

PHILADELPHIA REGIONAL HOUSE PRICE INDICES

May 24, 2017



DREXEL UNIVERSITY
Lindy Institute
for Urban Innovation

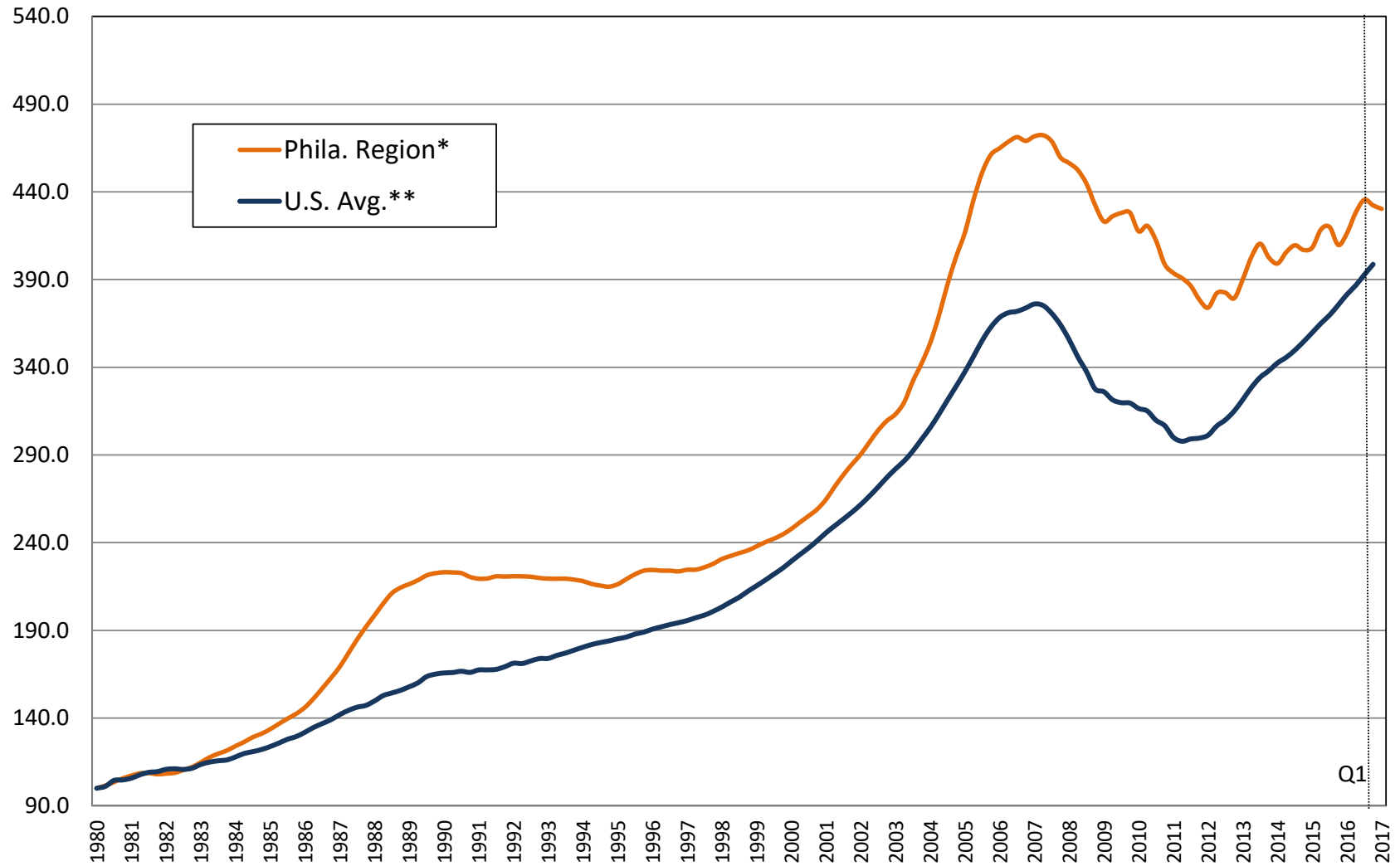
KEVIN C. GILLEN, Ph.D.

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 1980-2017

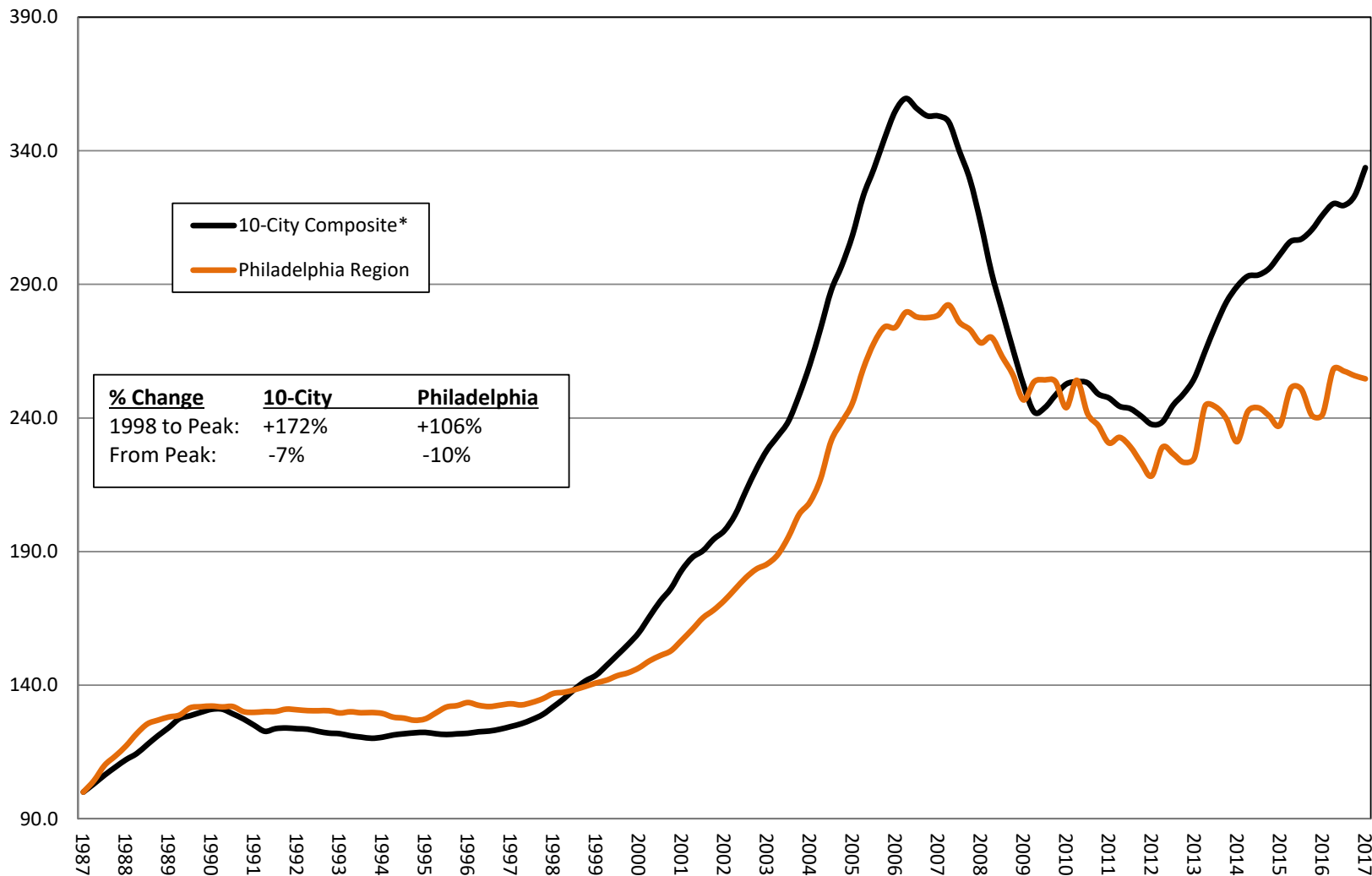
1980Q1=100



*Empirically estimated by Kevin C. Gillen, PhD

**Courtesy Federal Housing Finance Agency (FHFA)

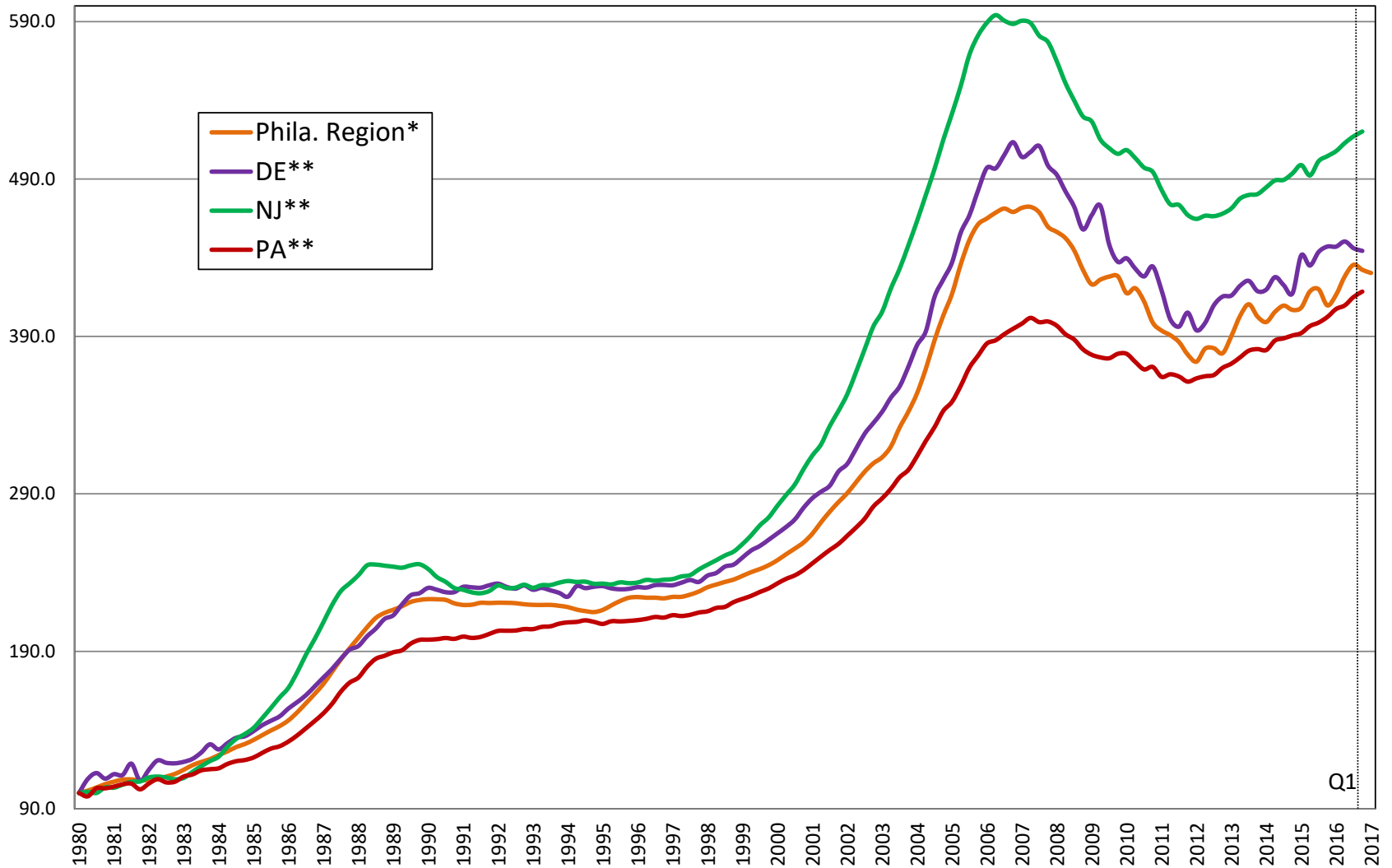
House Price Appreciation 1987-2017: Philadelphia Region v. 10-City U.S. Composite



*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 1980-2017

by Philadelphia Region and State: 1980Q1=100



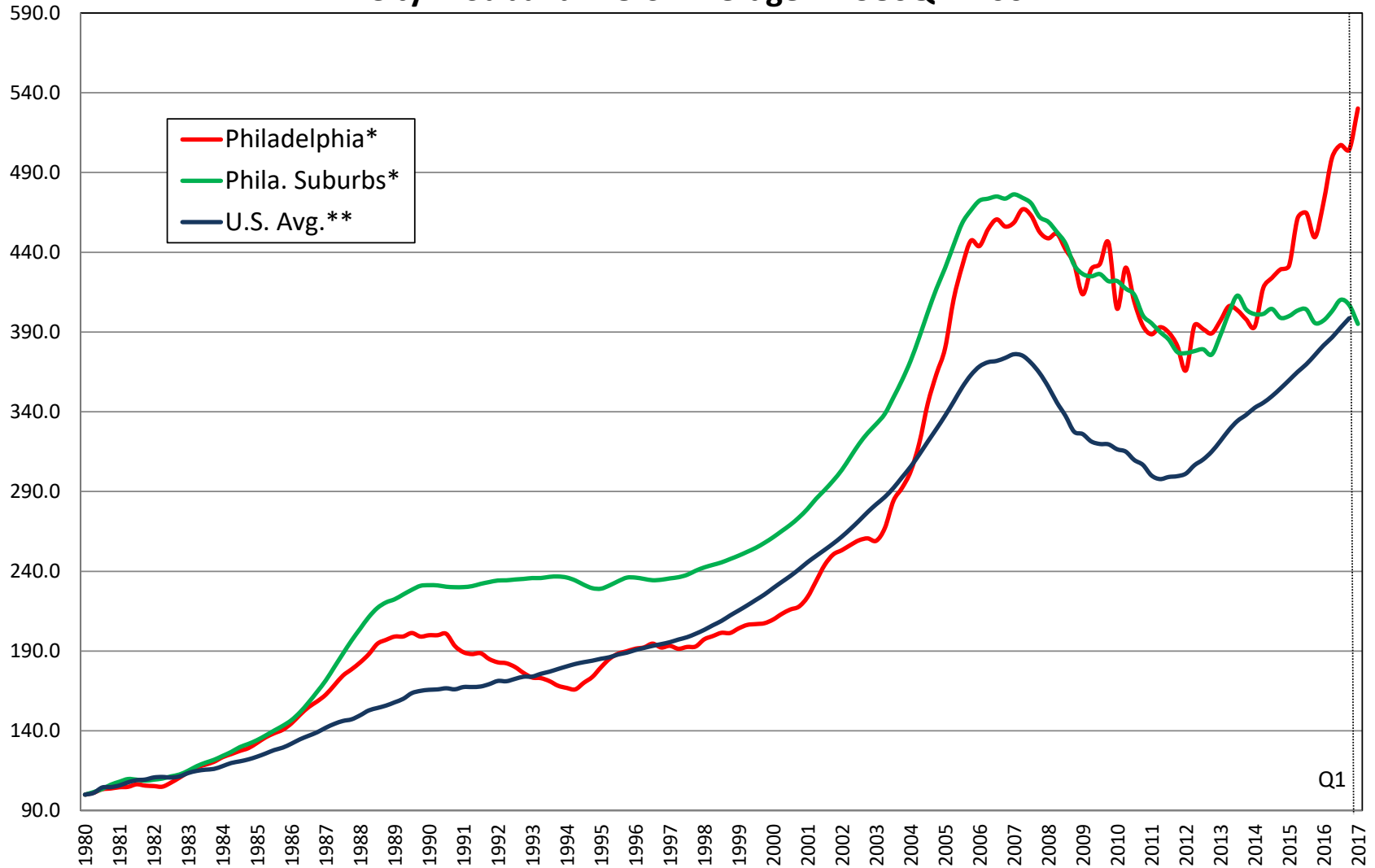
*Empirically estimated by Kevin C. Gillen, Ph.D.

**Courtesy Federal Housing Finance Agency (FHFA)

Q1

Philadelphia Regional House Price Indices 1980-2017

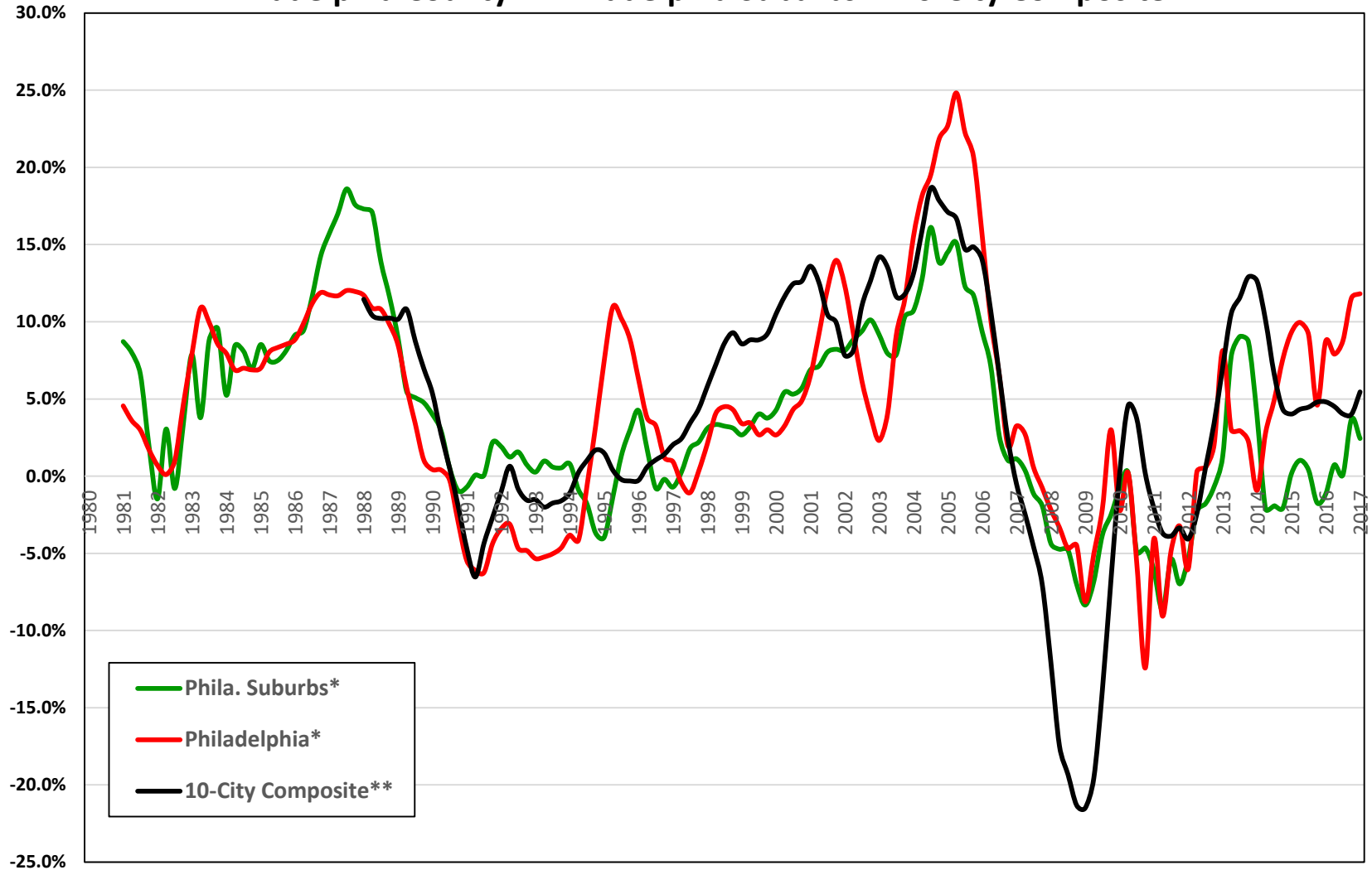
City v. Suburb v. U.S. Average.: 1980Q1=100



*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.

YoY Change in Average House Prices: 1980-2017

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.**
38-Year	145.9%	166.8%	137.4%	138.3%
10-Year	-9.2%	14.5%	-18.7%	6.4%
1-Year	3.3%	11.8%	-0.5%	6.0%
1-Quarter	-0.5%	5.0%	-2.9%	1.5%

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

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

Philadelphia Region House Price Appreciation Rates by County

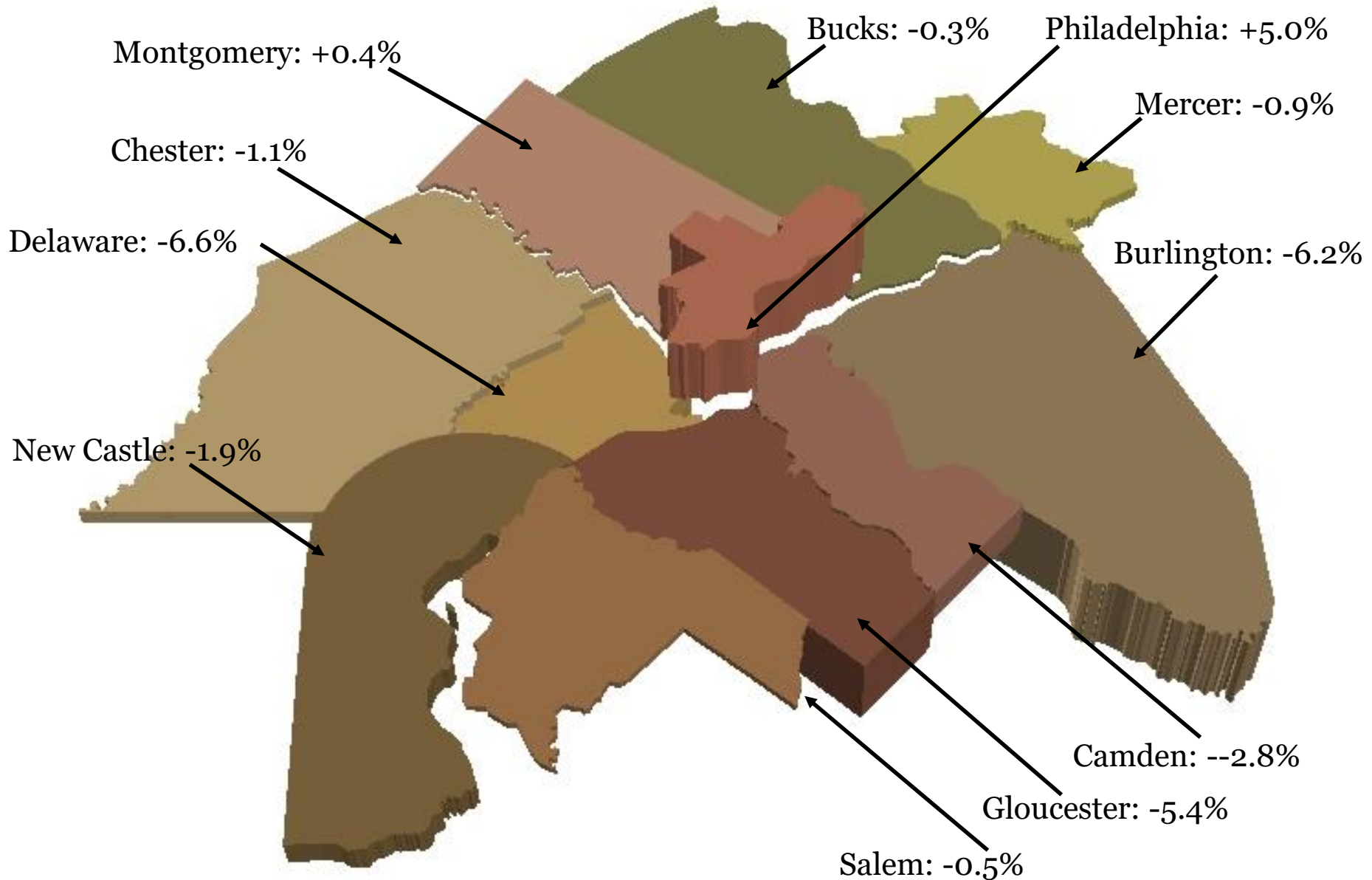
Period	Philadelphia	Bucks	Chester	Delaware	Montgomery	New Castle	Mercer	Burlington	Camden	Gloucester	Salem
38-Year	167%	158%	154%	128%	145%	131%	156%	115%	110%	128%	110%
10-Year	14.5%	-10.8%	-5.9%	-22.2%	-12.2%	-19.4%	-19.2%	-35.1%	-39.8%	-28.8%	-44.9%
1-Year	11.8%	2.4%	0.9%	1.2%	3.8%	-0.3%	-2.3%	-1.4%	-2.7%	-2.4%	-3.0%
1-Quarter	5.0%	-0.3%	-1.1%	-6.6%	0.4%	-1.9%	-0.9%	-6.2%	-2.8%	-5.4%	-0.5%

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

Philadelphia Region: County Boundary Definitions

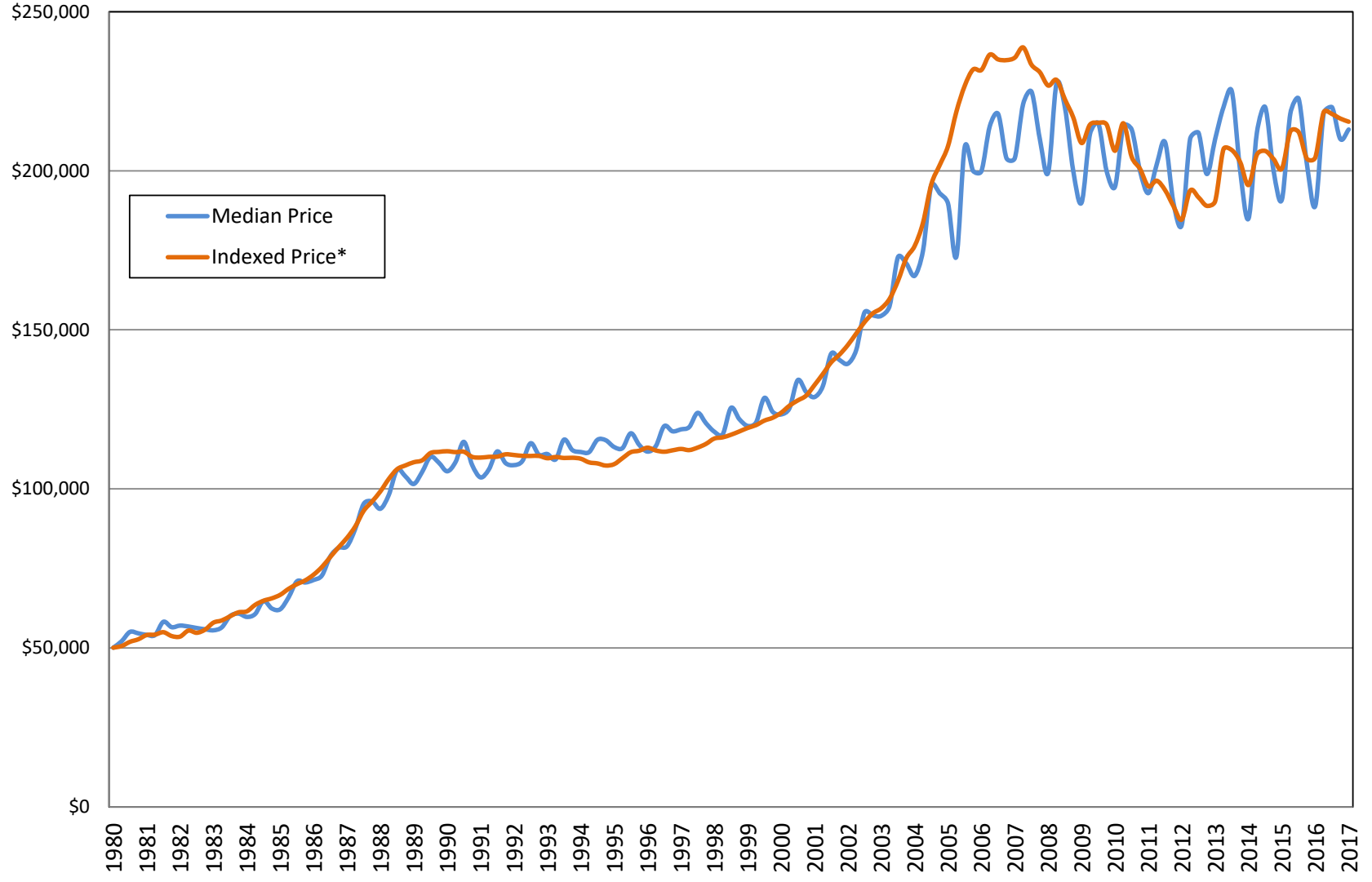


2017 Q1 House Price Rate of Change by County



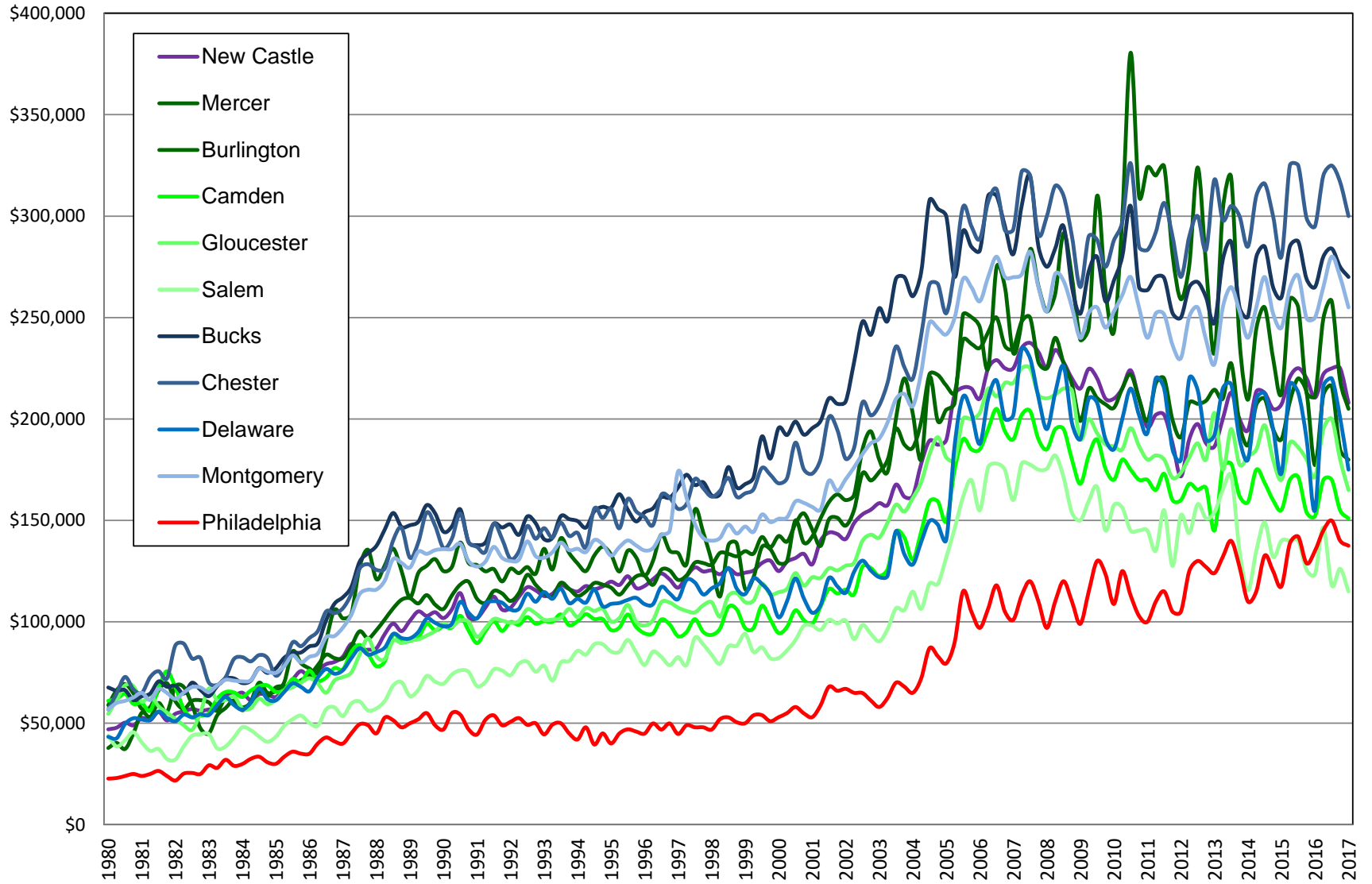
Note: Each county is extruded by its average change in house values during 2017 Q1 in order to reflect its growth (or depreciation) rate relative to other counties.

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

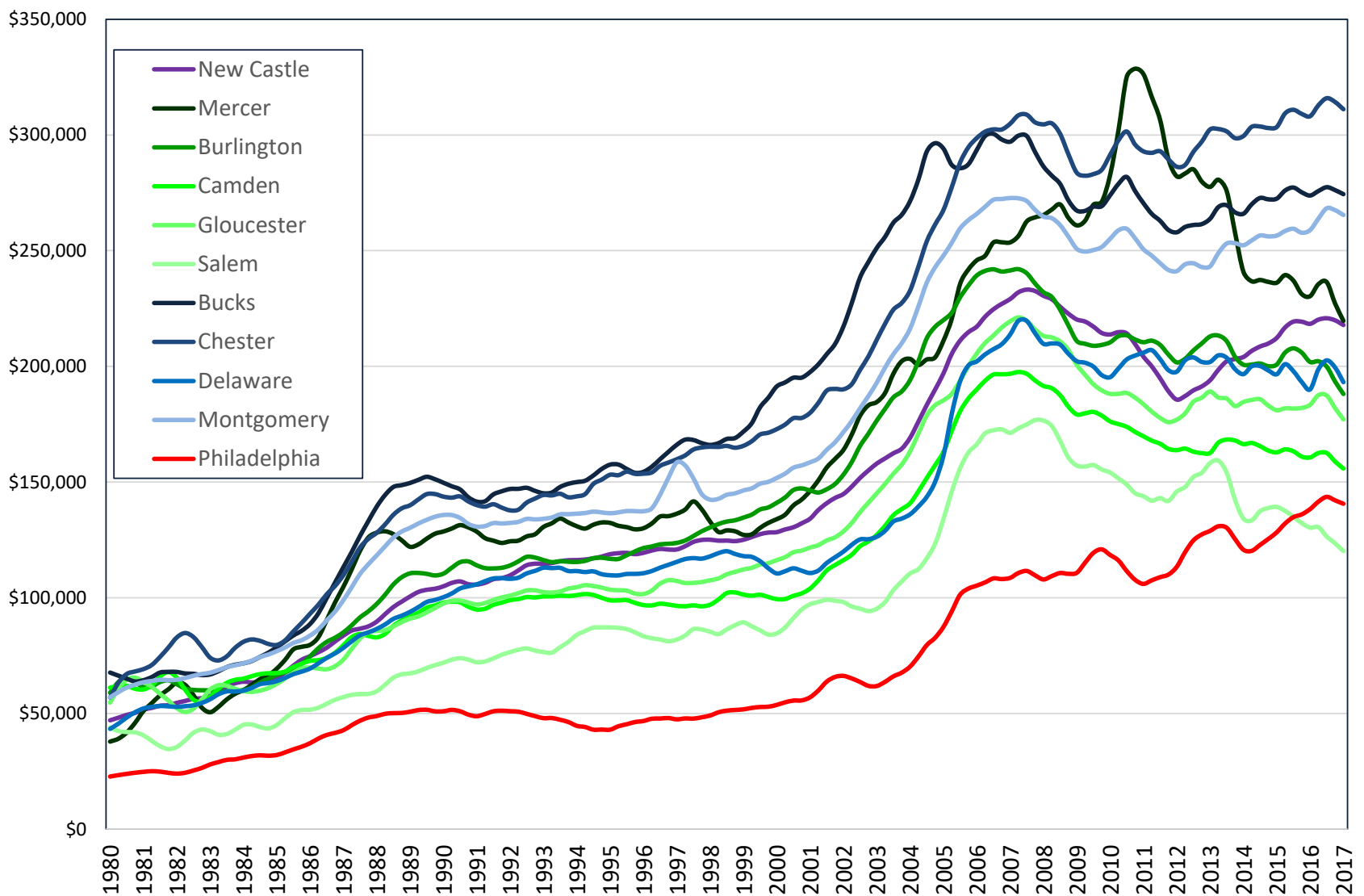


*Empirically estimated by Kevin C. Gillen, Ph.D.

Median House Price by County: 1980-2017

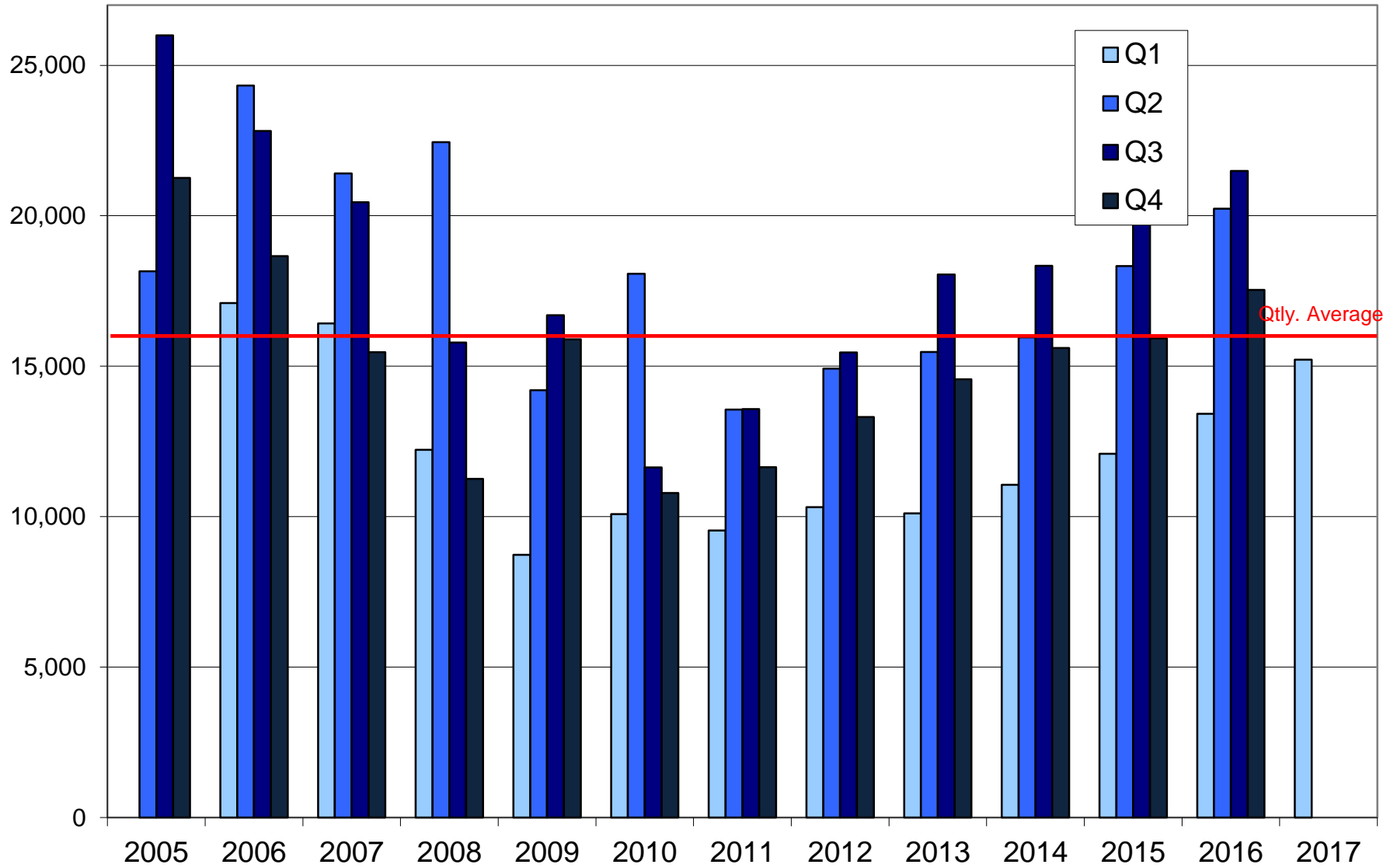


Median House Price by County, Smoothed*: 1980-2017

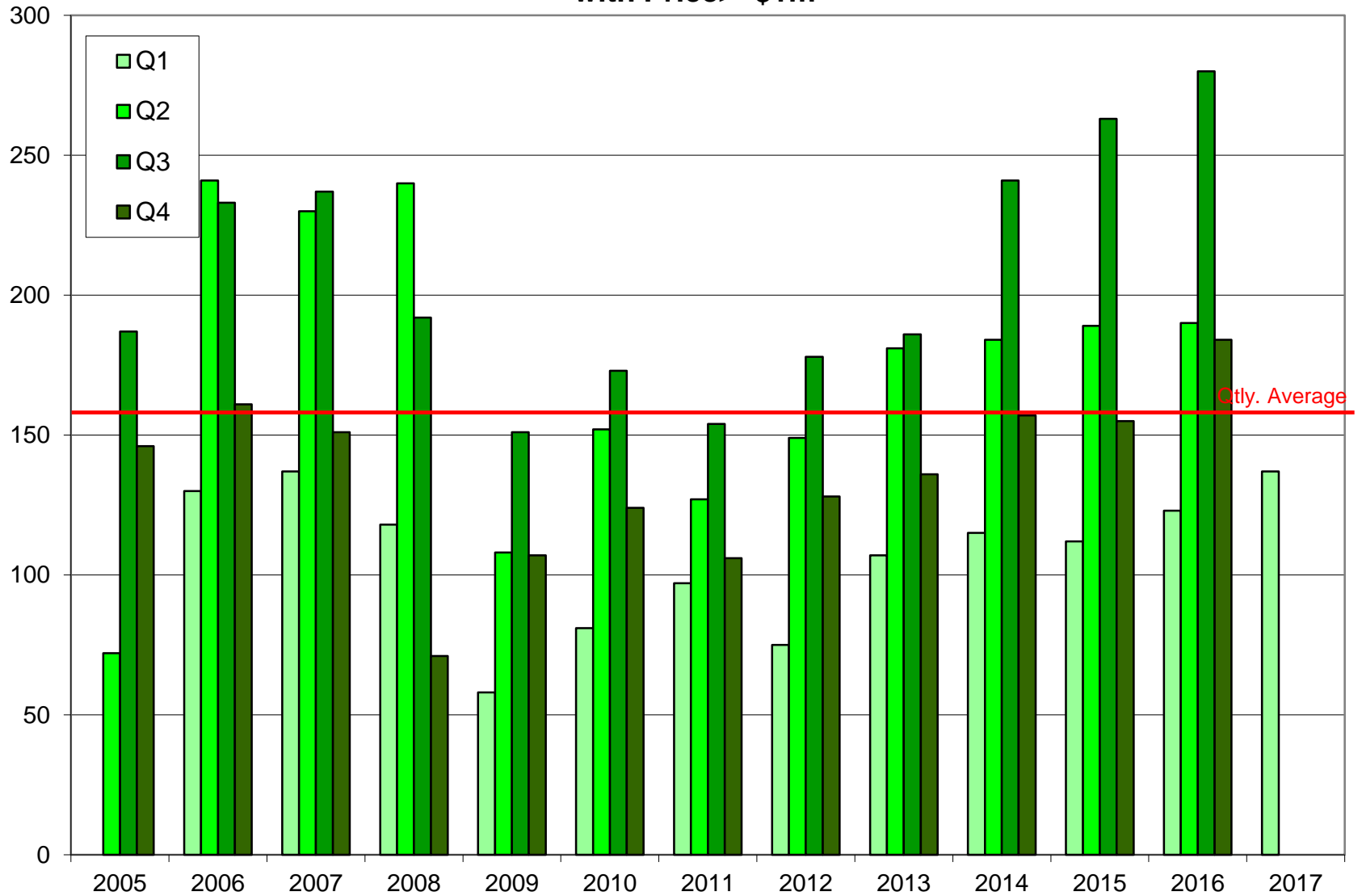


*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.

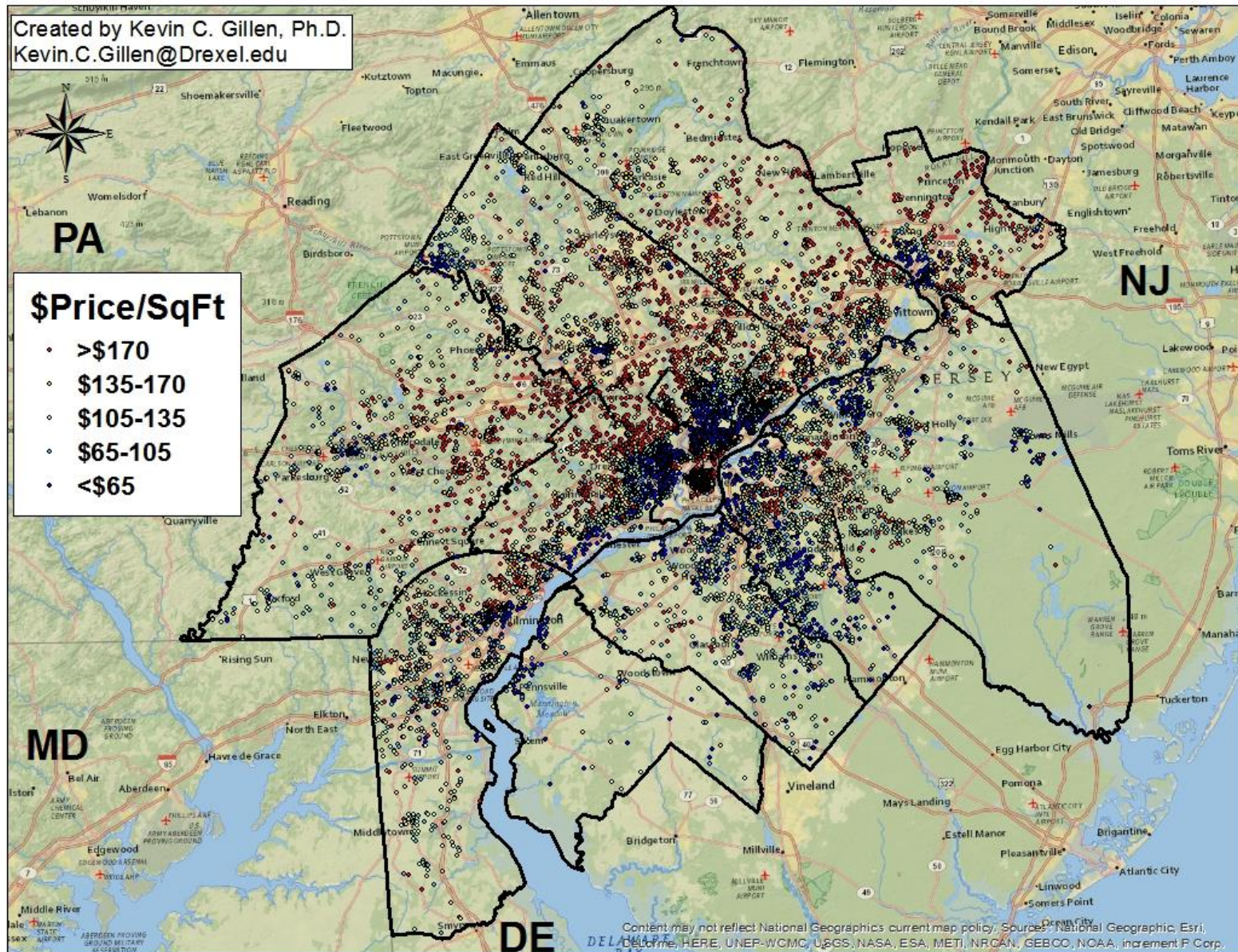
Number of Regional House Sales per Quarter: 2005-2016



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



Philadelphia Region House Sales in 2017 Q1



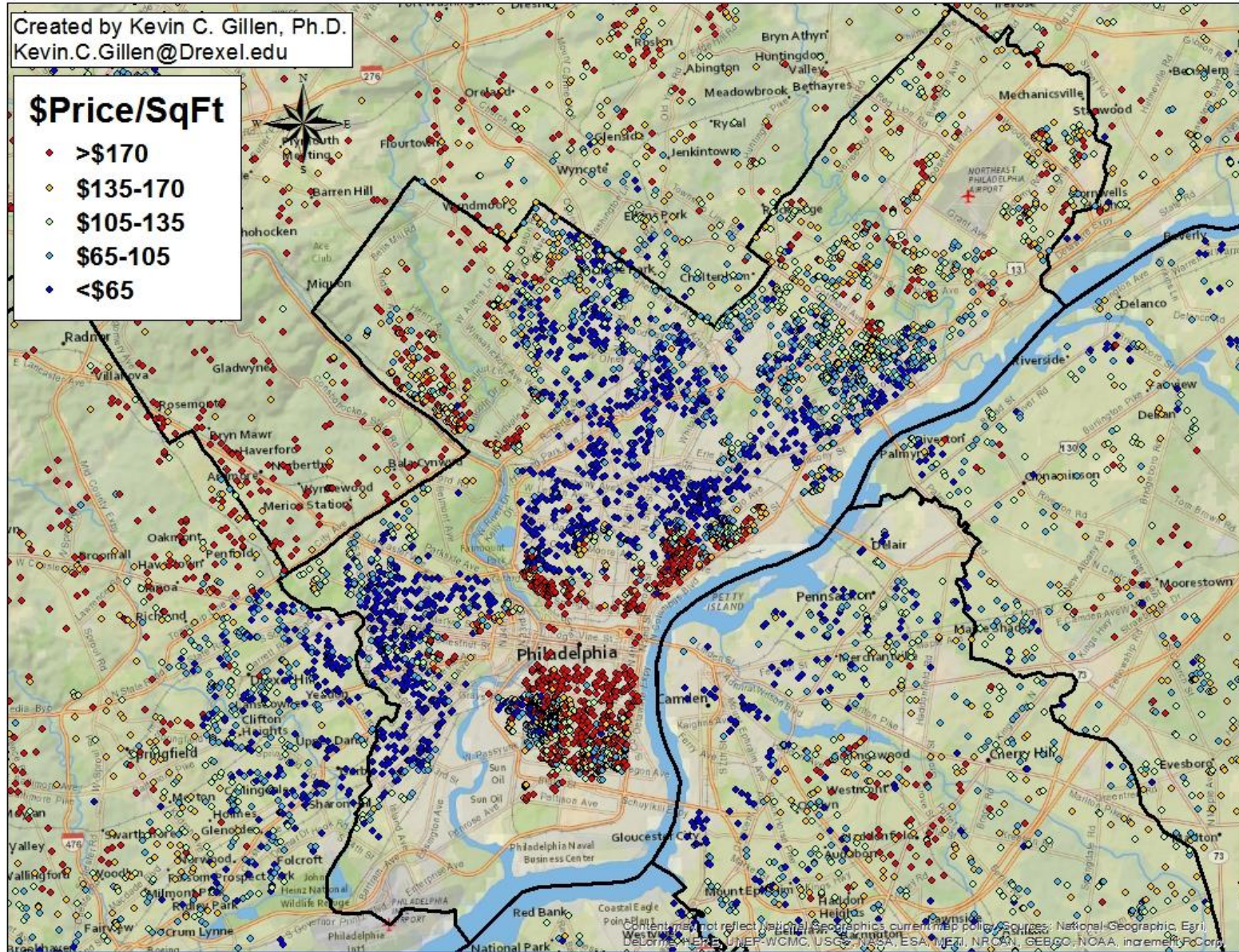
Note: the categories for \$price/sqft are based upon the quintiles of its distribution. Hence, exactly 20% of all sales fall into each one of the five categories.

Philadelphia County House Sales in 2017 Q1

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

\$Price/SqFt

- >\$170
- ◊ \$135-170
- ◊ \$105-135
- ◊ \$65-105
- <\$65



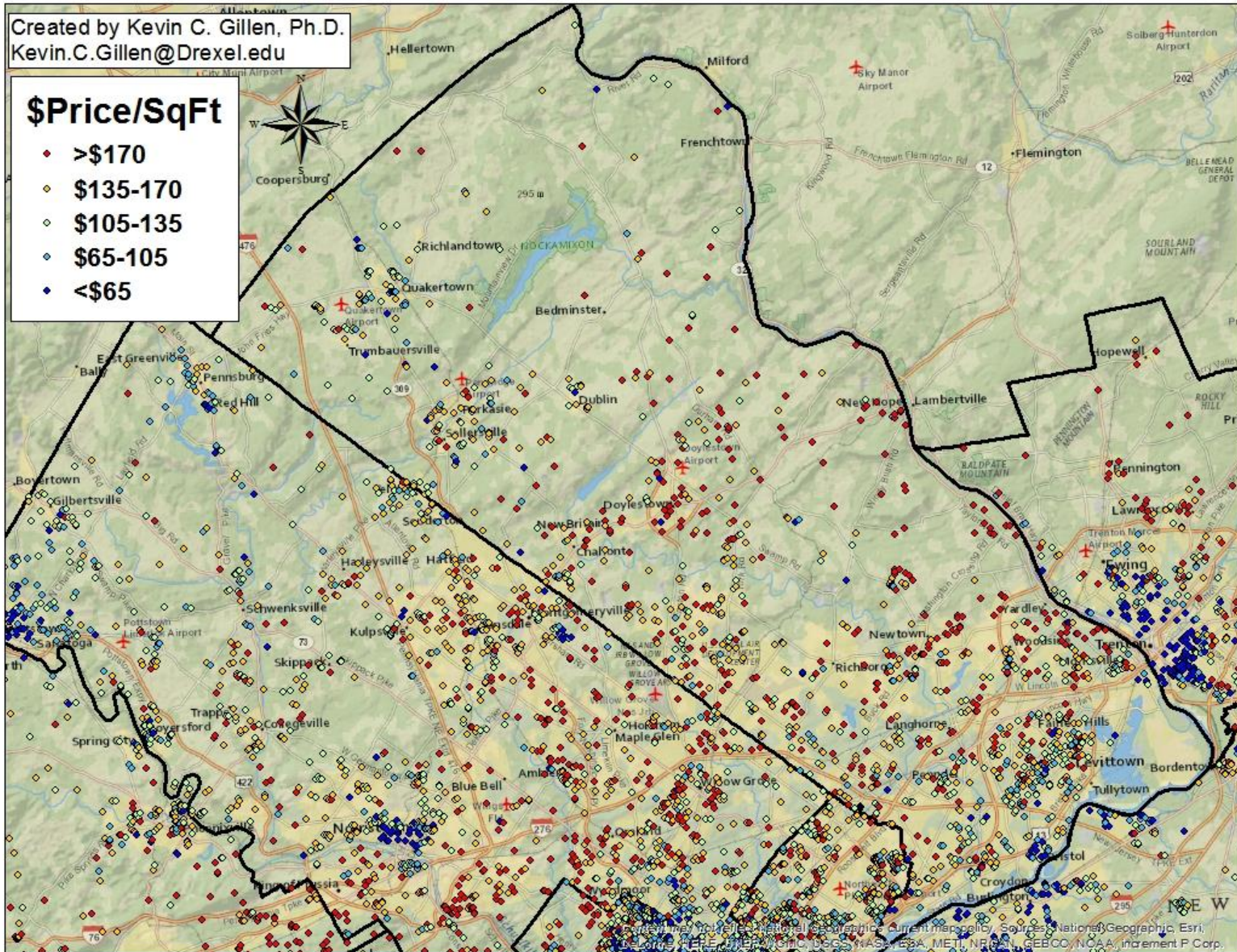
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Bucks County House Sales in 2017 Q1

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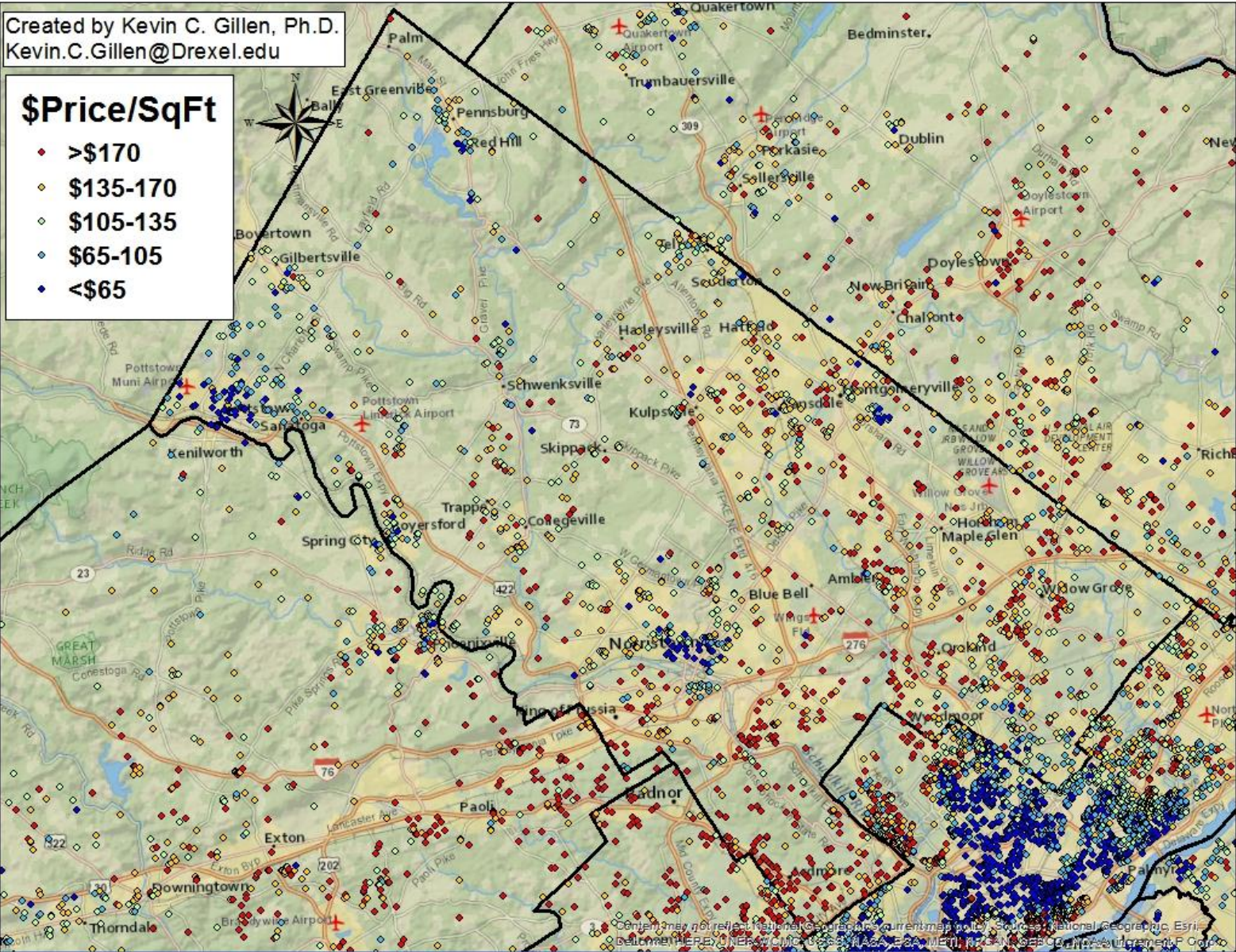
\$Price/SqFt

- ◆ >\$170
- ◇ \$135-170
- ◇ \$105-135
- ◇ \$65-105
- ◆ <\$65



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Montgomery County House Sales in 2017 Q1

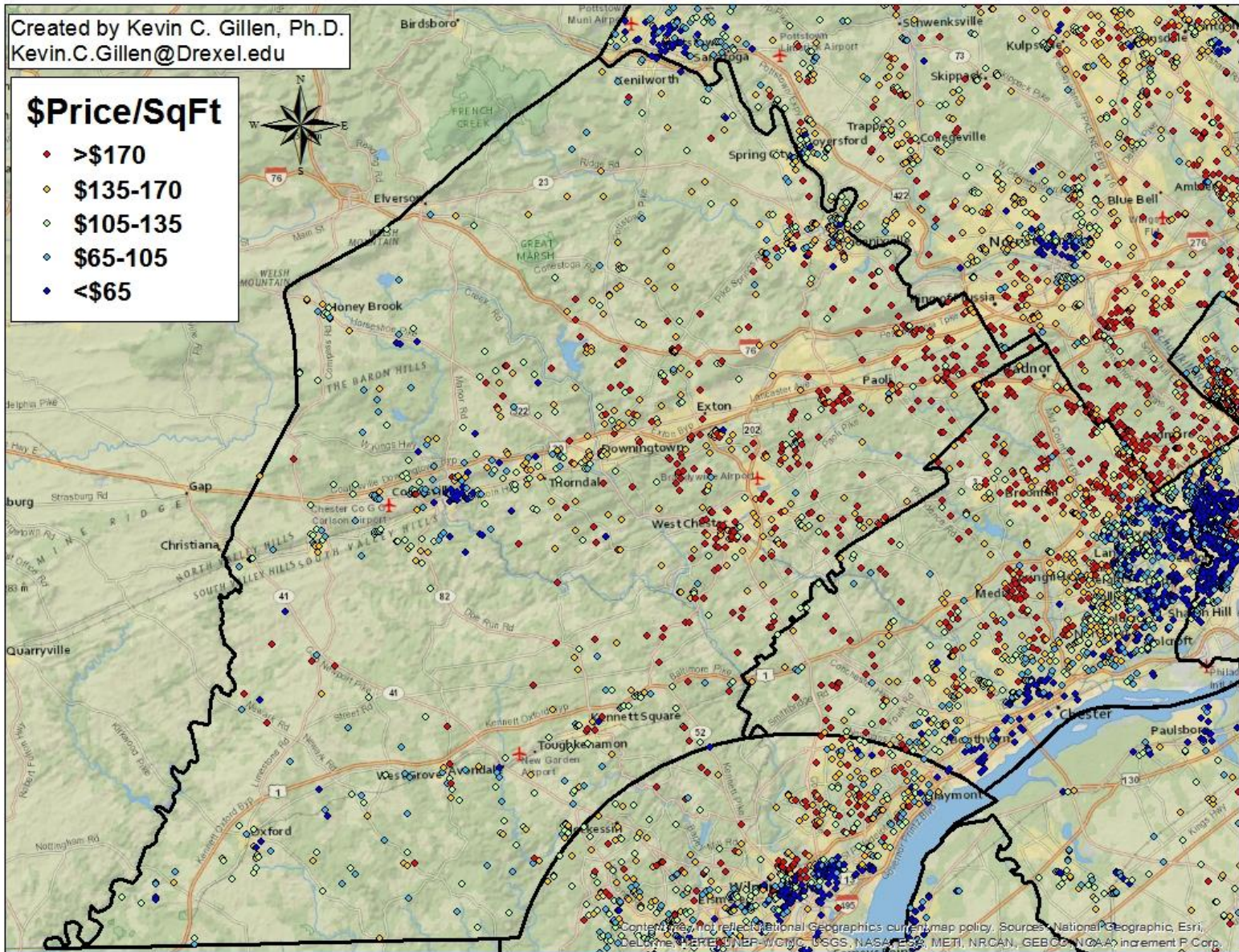


Chester County House Sales in 2017 Q1

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

\$Price/SqFt

- >\$170
- ◊ \$135-170
- ◇ \$105-135
- ◆ \$65-105
- <\$65



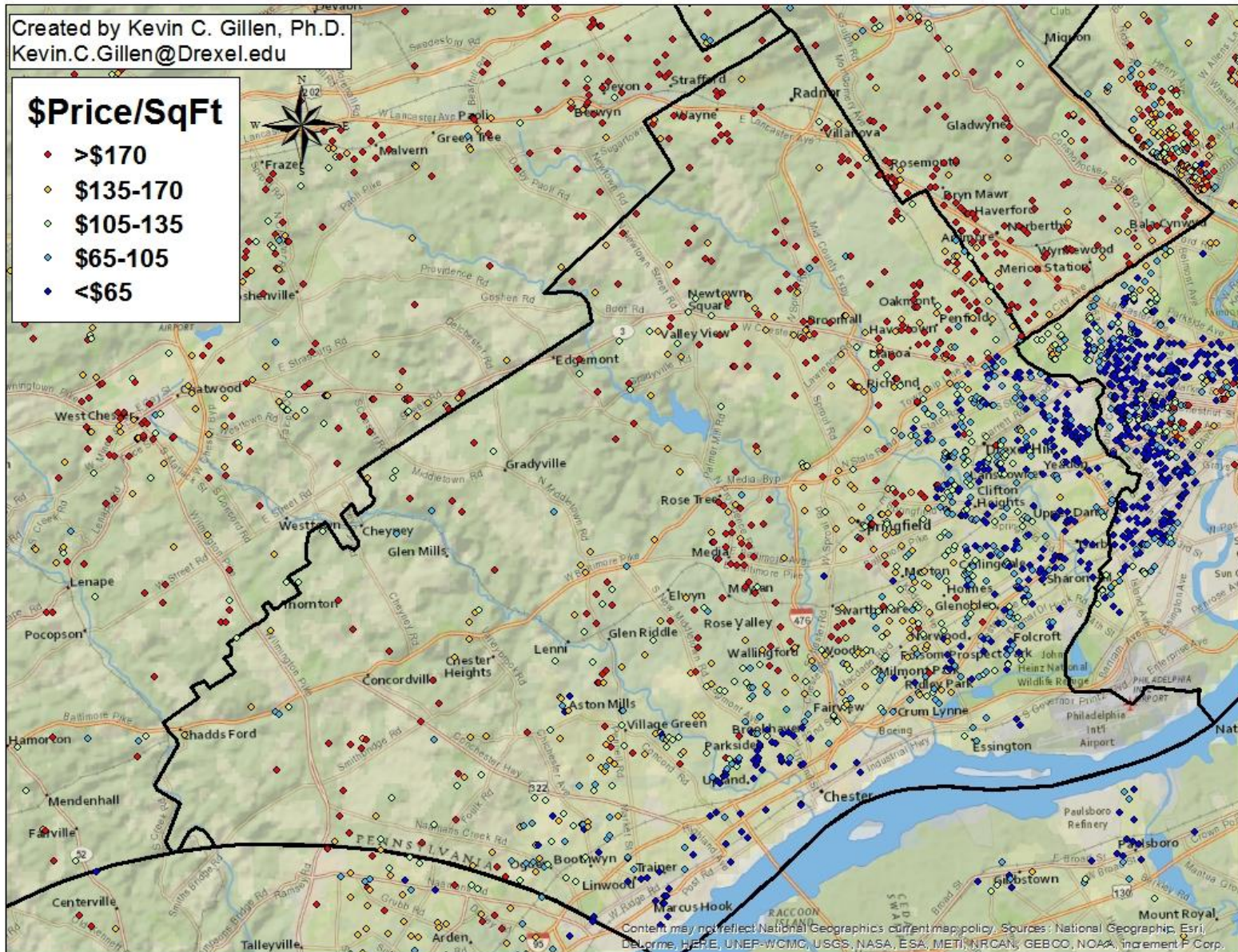
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, CNRF, WGC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA) increment P Corp.

Delaware County House Sales in 2017 Q1

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

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65



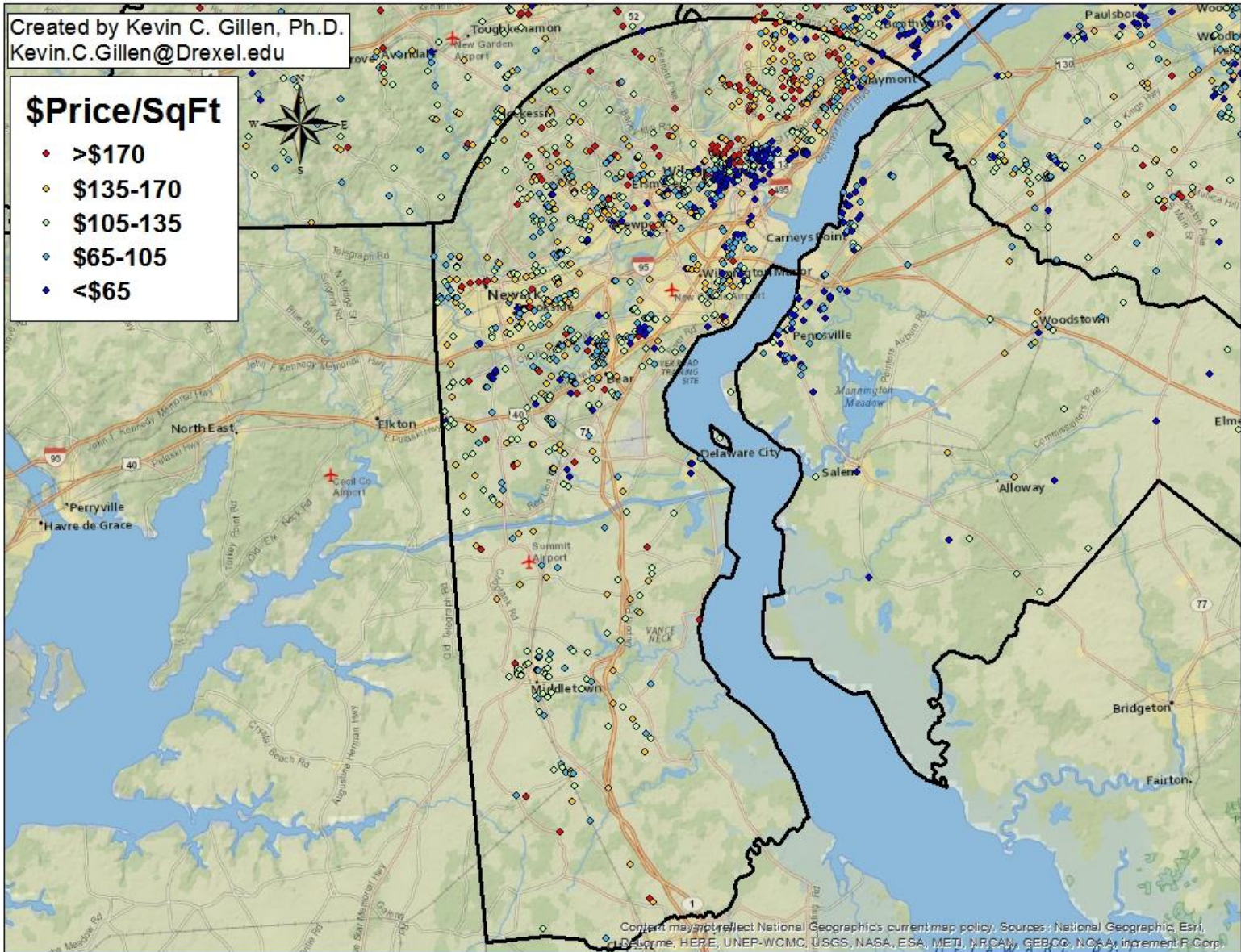
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, Delorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

New Castle County House Sales in 2017 Q1

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

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65



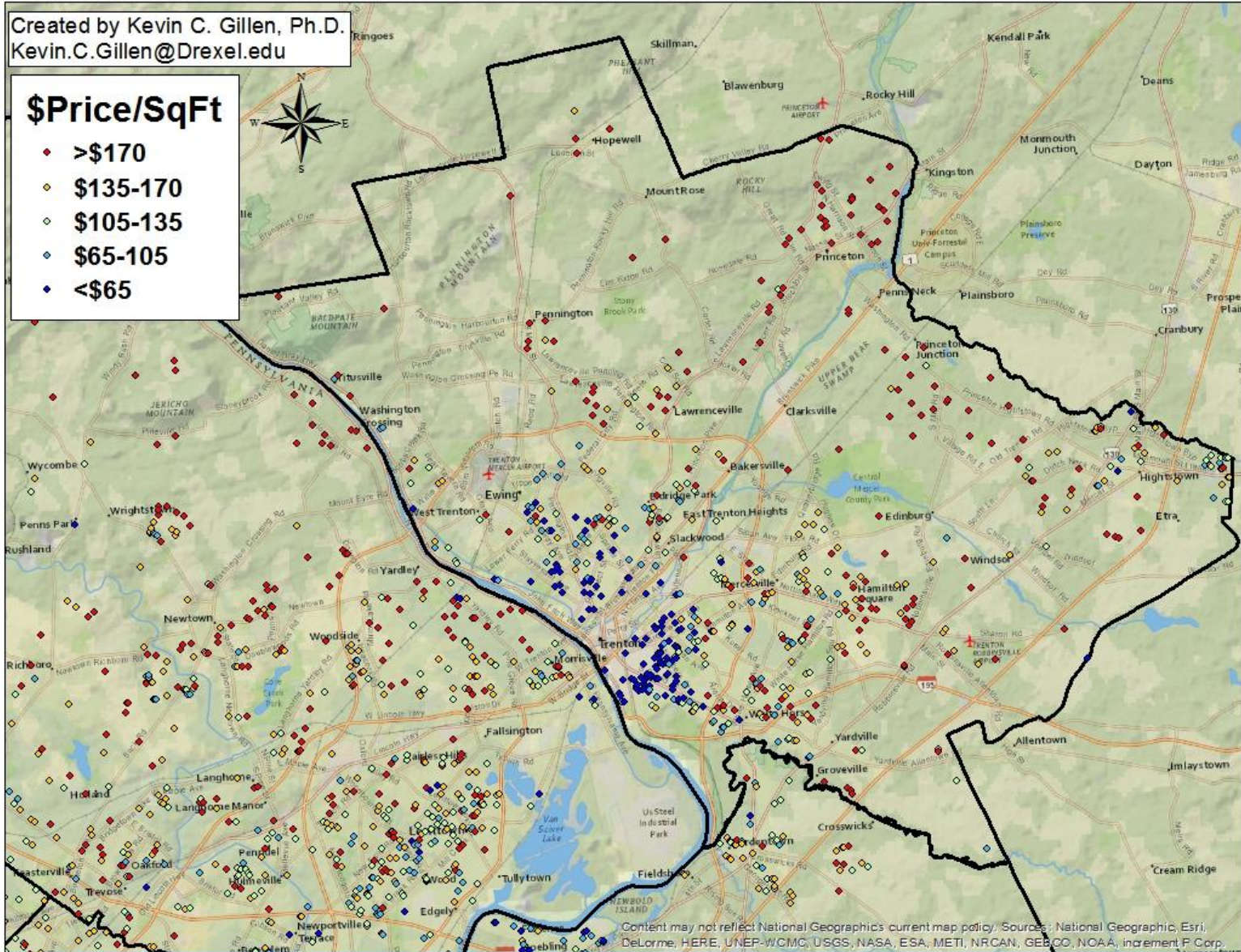
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Mercer County House Sales in 2017 Q1

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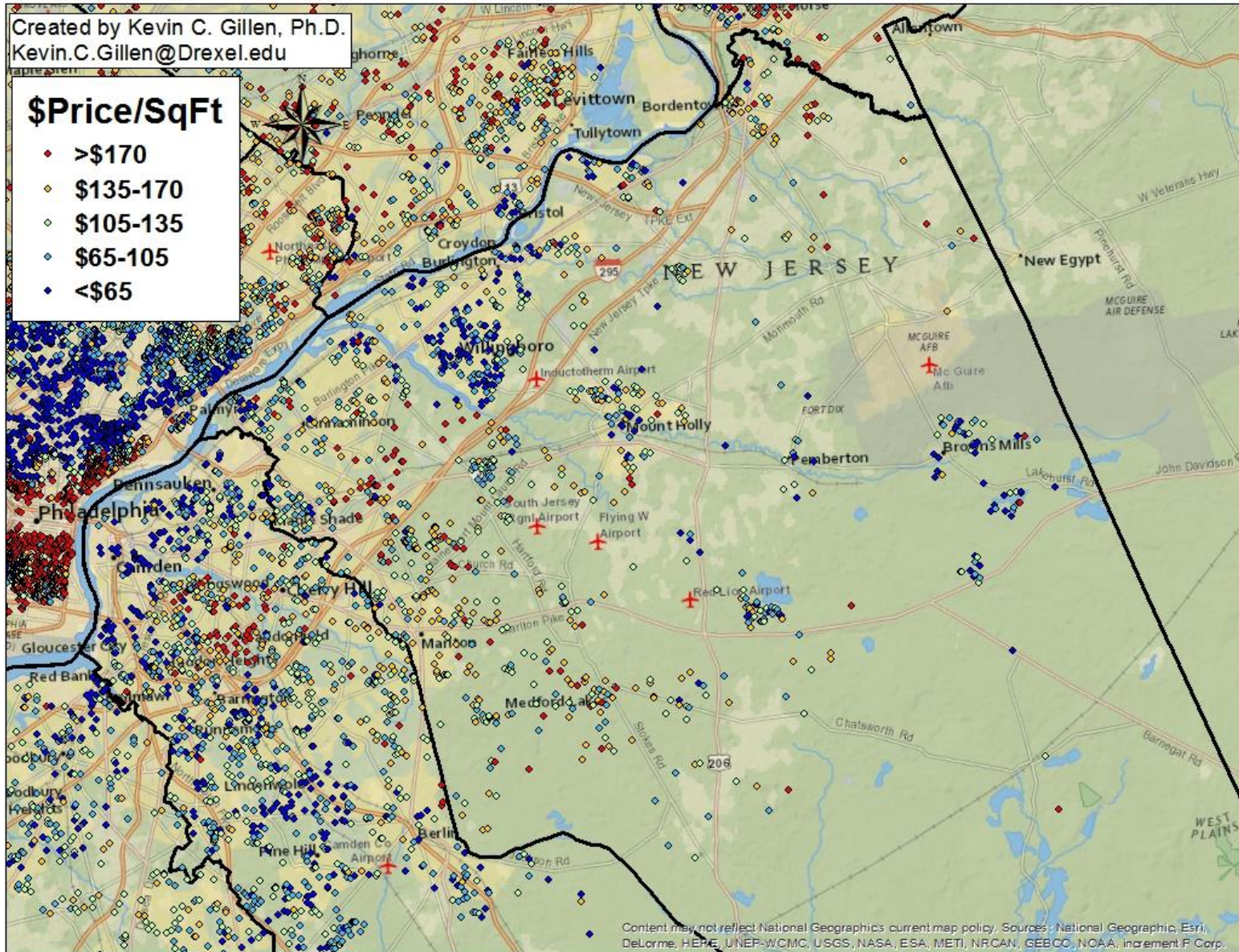
\$Price/SqFt

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65



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.

Burlington County House Sales in 2017 Q1

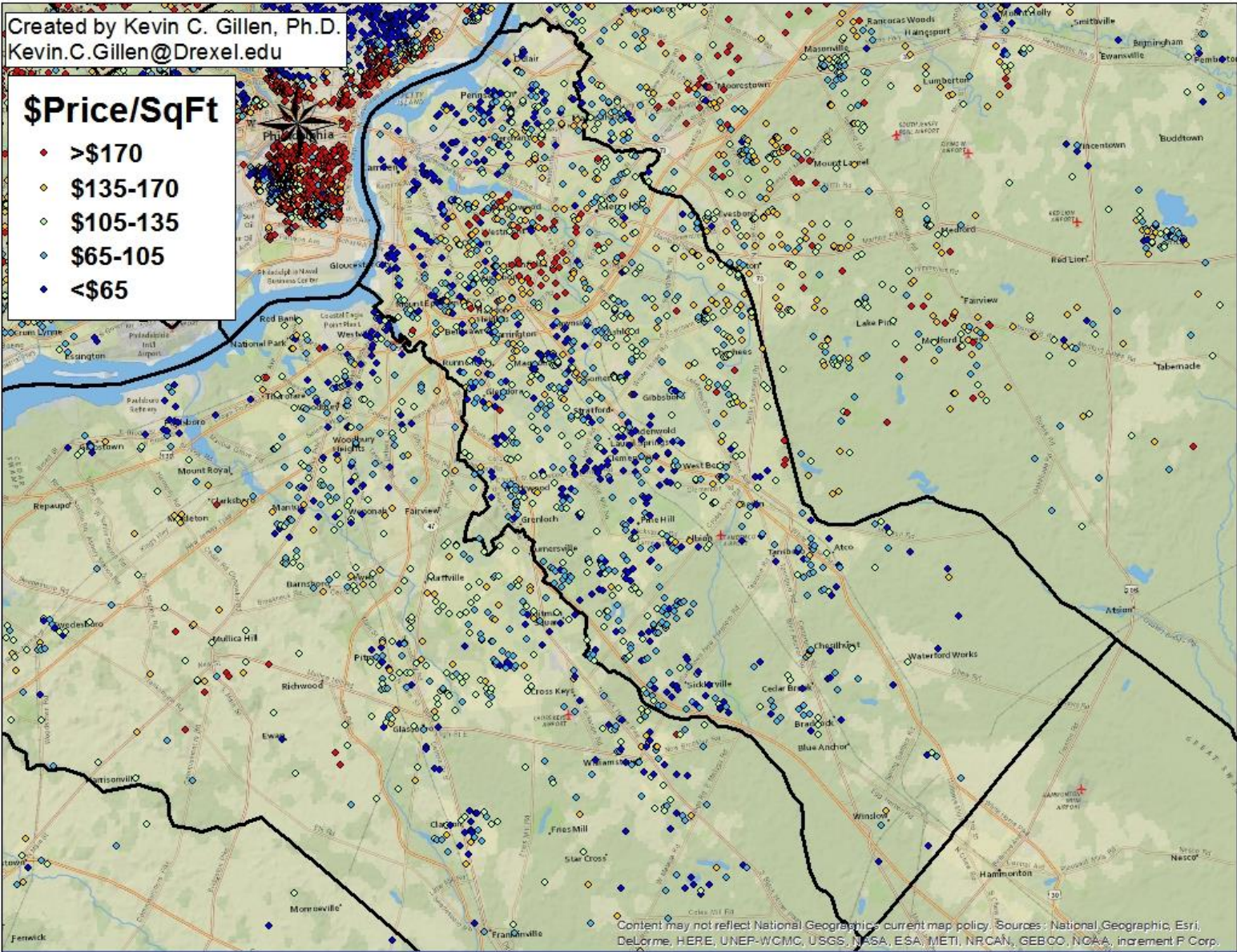


Camden County House Sales in 2017 Q1

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

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65



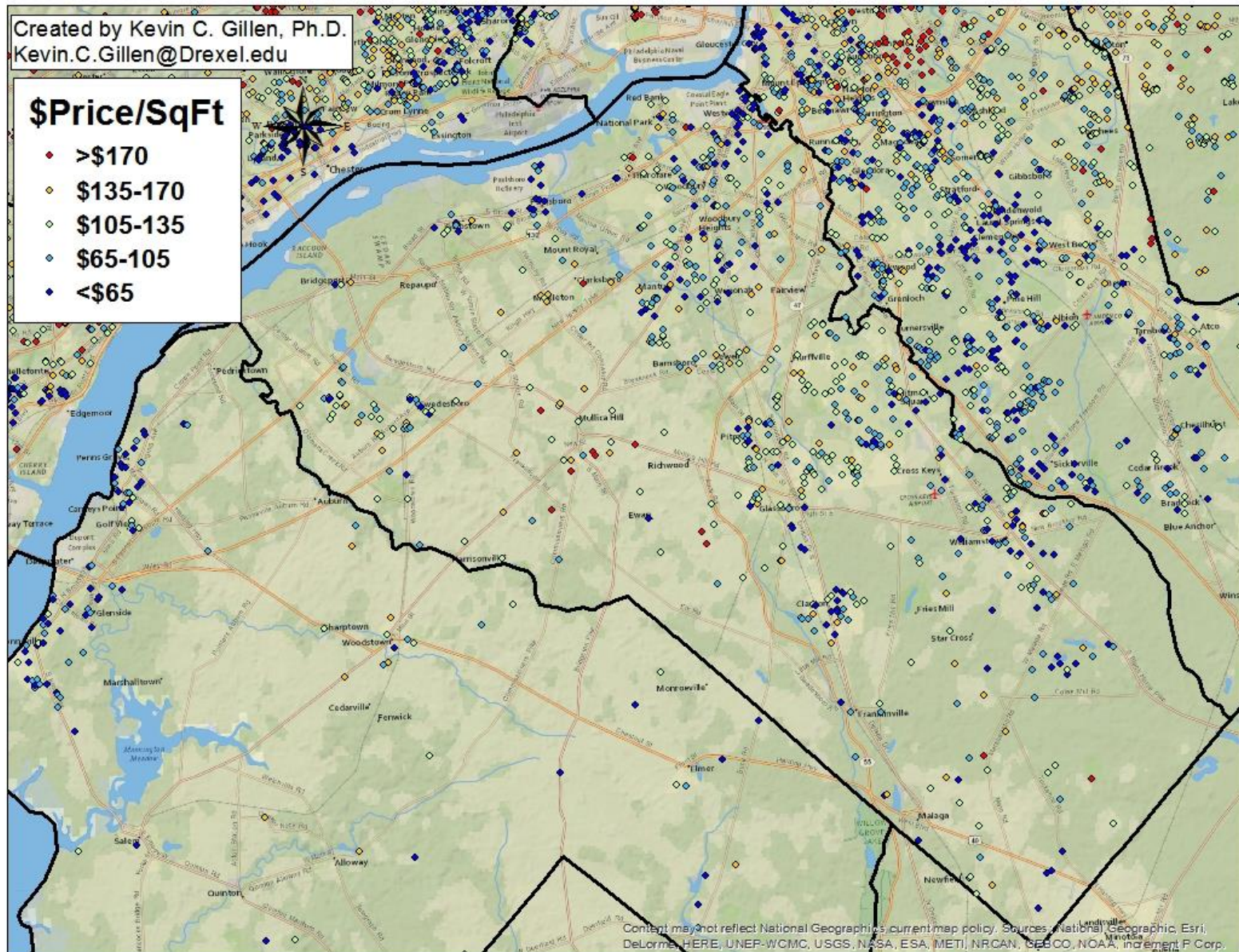
Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Gloucester County House Sales in 2017 Q1

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

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65



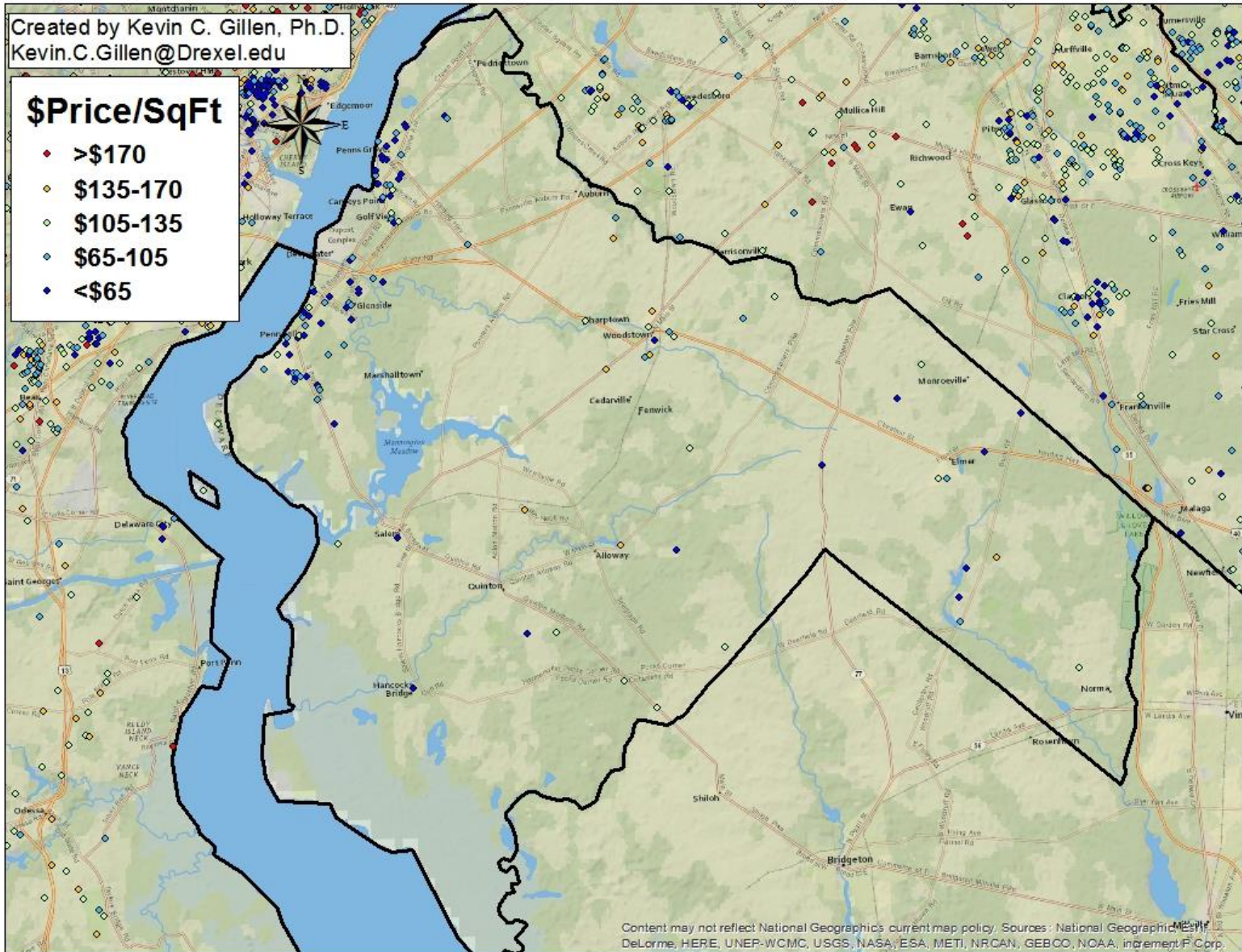
Content may not reflect National Geographic's current map policy. Sources: National Geographic Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Salem County House Sales in 2017 Q1

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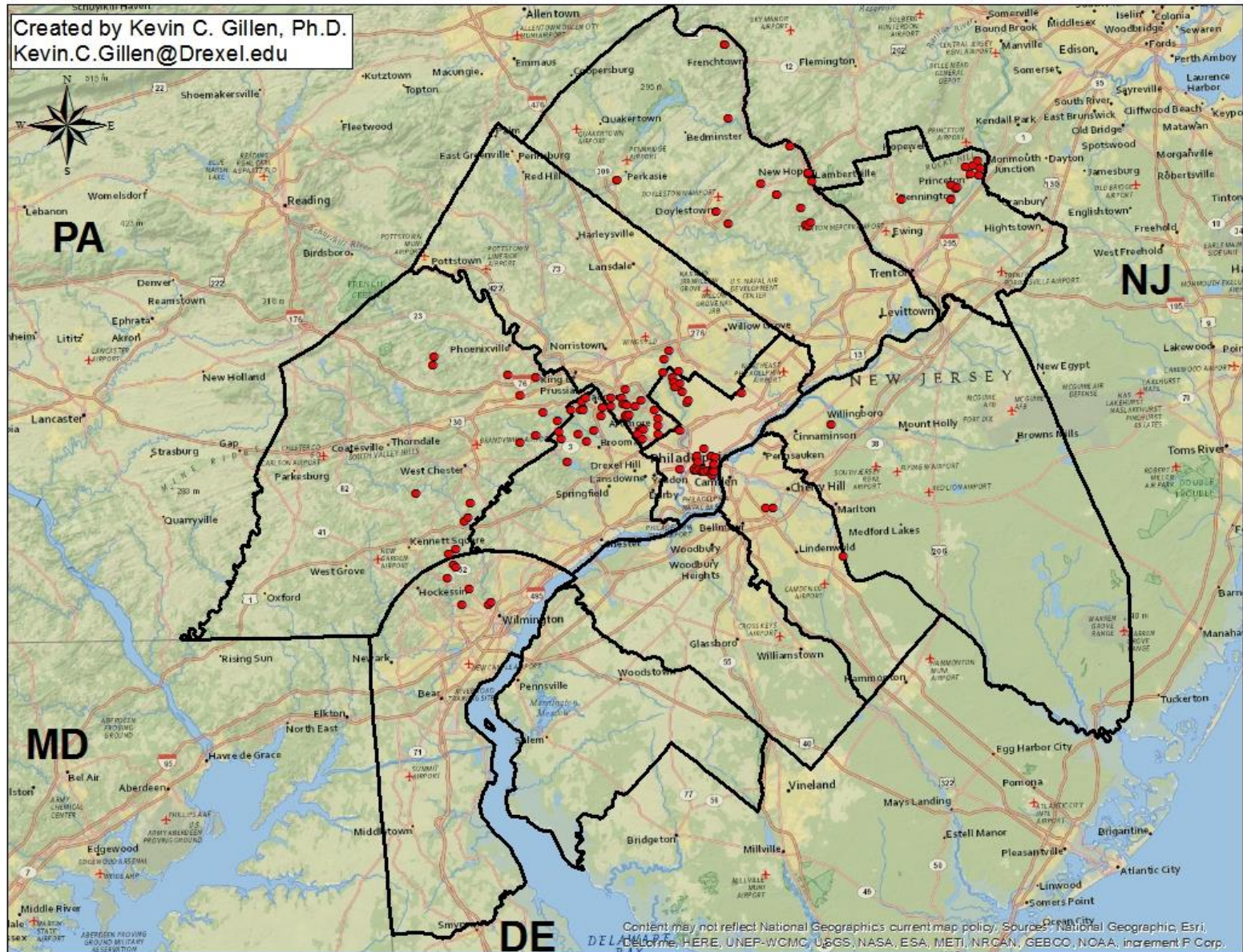
\$Price/SqFt

- ◆ >\$170
- ◆ \$135-170
- ◆ \$105-135
- ◆ \$65-105
- ◆ <\$65

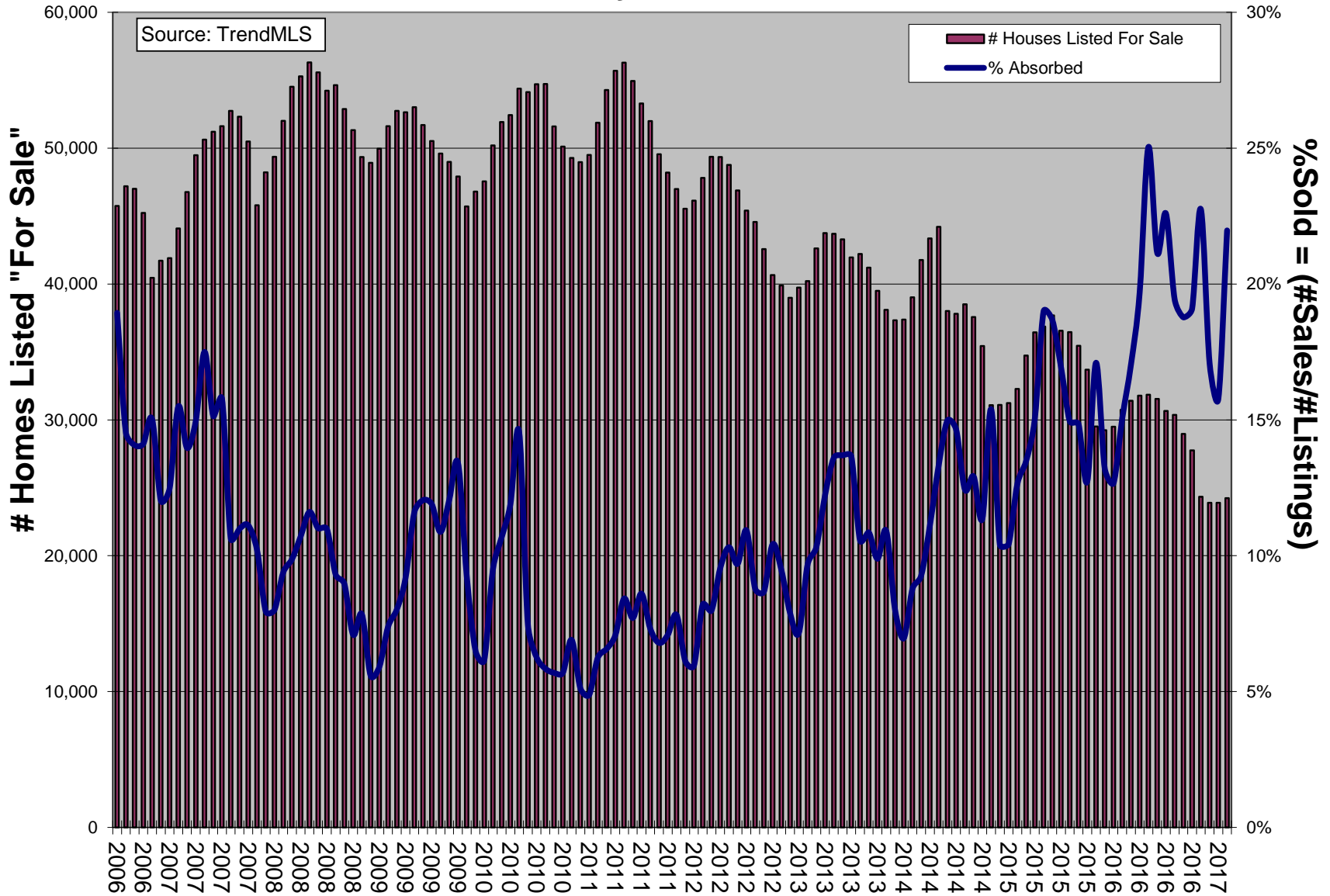


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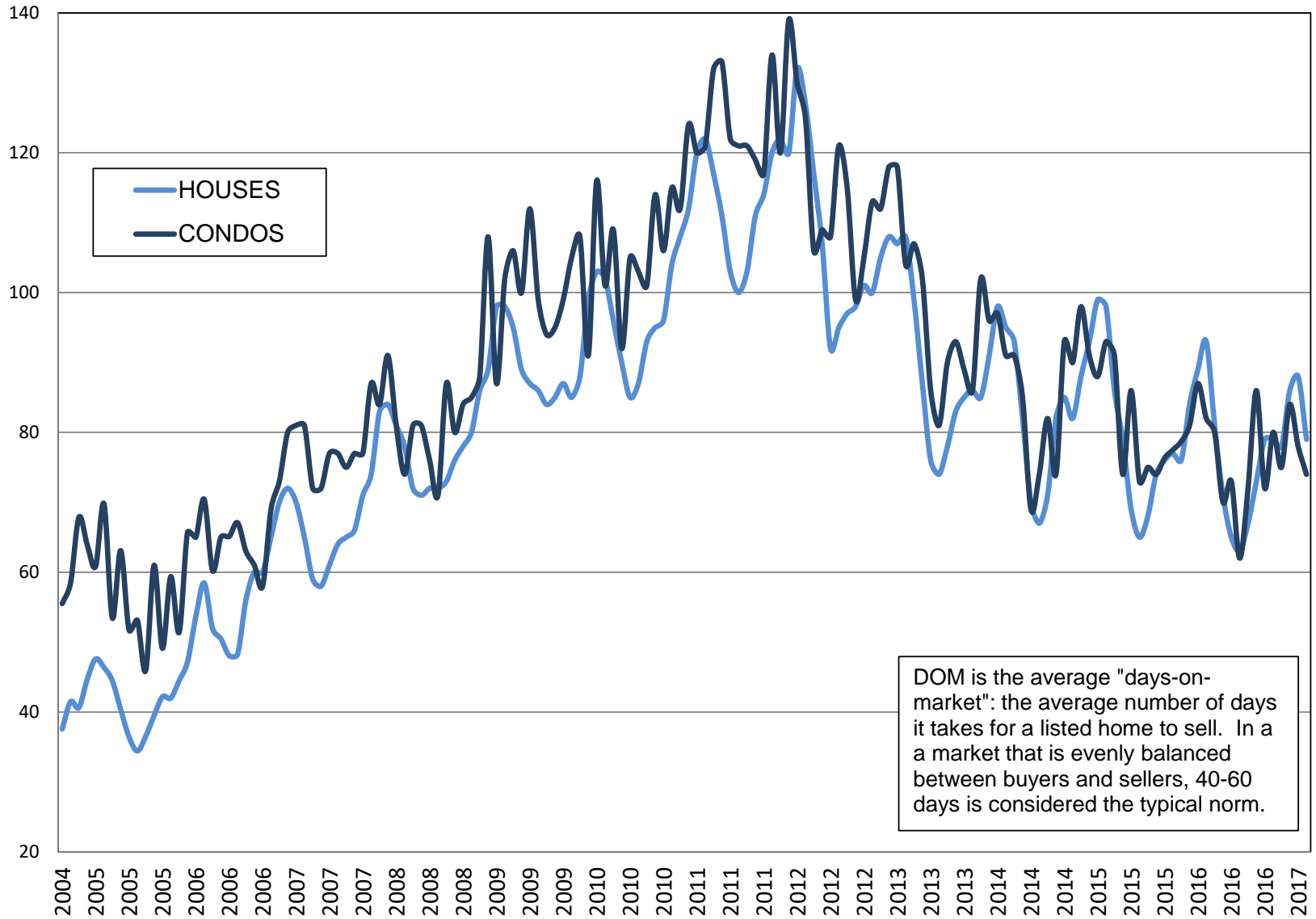
+ \$1 Million Dollar House Sales in 2017 Q1



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



Philadelphia Region Avg. DOM*: Houses v. Condos



DOM is the average "days-on-market": the average number of days it takes for a listed home to sell. In a market that is evenly balanced between buyers and sellers, 40-60 days is considered the typical norm.

Pennsylvania Foreclosure Rates

FORECLOSURE RATES FOR PENNSYLVANIA

April 2017

Pennsylvania
1 in every 1766

Top 5 Counties

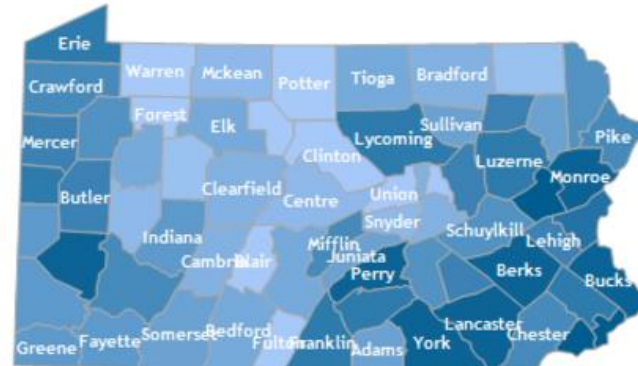
Carbon
1 in every 672

Philadelphia
1 in every 861

Delaware
1 in every 876

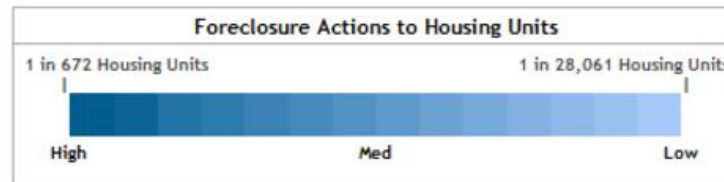
Monroe
1 in every 1005

Berks
1 in every 1049



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1 out of every 861 homes in Philadelphia is currently in the process of foreclosure, which is essentially unchanged from 1 out of every 860 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,766 homes in Pennsylvania is in the process of foreclosure, which is down from 1 out of every 1,418 homes in the previous quarter.

New Jersey Foreclosure Rates

FORECLOSURE RATES FOR NEW JERSEY

New Jersey
1 in every 560

Top 5 Counties

Atlantic
1 in every 236

Sussex
1 in every 264

Camden
1 in every 302

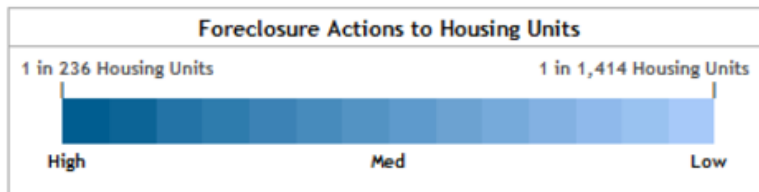
Cumberland
1 in every 304

Salem
1 in every 312



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South Jersey's foreclosure rate continues to remain the highest in the region.

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 284 homes. This is well above the statewide average of 1 in every 560 homes.

Moreover, the foreclosure rate for South Jersey rose sharply this quarter, from its previous level of 1 in every 419 homes in the previous quarter.

Delaware Foreclosure Rates

FORECLOSURE RATES FOR DELAWARE

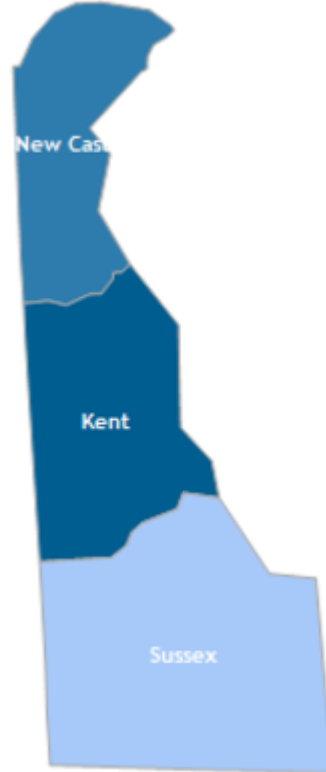
Delaware
1 in every 695

Top 3 Counties

Kent
1 in every 464

New Castle
1 in every 640

Sussex
1 in every 1183

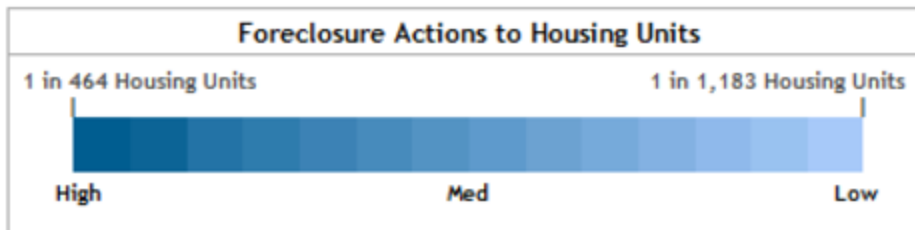


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After several quarters of improvement, Delaware's foreclosure rate rose in Q1:

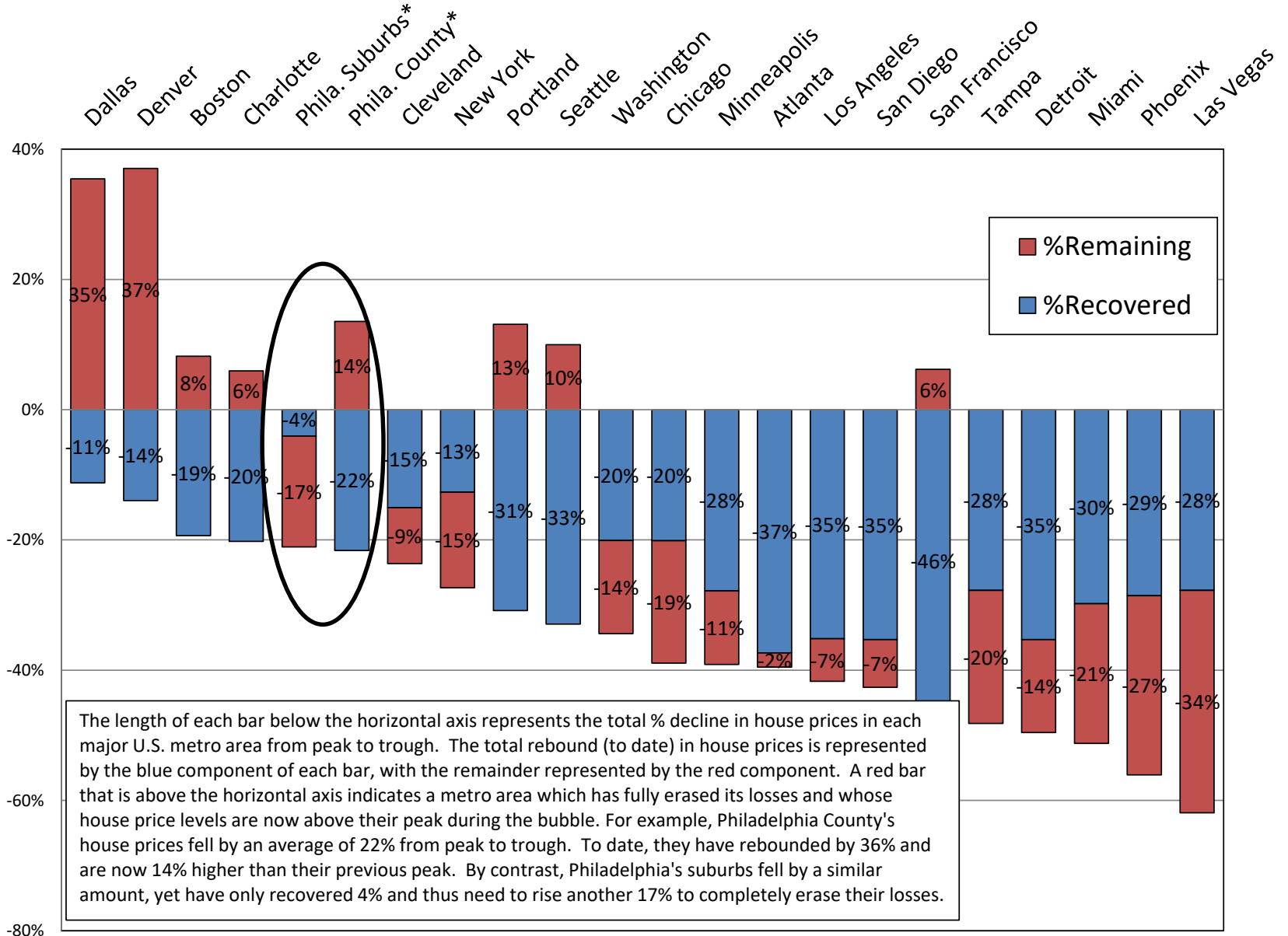
- 1 out of every 640 homes in New Castle County, up from 1 out of every 804 homes in the previous quarter.
- 1 out of every 464 homes in Kent County, up from 1 out of every 523 homes in the previous quarter.
- 1 out every 1,183 homes in Sussex County, up from 1 out of every 1,230 homes in the previous quarter.
- Statewide, the foreclosure rate increased from 1 in every 819 homes to 1 in every 695 homes.



Source: <http://www.realtytrac.com/statsandtrends/foreclosure trends/de>

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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 36% and are now 14% higher than their previous peak. By contrast, Philadelphia's suburbs fell by a similar amount, yet have only recovered 4% and thus need to rise another 17% to completely erase their losses.

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