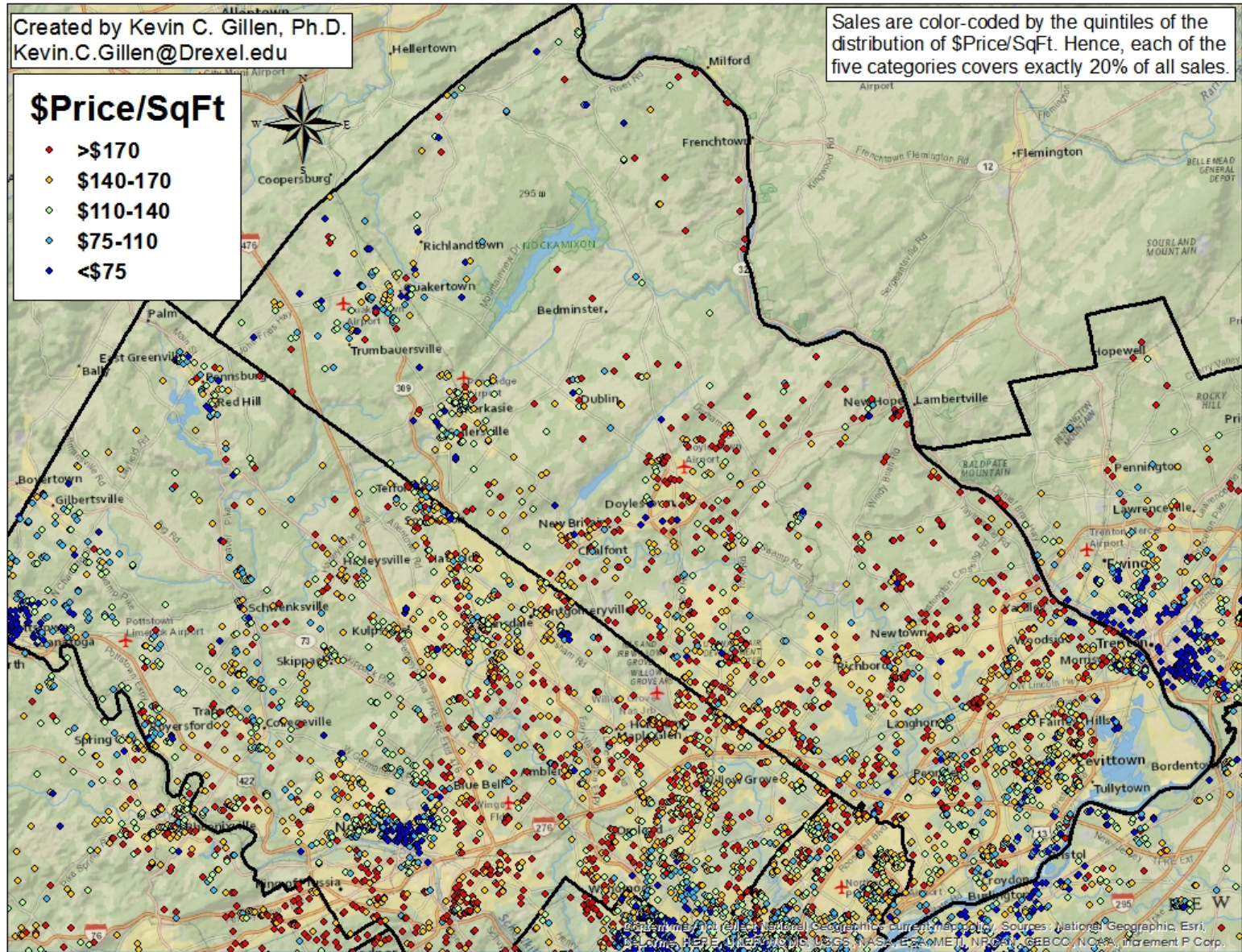
Bucks County House Sales in 2016 Q4

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

Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

\$Price/SqFt

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75



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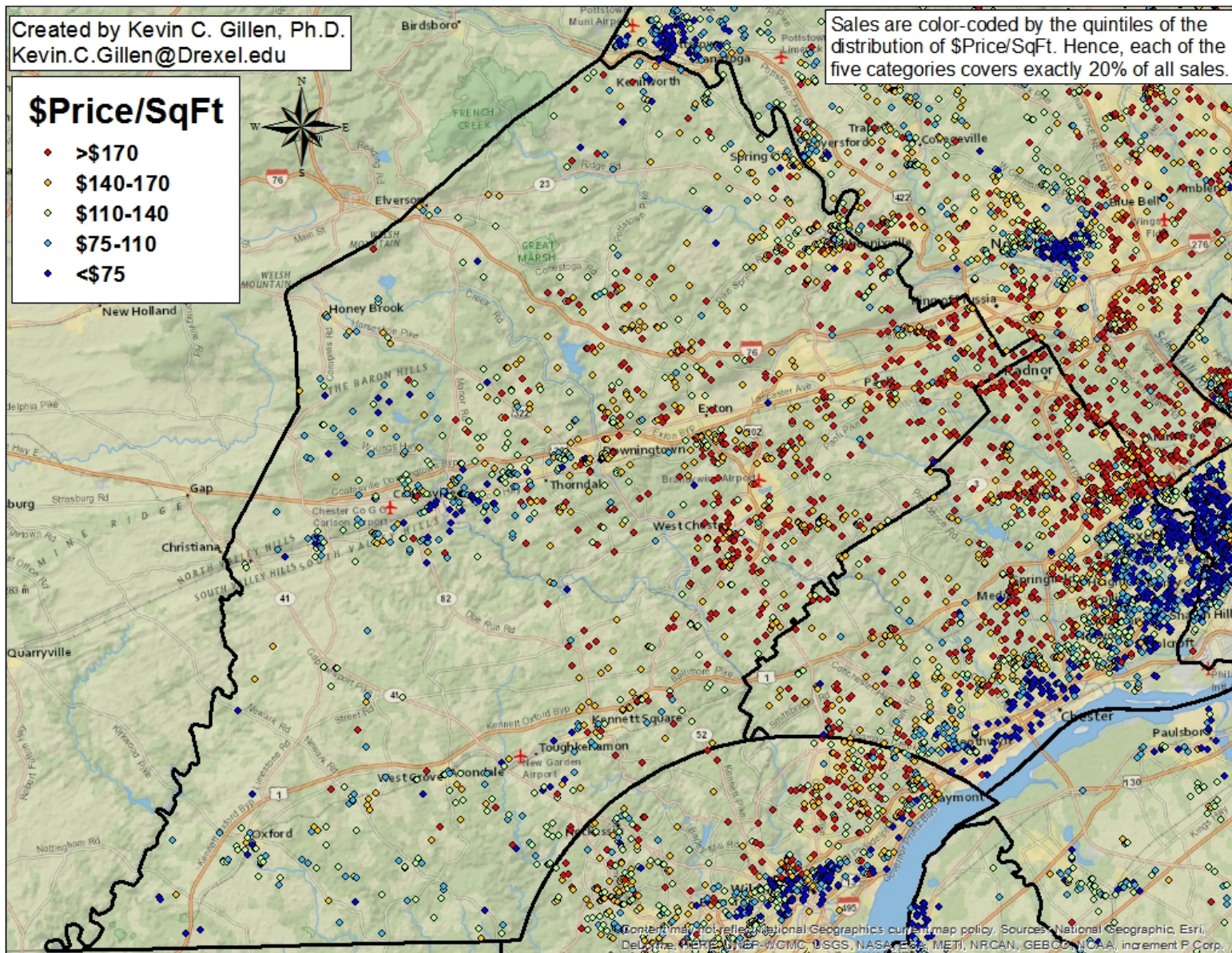
Chester County House Sales in 2016 Q4

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

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\$Price/SqFt

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75



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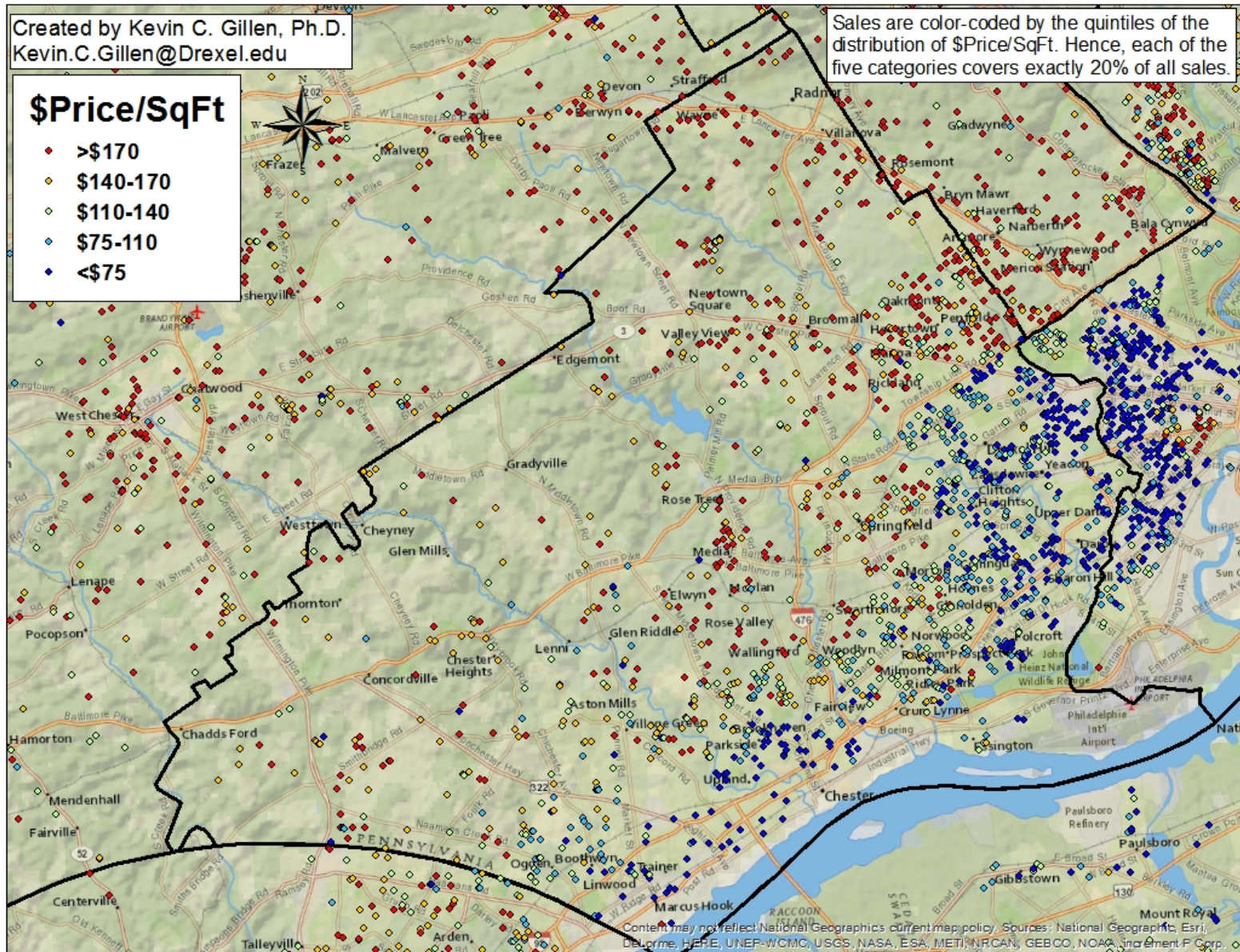
Delaware County House Sales in 2016 Q4

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

- >\$170
- ◊ \$140-170
- ◊ \$110-140
- ◊ \$75-110
- <\$75



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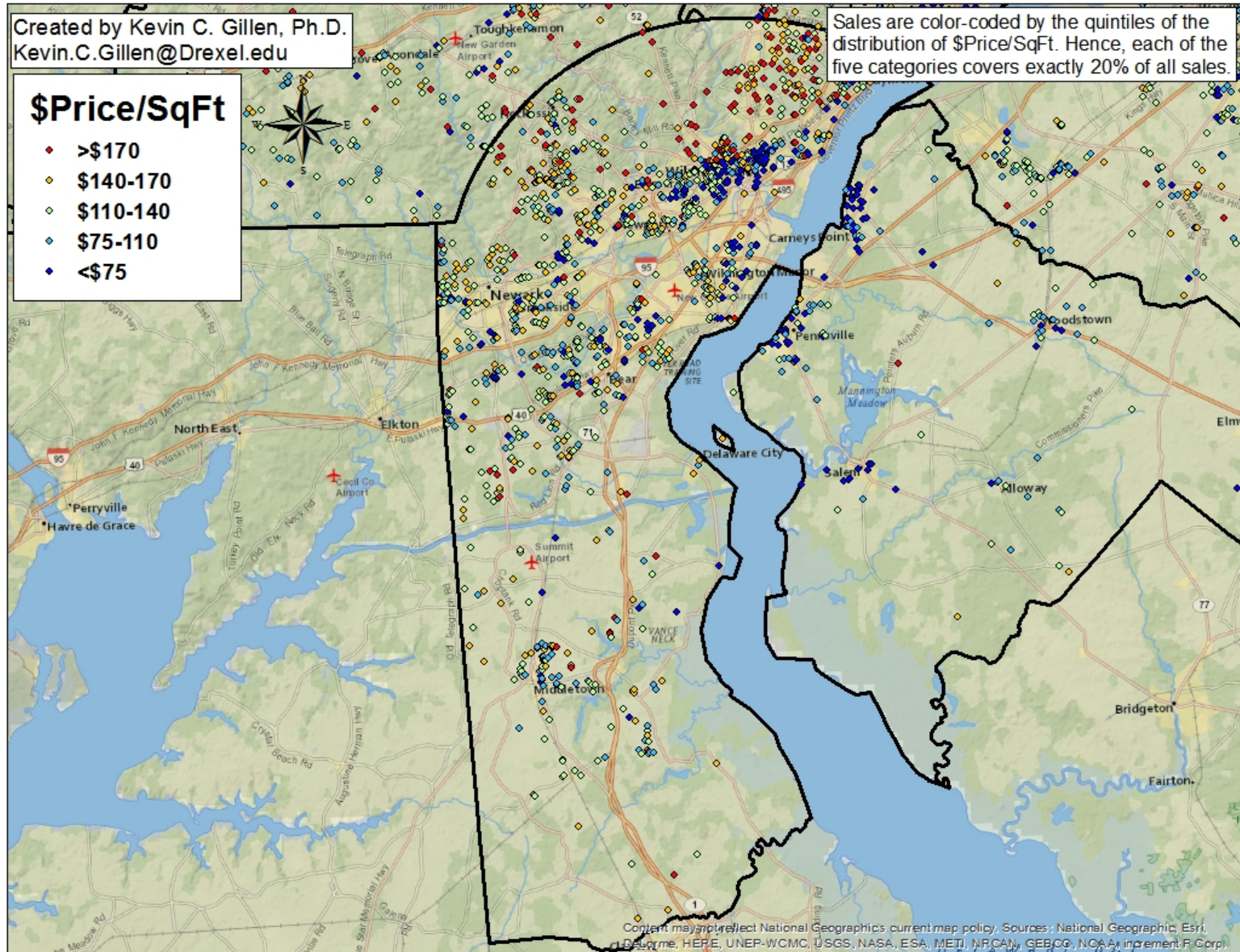
New Castle County House Sales in 2016 Q4

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

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75



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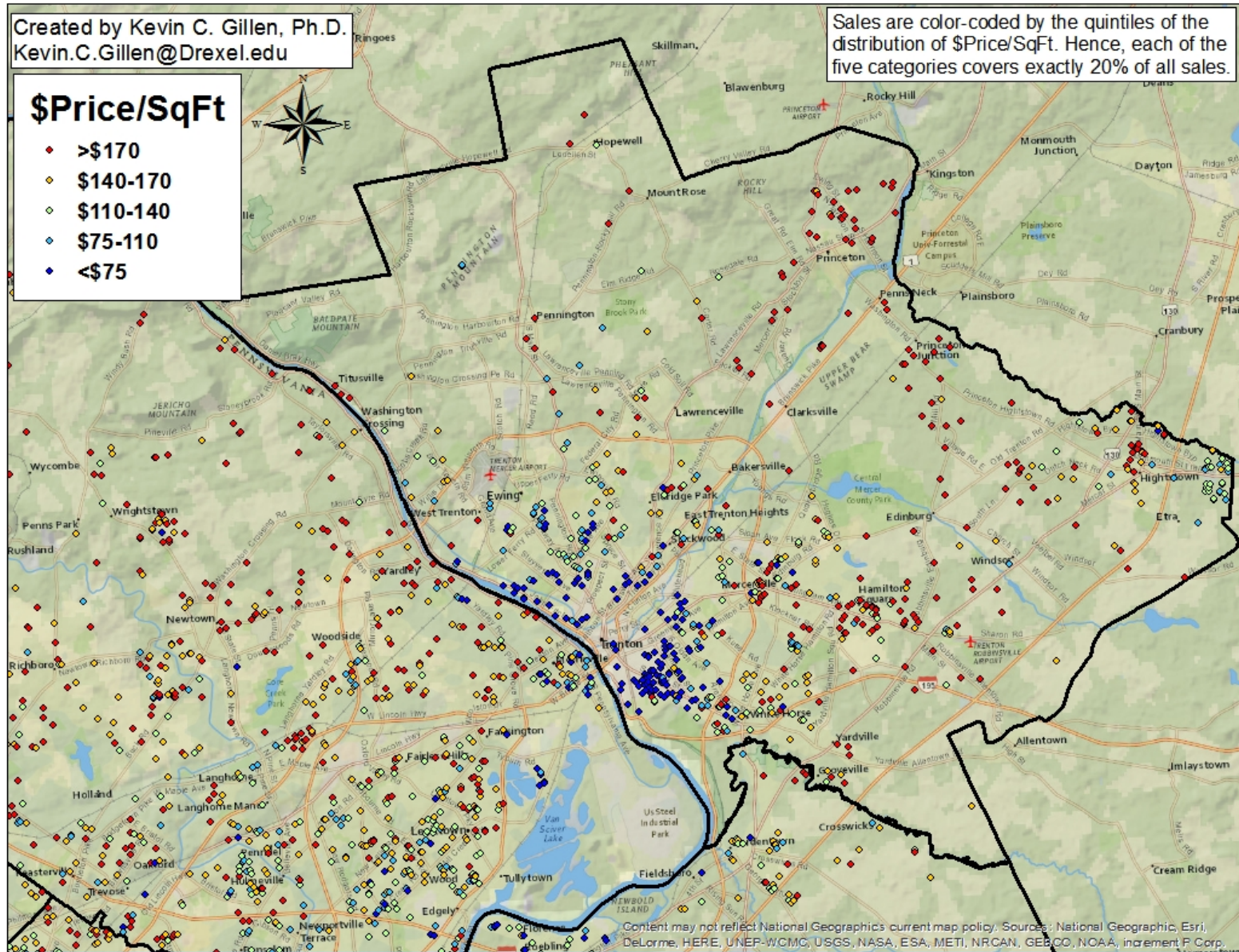
Mercer County House Sales in 2016 Q4

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\$Price/SqFt

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75



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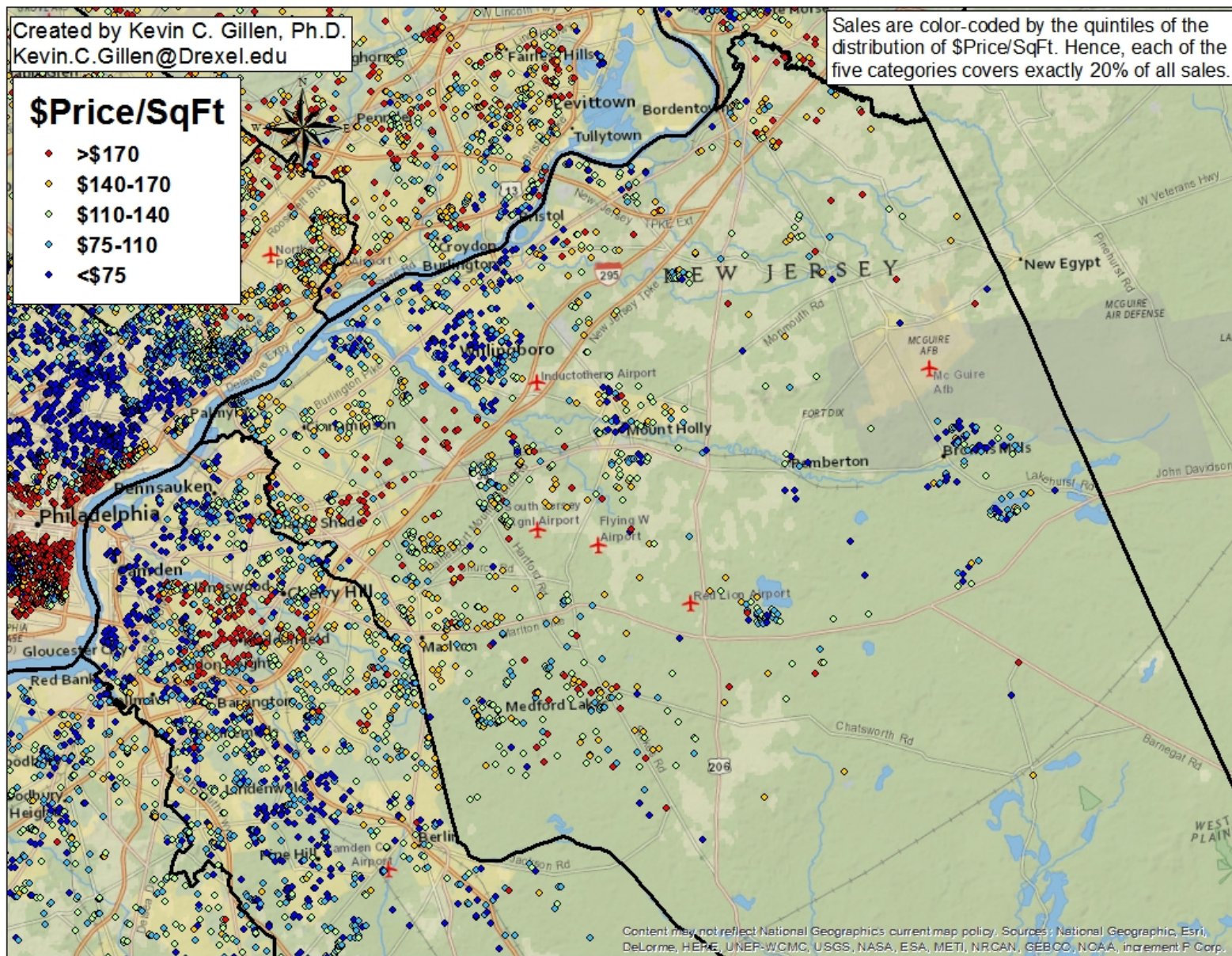
Burlington County House Sales in 2016 Q4

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

Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

\$Price/SqFt

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75



Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

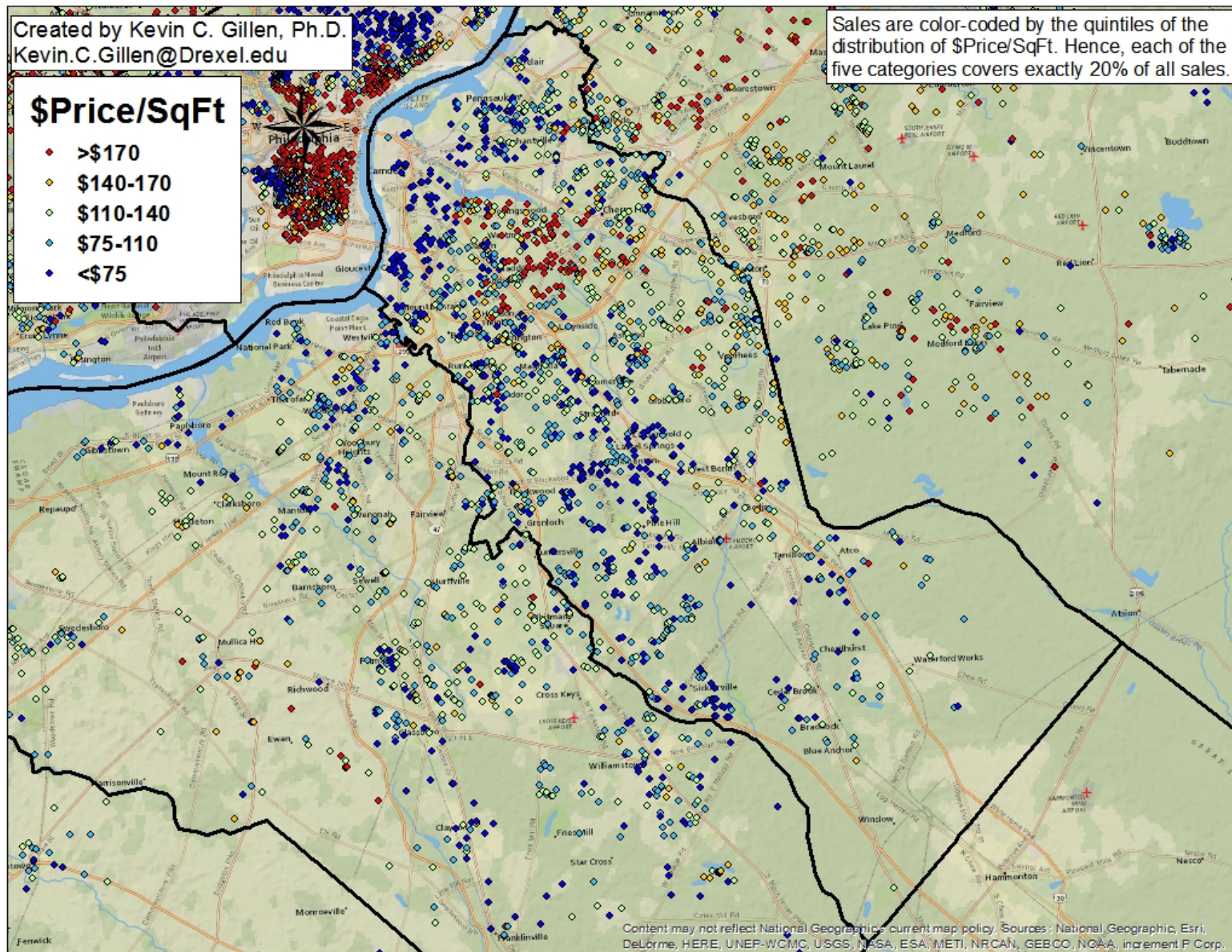
Camden County House Sales in 2016 Q4

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Sales are color-coded by the quintiles of the distribution of \$Price/SqFt. Hence, each of the five categories covers exactly 20% of all sales.

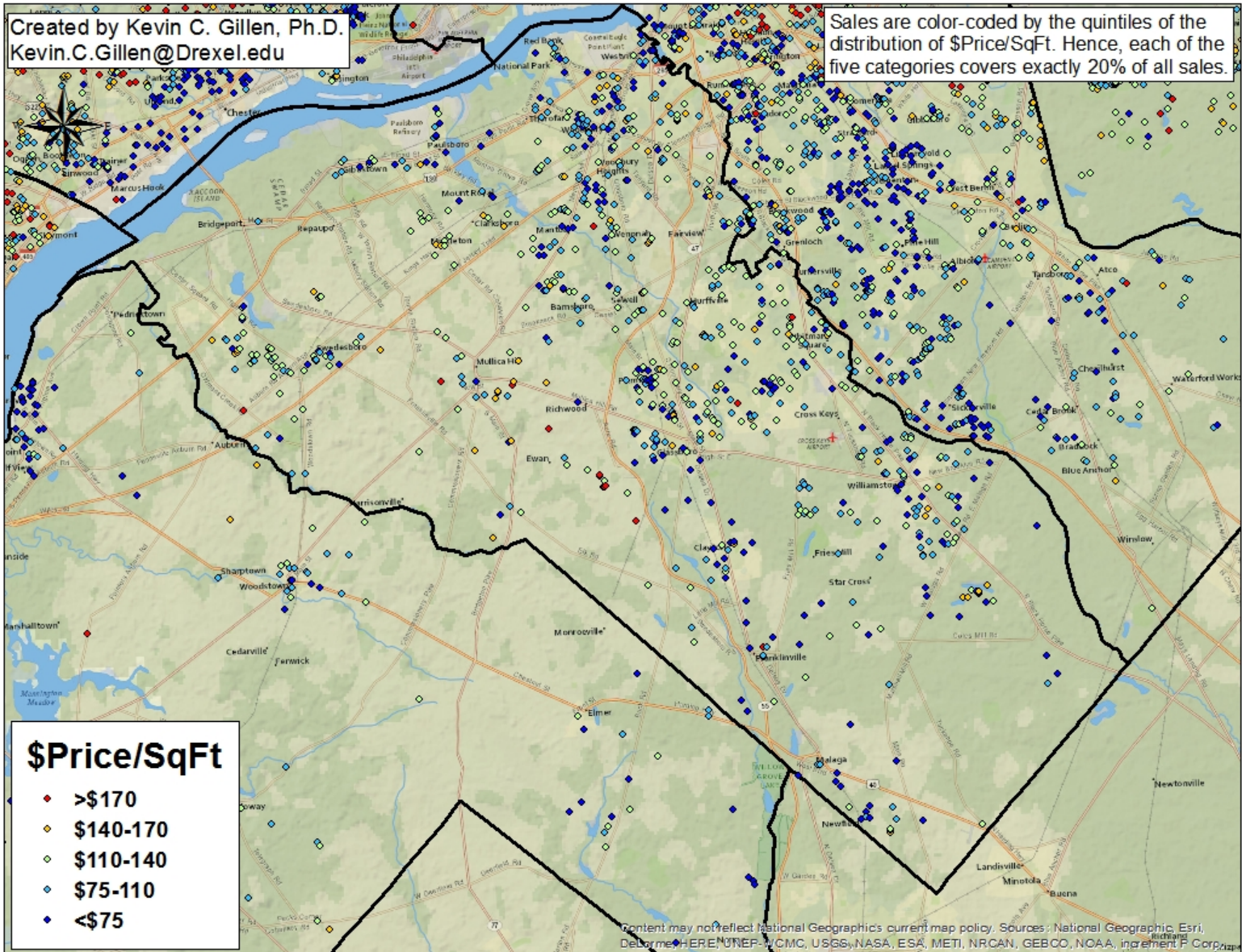
\$Price/SqFt

- ◆ >\$170
- ◆ \$140-170
- ◆ \$110-140
- ◆ \$75-110
- ◆ <\$75

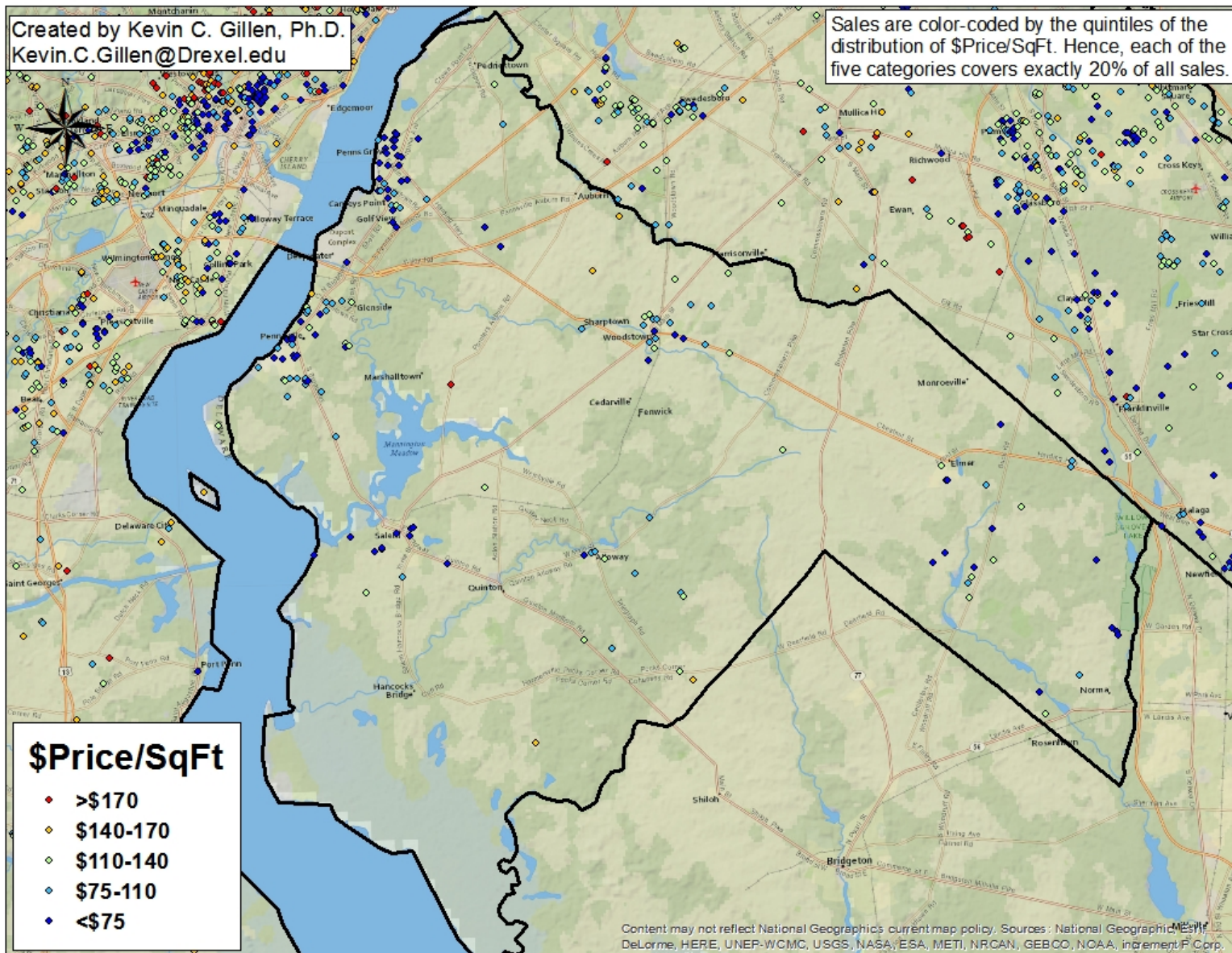


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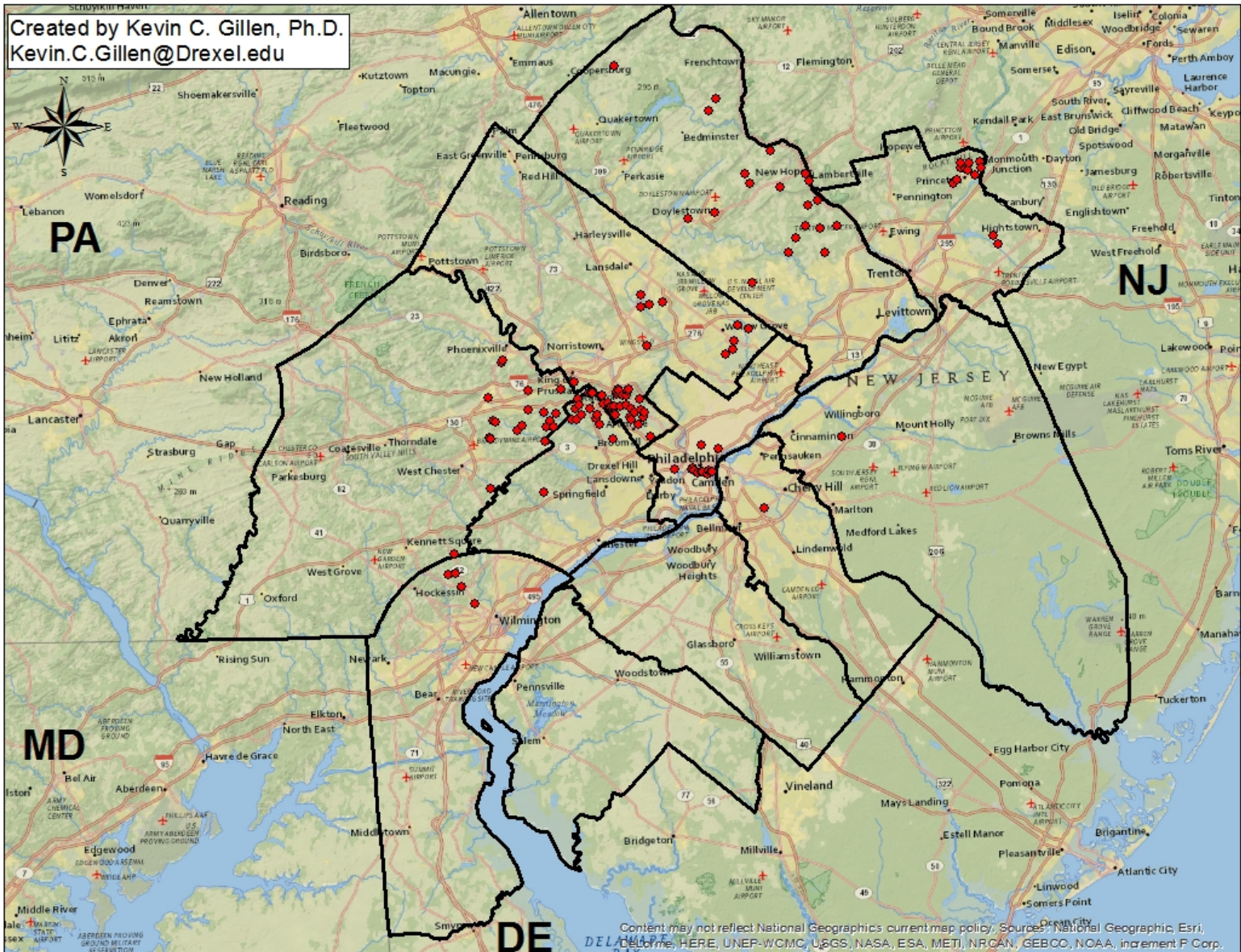
Gloucester County House Sales in 2016 Q4



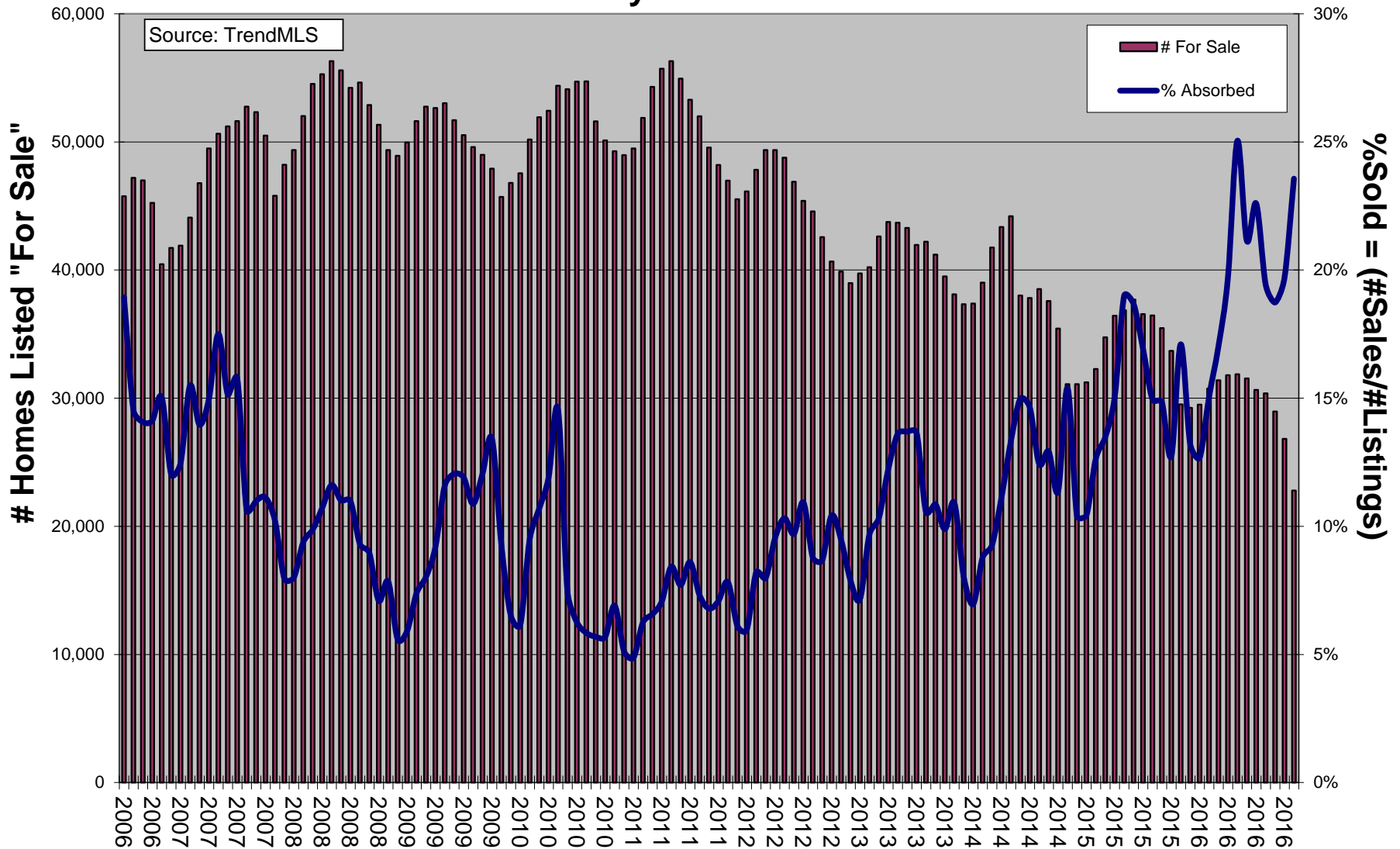
Salem County House Sales in 2016 Q4



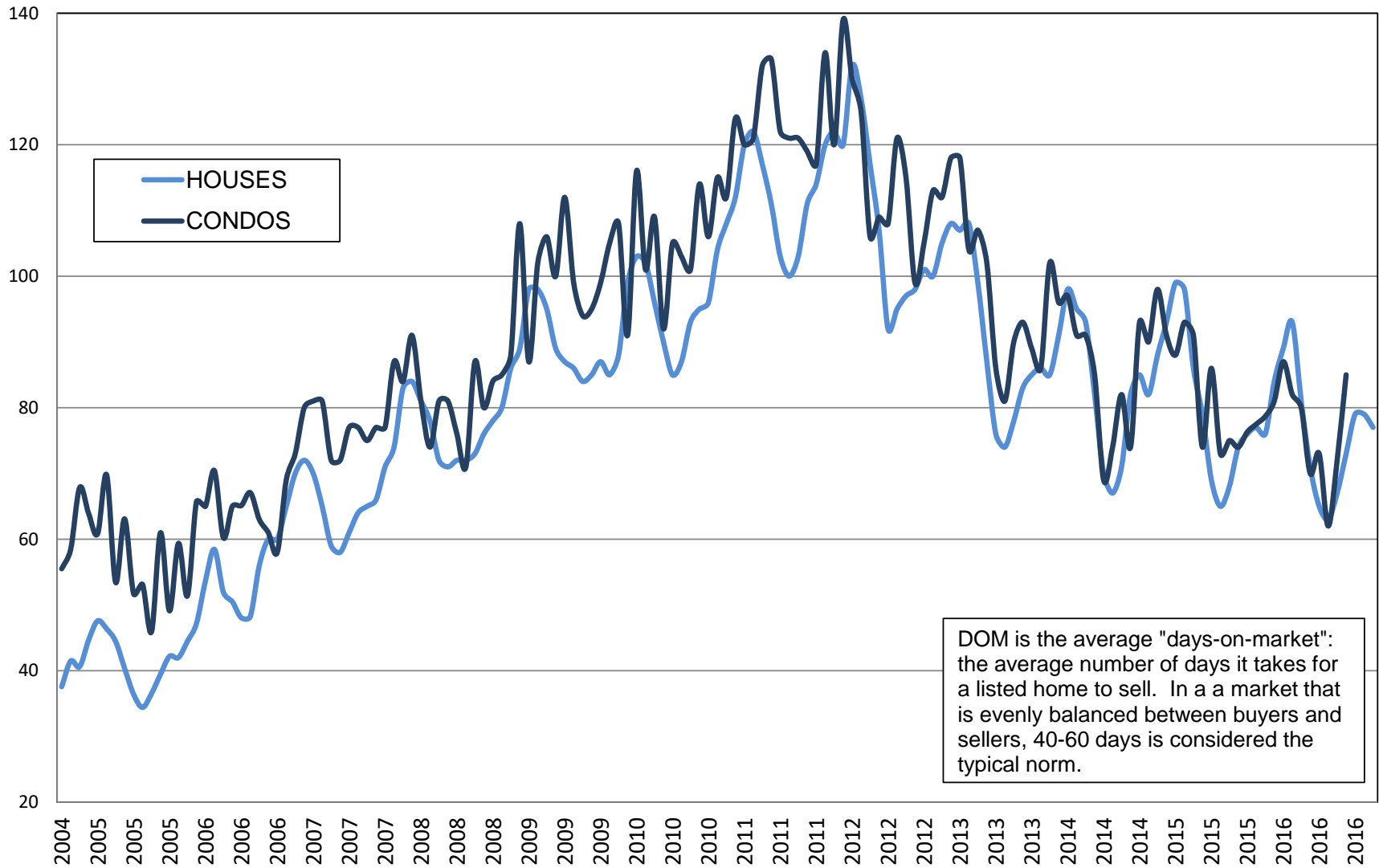
+ \$1 Million Dollar House Sales in 2016 Q4



Philadelphia Region Houses Listed For Sale: Inventory v. Sales Rate



Philadelphia Region Avg. DOM*: Houses v. Condos



Pennsylvania Foreclosure Rates

FORECLOSURE RATES FOR PENNSYLVANIA

January 2017

Pennsylvania
1 in every 1418

Top 5 Counties

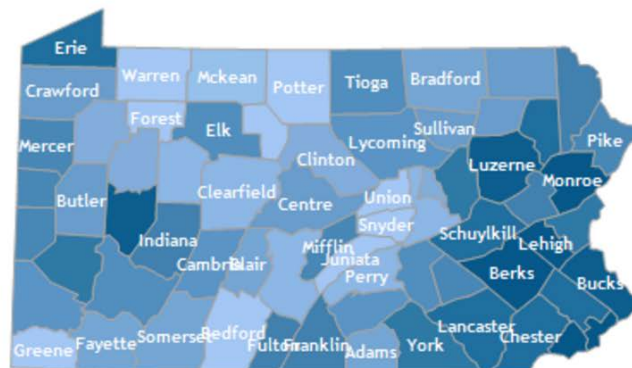
Monroe
1 in every 493

Delaware
1 in every 514

Berks
1 in every 857

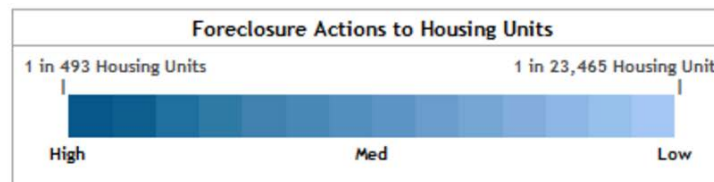
Philadelphia
1 in every 860

Lehigh
1 in every 951



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1 out of every 860 homes in Philadelphia is currently in the process of foreclosure, which is up from 1 out of every 877 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,418 homes in Pennsylvania is in the process of foreclosure, which is down from 1 out of every 1,243 homes in the previous quarter.

New Jersey Foreclosure Rates

FORECLOSURE RATES FOR NEW JERSEY

January 2017

New Jersey
1 in every 654

Top 5 Counties

Sussex
1 in every 288

Burlington
1 in every 375

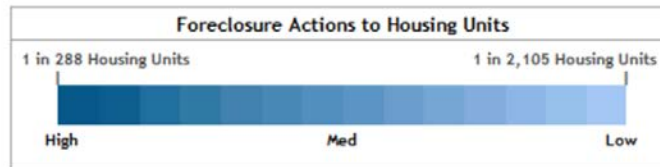
Gloucester
1 in every 420

Camden
1 in every 428

Cumberland
1 in every 452

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South Jersey's foreclosure rate continues to remain the highest in the region, and the statewide foreclosure rate trended up in Q3.

Of the top five counties in NJ with the highest foreclosure rate, four of them are located in South Jersey, with an average foreclosure rate of 1 in every 419 homes. This is well above the statewide average of 1 in every 654 homes.

However, the foreclosure rate for South Jersey did trend downward this quarter, from its previous level of 1 in every 339 homes in the previous quarter.

Delaware Foreclosure Rates

FORECLOSURE RATES FOR DELAWARE

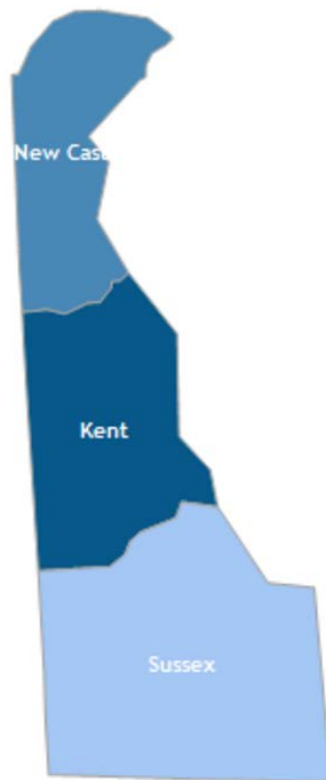
Delaware
1 in every 786

Top 3 Counties

Kent
1 in every 599

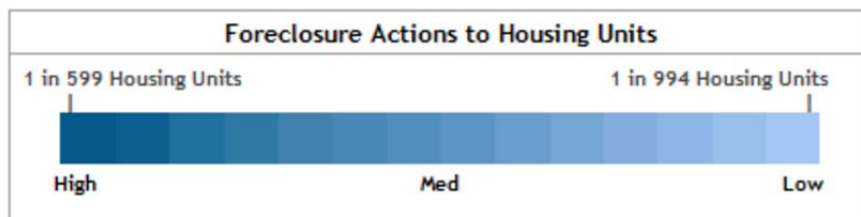
New Castle
1 in every 767

Sussex
1 in every 994



This quarter, Delaware saw significant improvements in its foreclosure rates:

- 1 out of every 767 homes in New Castle County, down from 1 out of every 551 homes in the previous quarter.
- 1 out of every 599 homes in Kent County, down from 1 out of every 375 homes in the previous quarter.
- 1 out every 994 homes in Sussex County, down from 1 out of every 828 homes in the previous quarter.
- Statewide, the foreclosure rate declined from 1 in every 566 homes to 1 in every 786 homes.



Delaware Foreclosure Rates

This quarter, Delaware continued to see general improvement in its foreclosure rates:

FORECLOSURE RATES FOR DELAWARE

January 2017

Delaware
1 in every 819

Top 3 Counties

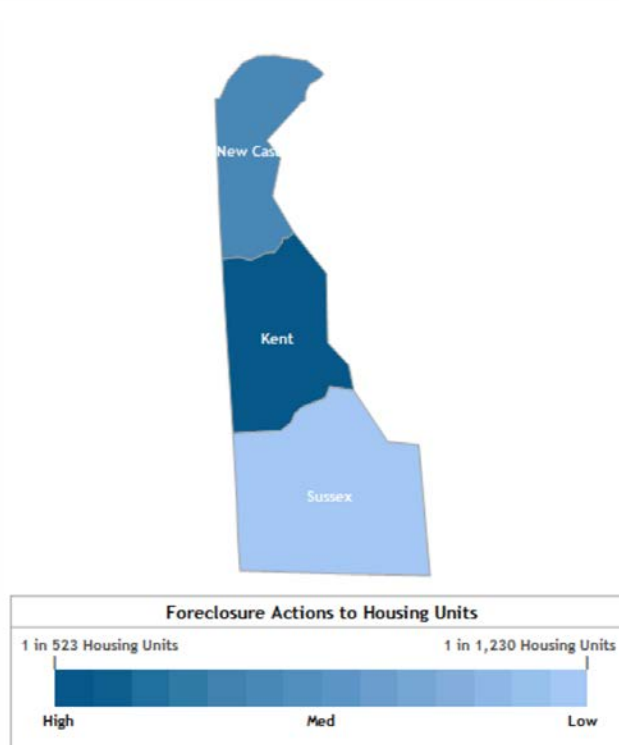
Kent
1 in every 523

New Castle
1 in every 804

Sussex
1 in every 1230

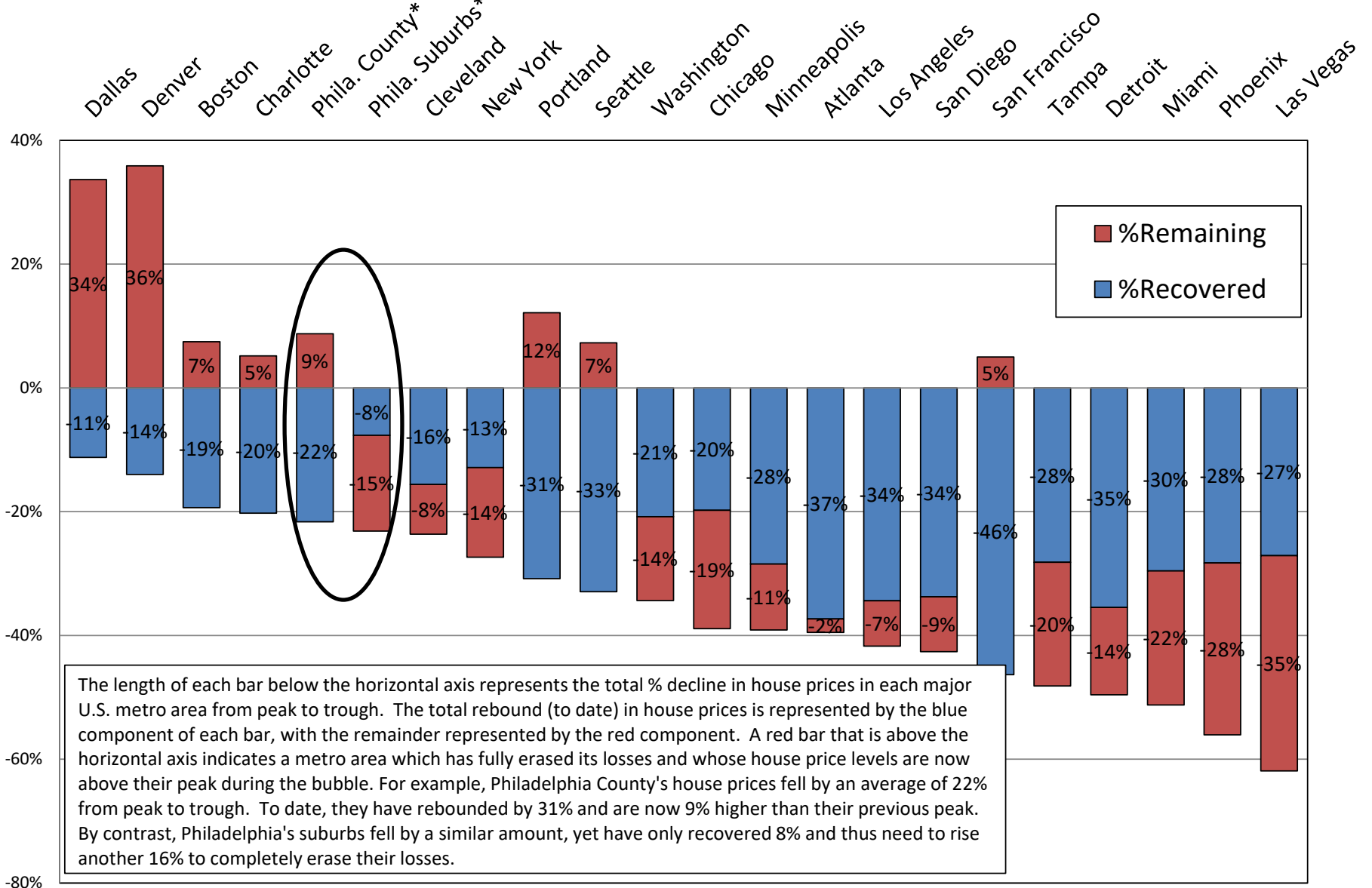
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- 1 out of every 804 homes in New Castle County, down from 1 out of every 767 homes in the previous quarter.
- 1 out of every 523 homes in Kent County, up from 1 out of every 599 homes in the previous quarter.
- 1 out every 1,230 homes in Sussex County, down from 1 out of every 994 homes in the previous quarter.
- Statewide, the foreclosure rate declined from 1 in every 786 homes to 1 in every 819 homes.

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



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