

# *PHILADELPHIA REGIONAL HOUSE PRICE INDICES*

**December 23, 2016**



DREXEL UNIVERSITY

**Lindy Institute**  
for Urban Innovation

**KEVIN C. GILLEN, Ph.D.**

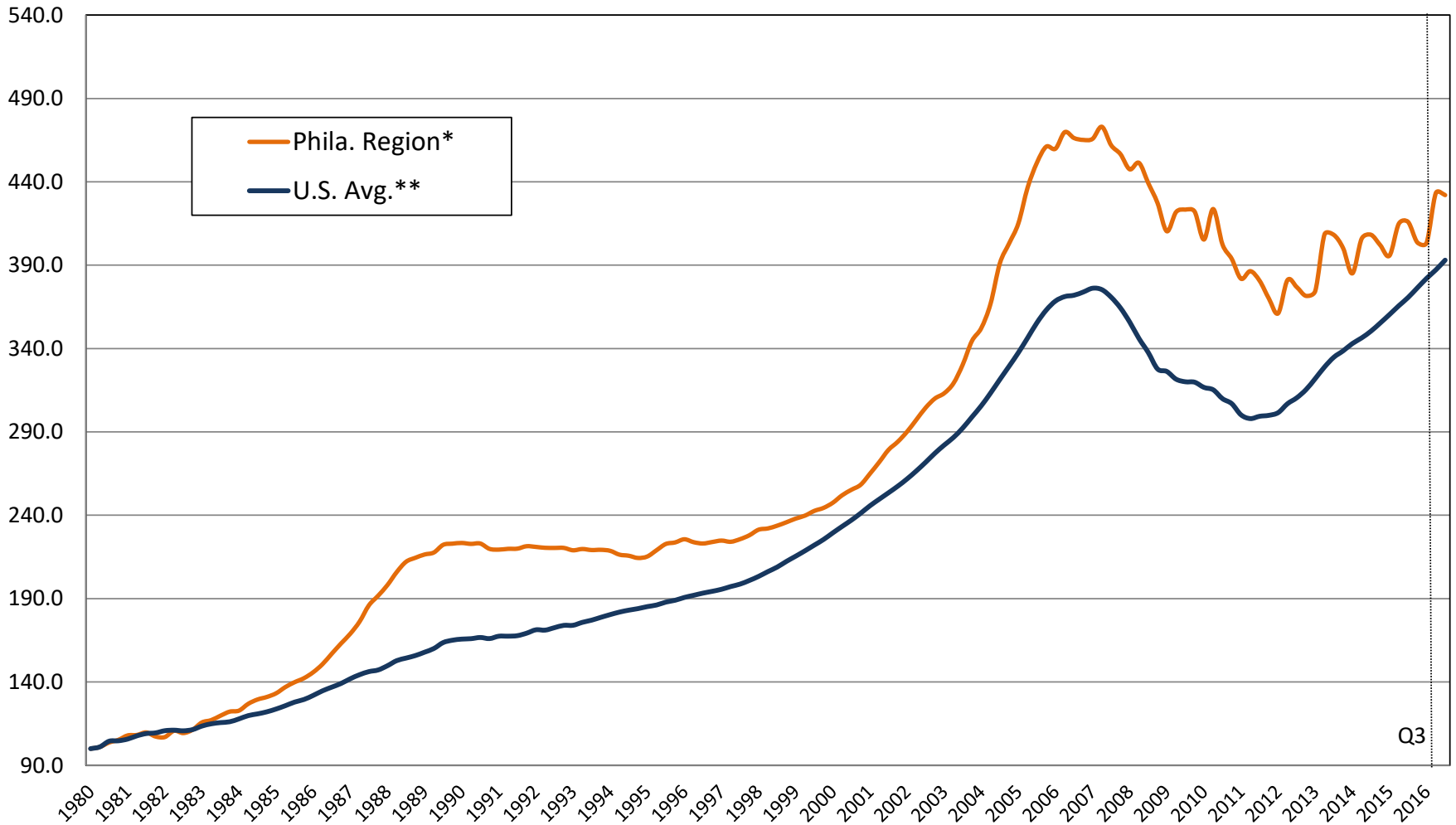
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Lindy Senior Research Fellow Kevin Gillen. The author thanks Azavea.com, 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 publicly available. © 2016, Drexel University, All Rights Reserved.*

## Philadelphia Regional House Price Indices 1980-2016

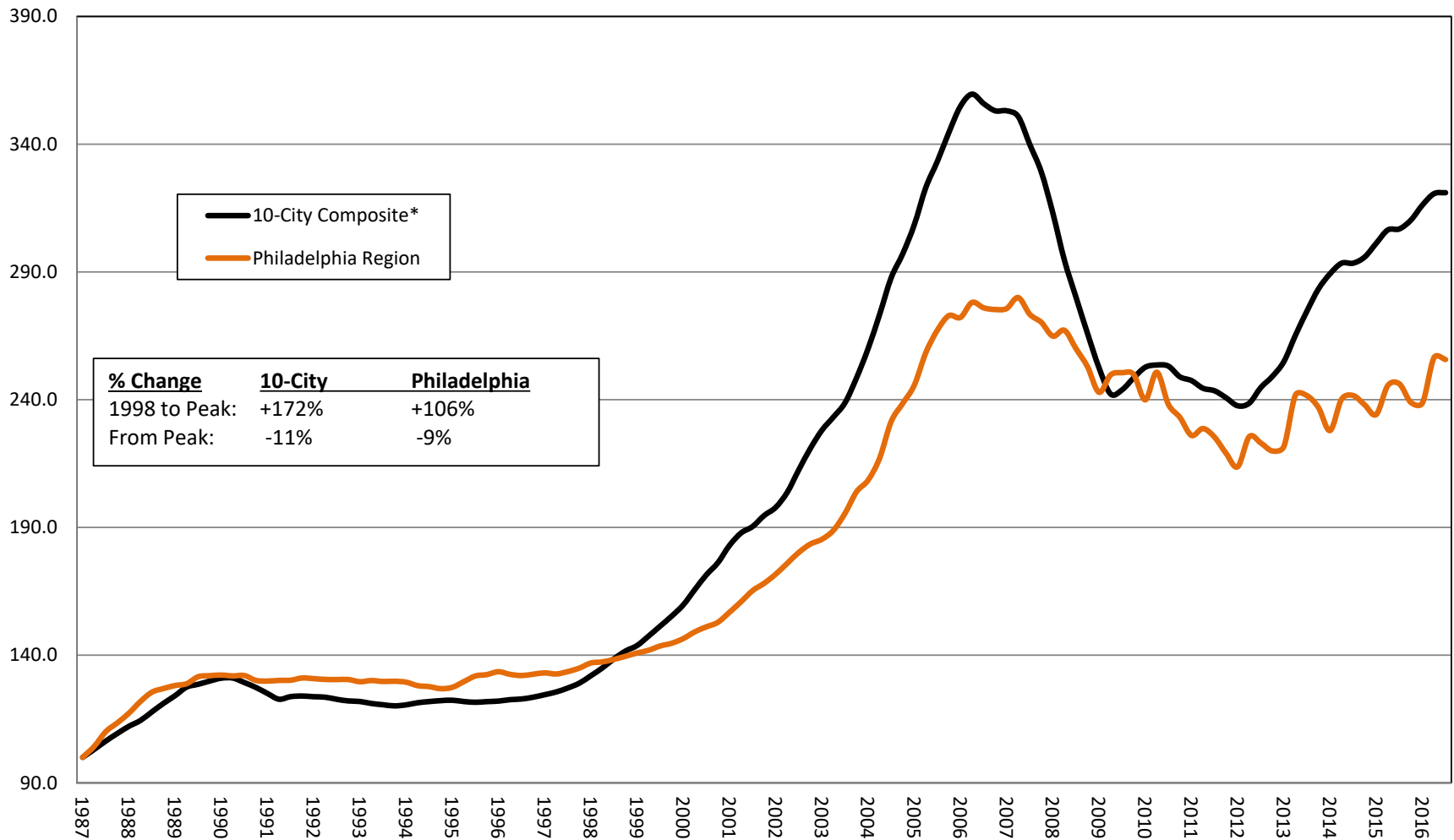
### 1980Q1=100



\*Empirically estimated by Kevin C. Gillen, PhD

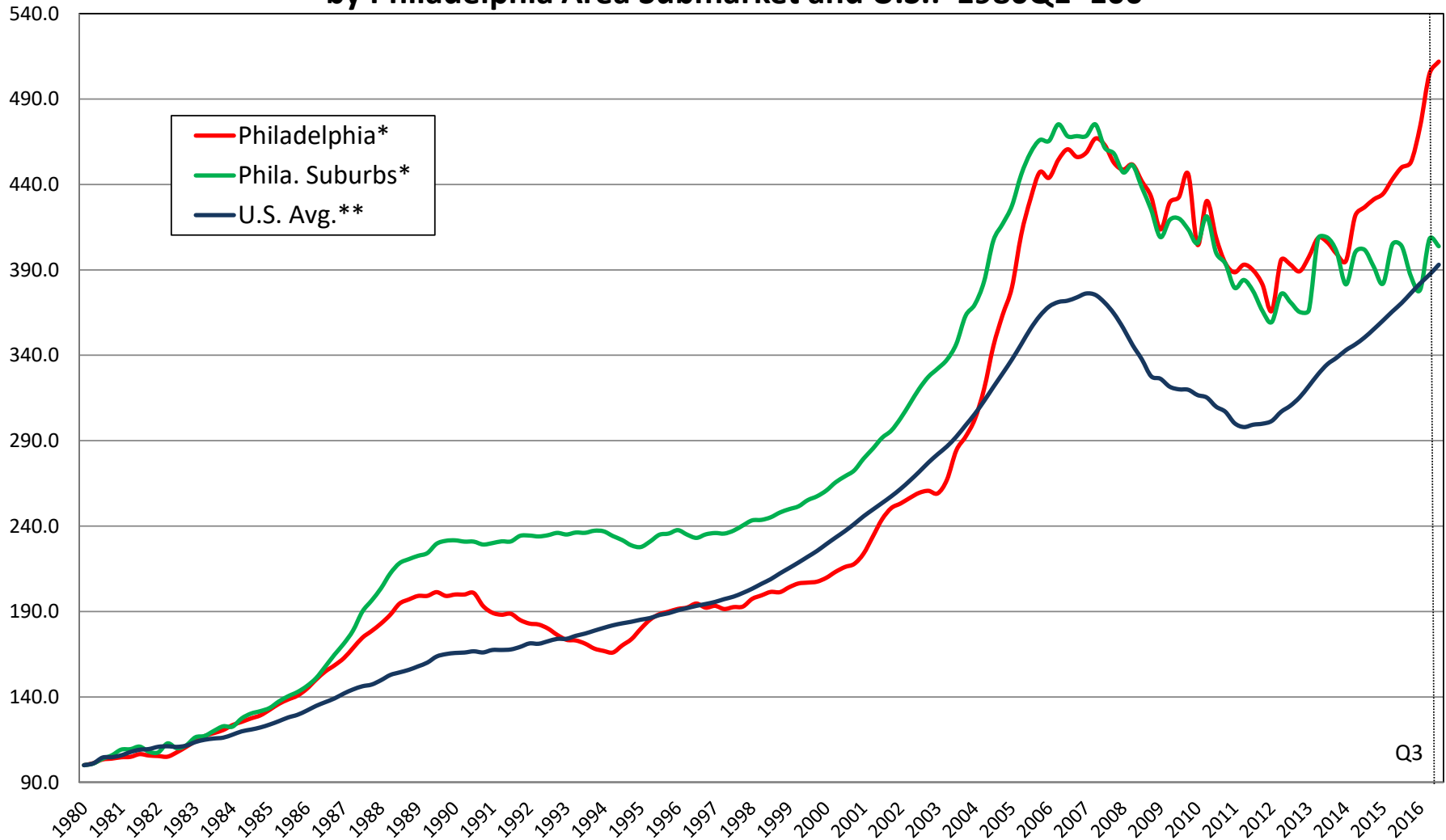
\*\*Courtesy Federal Housing Finance Agency (FHFA)

## 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 Area Submarket and U.S.: 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.

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

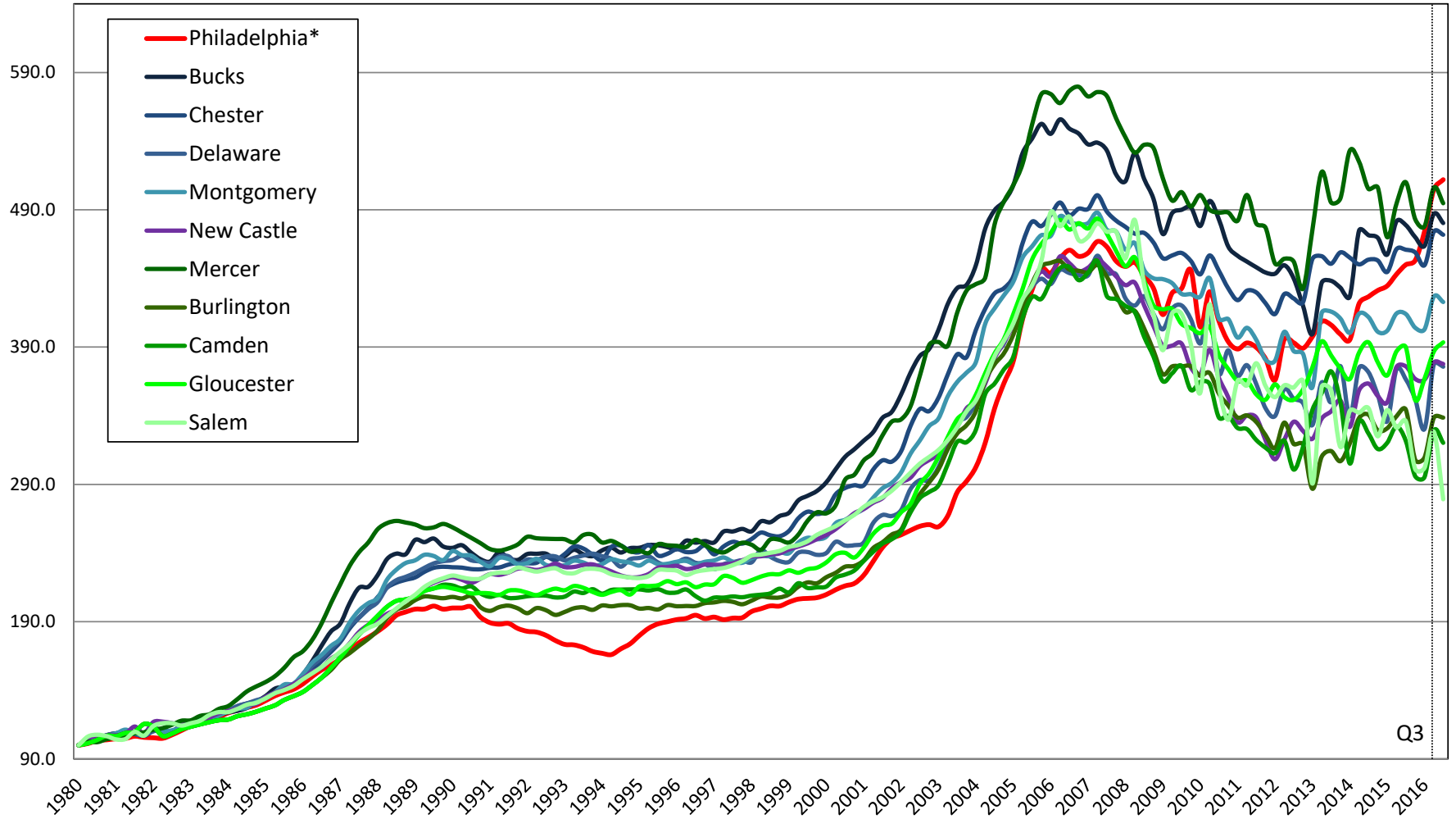
Period	Philadelphia Region*	Philadelphia County*	Philadelphia Suburbs*	U.S.A.**
37-Year	<b>146.3%</b>	<b>163.3%</b>	<b>139.6%</b>	<b>136.9%</b>
10-Year	<b>-7.6%</b>	<b>10.6%</b>	<b>-14.8%</b>	<b>5.5%</b>
1-Year	<b>3.8%</b>	<b>12.9%</b>	<b>0.0%</b>	<b>5.9%</b>
1-Quarter	<b>-0.3%</b>	<b>1.4%</b>	<b>-1.0%</b>	<b>1.5%</b>

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

\*\*Source: Federal Housing Finance Agency (FHFA). FHFA numbers are through 2016 Q3.

# Philadelphia Regional House Price Indices 1980-2016, by County

## 1980Q1=100



\*All indices empirically estimated by Kevin C. Gillen, PhD

## Philadelphia Region House Price Appreciation Rates by County

Period	Philadelphia	Bucks	Chester	Delaware	Montgomery	New Castle	Mercer	Burlington	Camden	Gloucester	Salem
37-Year	163.3%	156.9%	155.1%	132.4%	144.2%	132.9%	159.9%	122.0%	116.4%	137.0%	102.7%
10-Year	10.6%	-13.4%	-3.0%	-16.7%	-12.9%	-17.8%	-15.3%	-27.6%	-33.6%	-19.0%	-55.3%
1-Year	12.9%	0.3%	2.3%	2.5%	2.1%	0.5%	-3.0%	-1.7%	-0.4%	0.9%	-18.6%
1-Quarter	1.4%	-1.4%	-0.5%	-0.5%	-0.9%	-0.3%	-2.3%	0.0%	-2.8%	1.7%	-16.2%

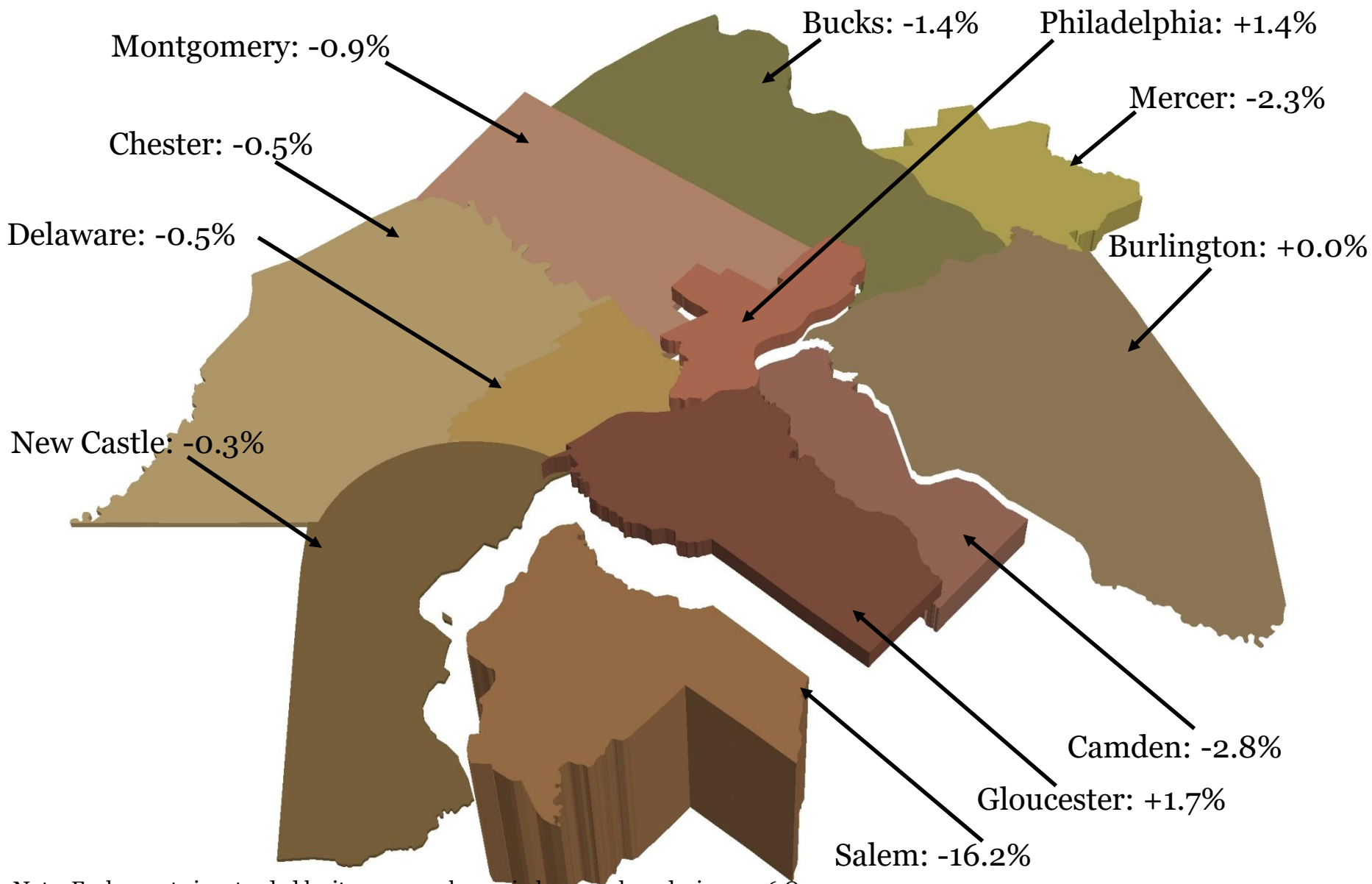
All county-level indices and appreciation rates estimated by Kevin C. Gillen, Ph.D.

# Philadelphia Region: County Boundary Definitions



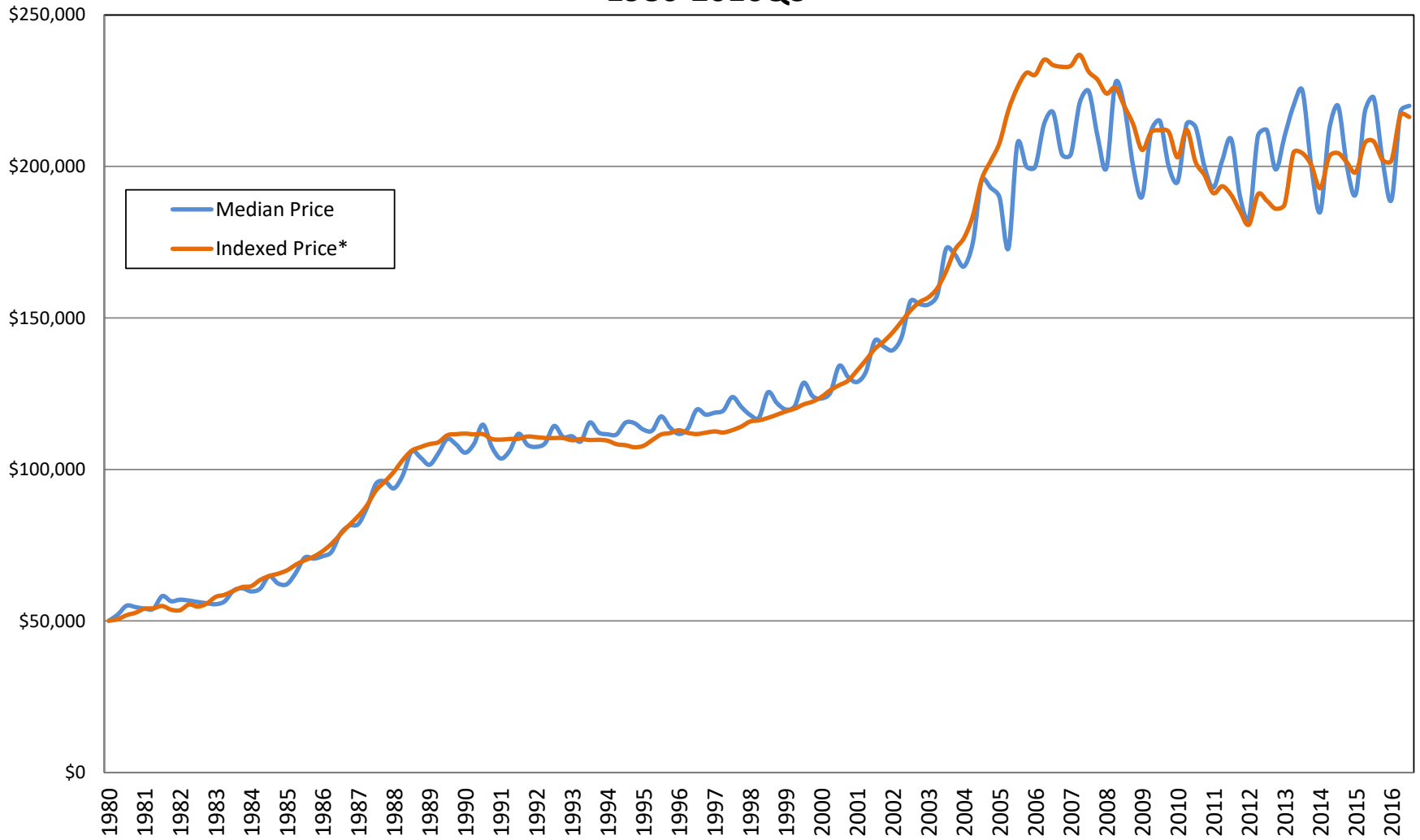


# 2016 Q3 House Price Rate of Change by County



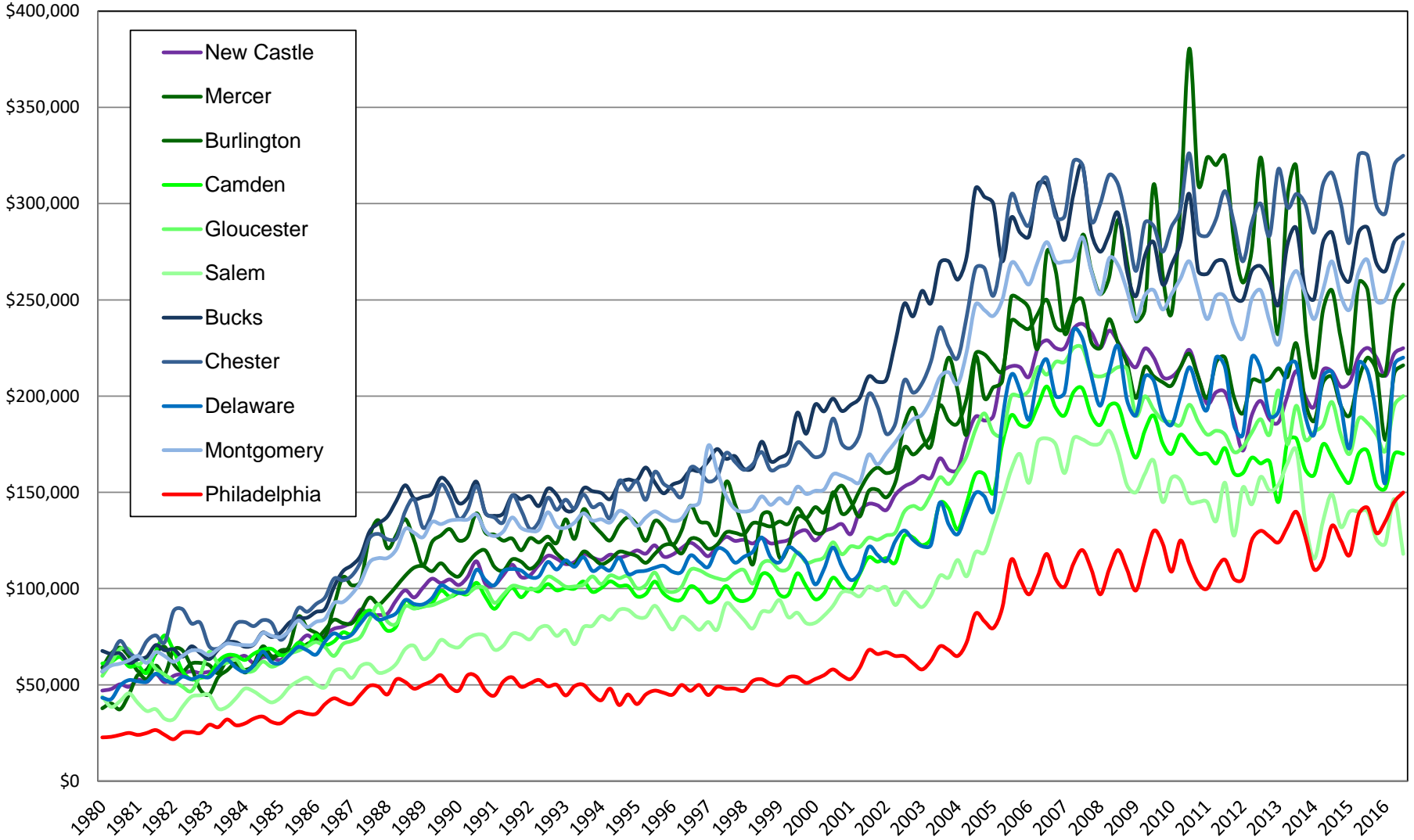
Note: Each county is extruded by its average change in house values during 2016 Q3 in order to reflect its growth (or depreciation) rate relative to other counties.

# Median Regional House Price v. Indexed Regional House Price: 1980-2016Q3

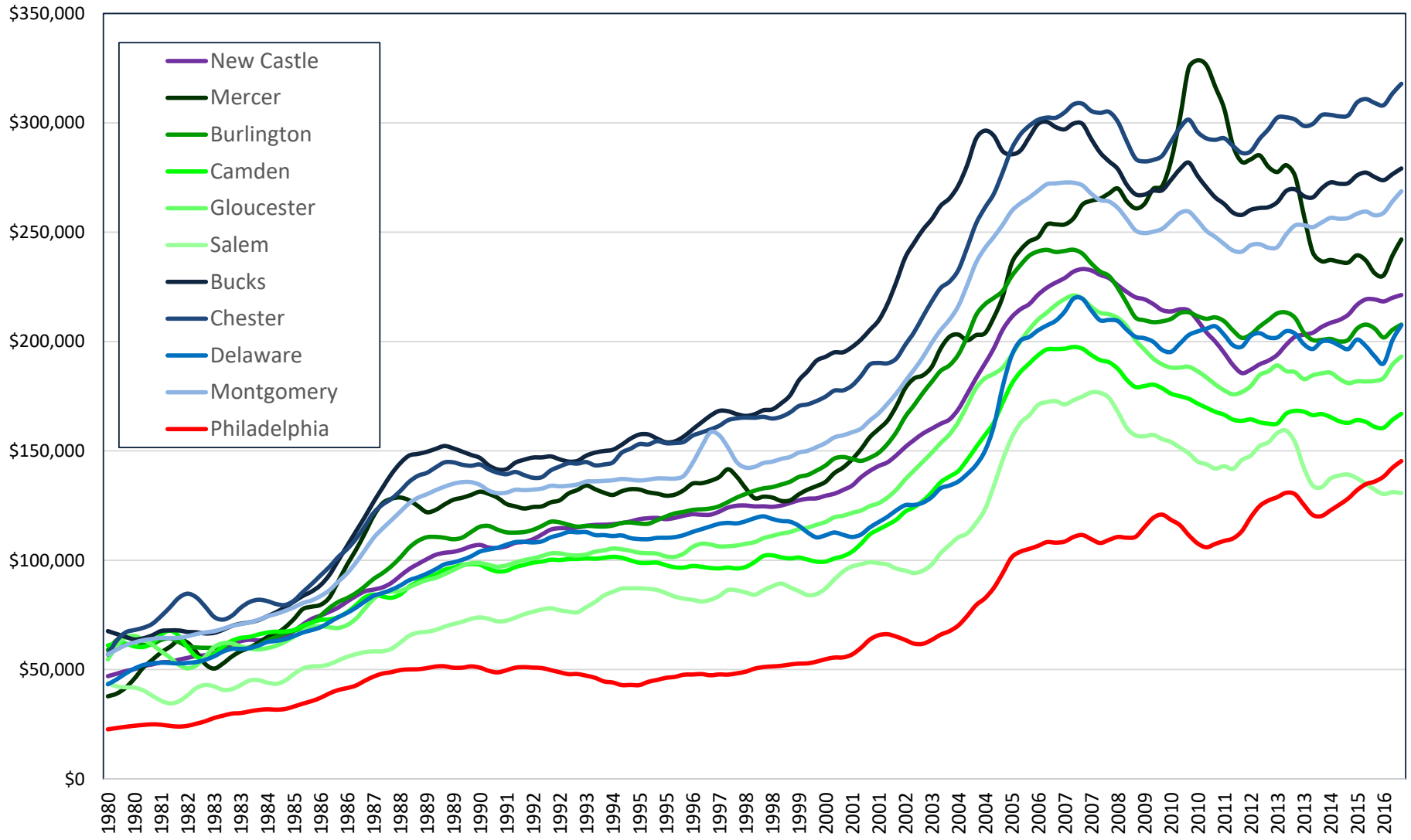


\*Empirically estimated by Kevin C. Gillen, PhD

# Median House Price by County: 1980-2016

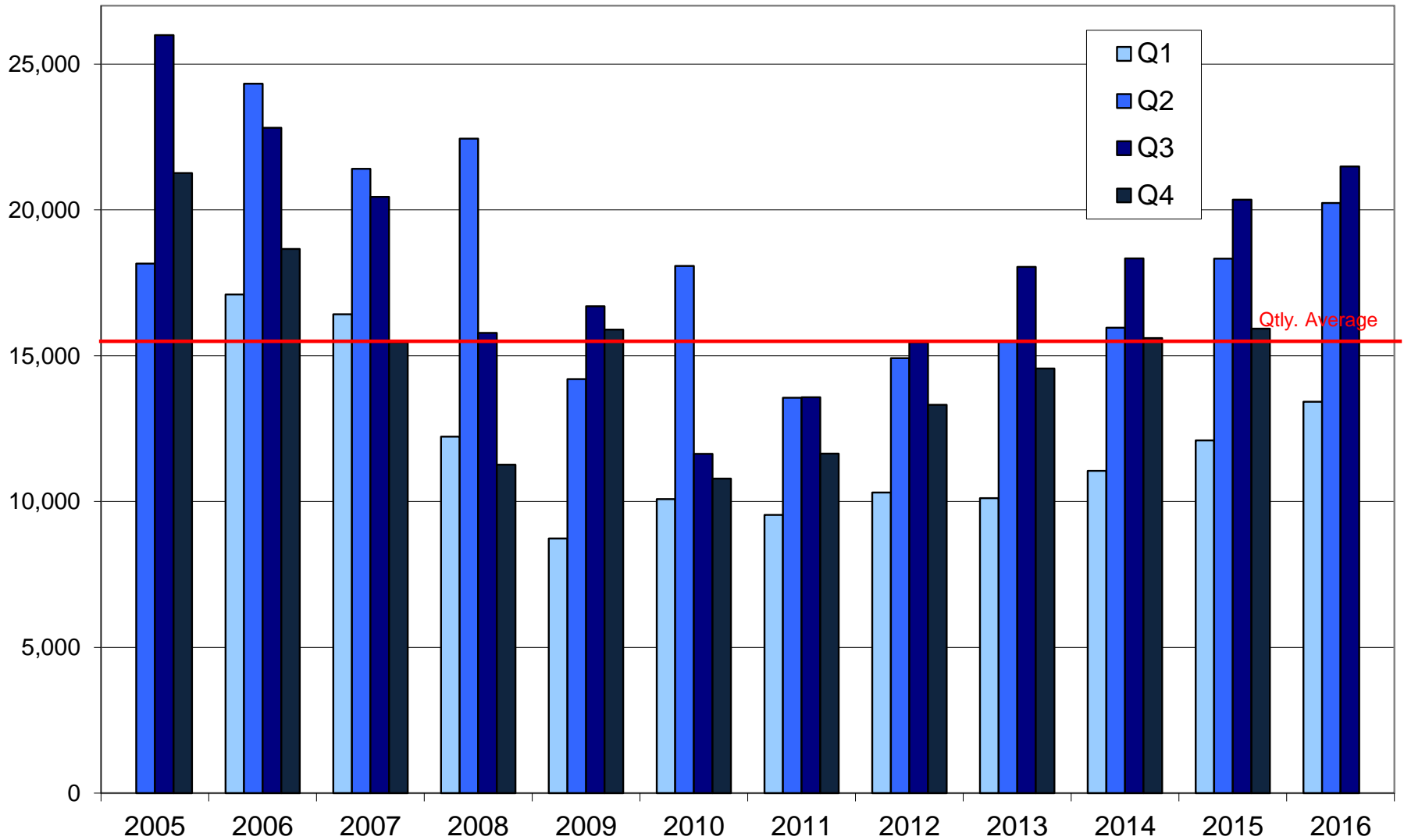


## Median House Price by County, Smoothed\*: 1980-2016

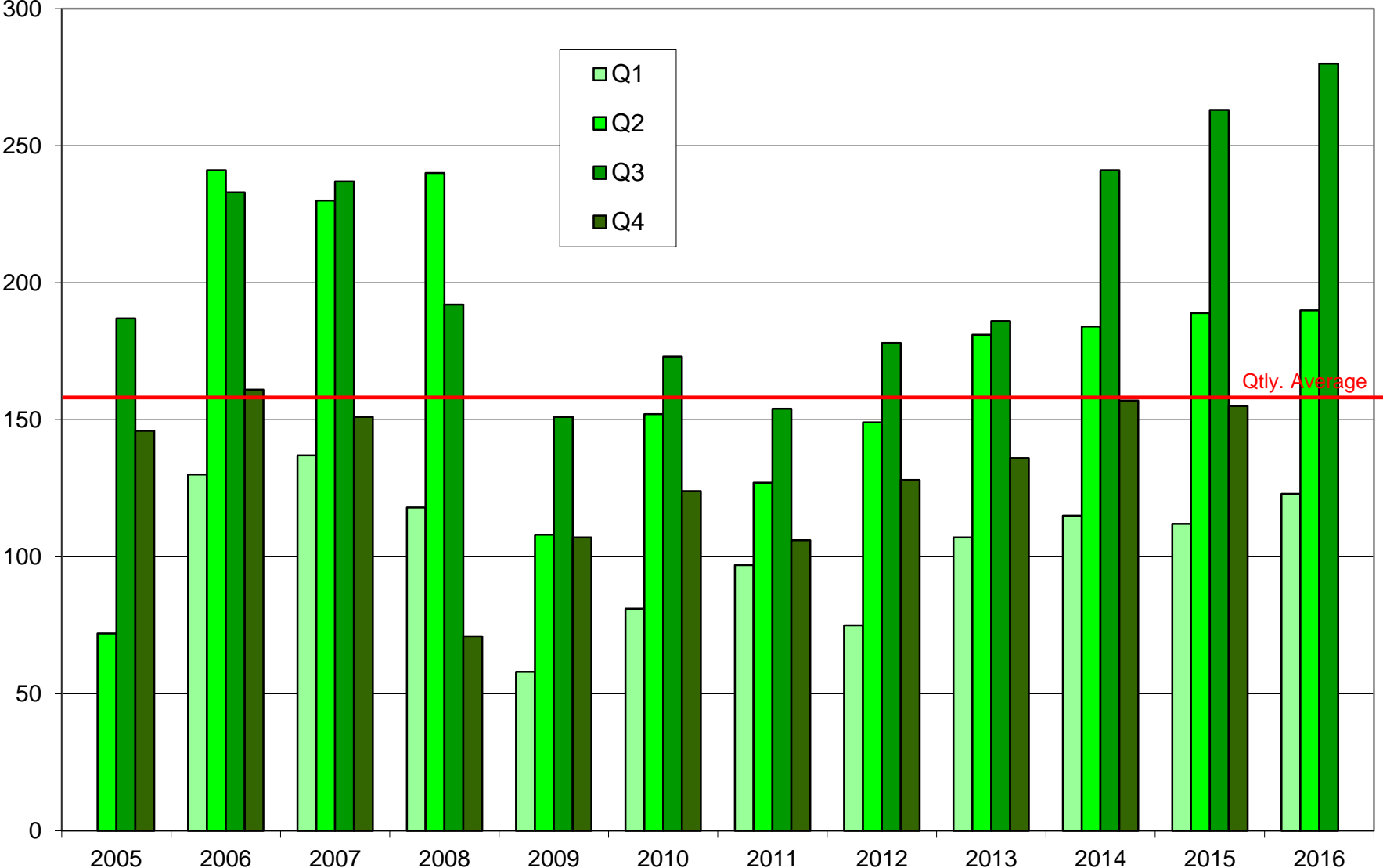


\*The price data was smoothed by applying a 3-period moving average, in order to eliminate seasonal noise.

## Number of Regional House Sales per Quarter: 2005-2016



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



Qtly. Average

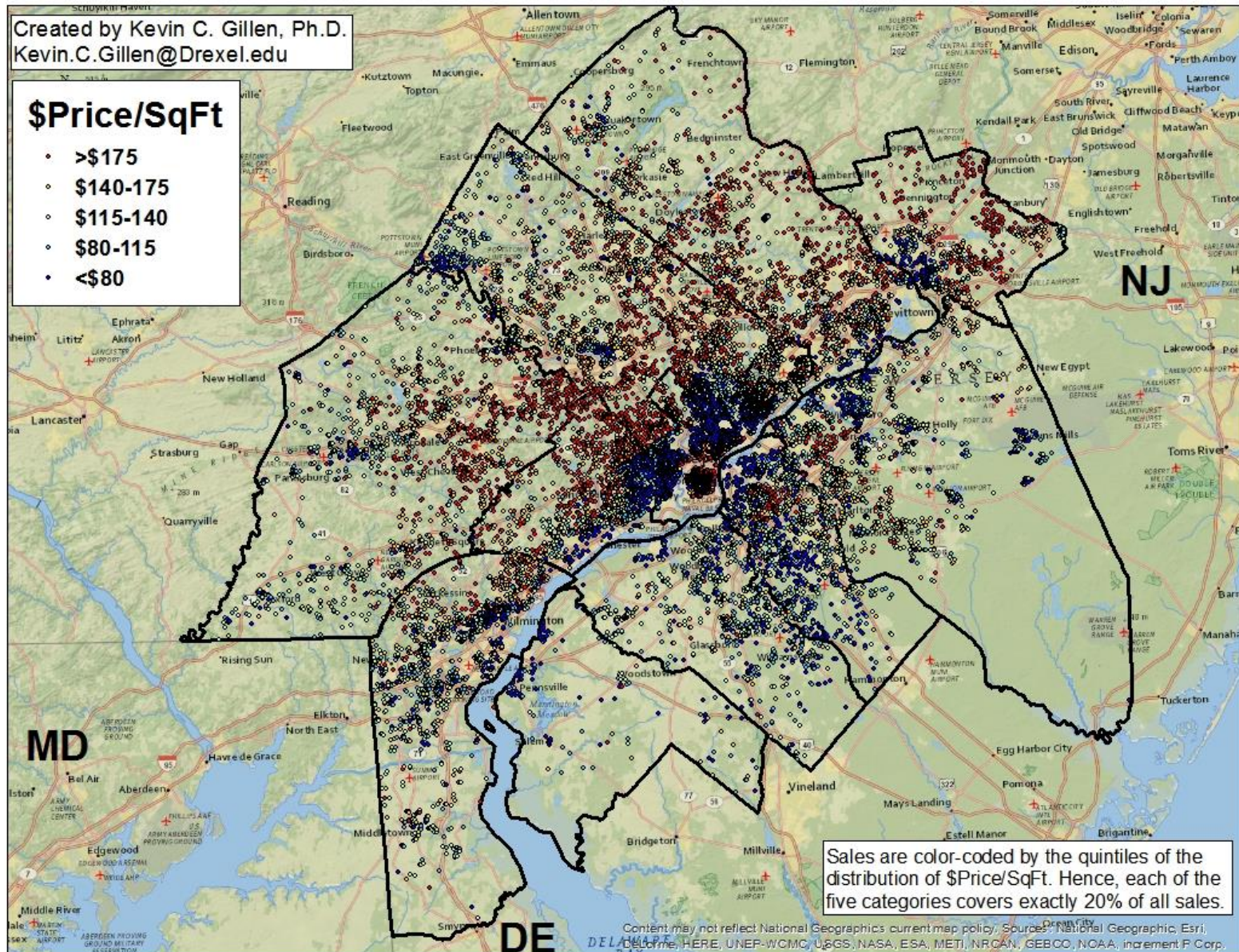


# Philadelphia Region House Sales in 2016 Q3

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

## \$Price/SqFt

- >\$175
- \$140-175
- \$115-140
- \$80-115
- <\$80



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.

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

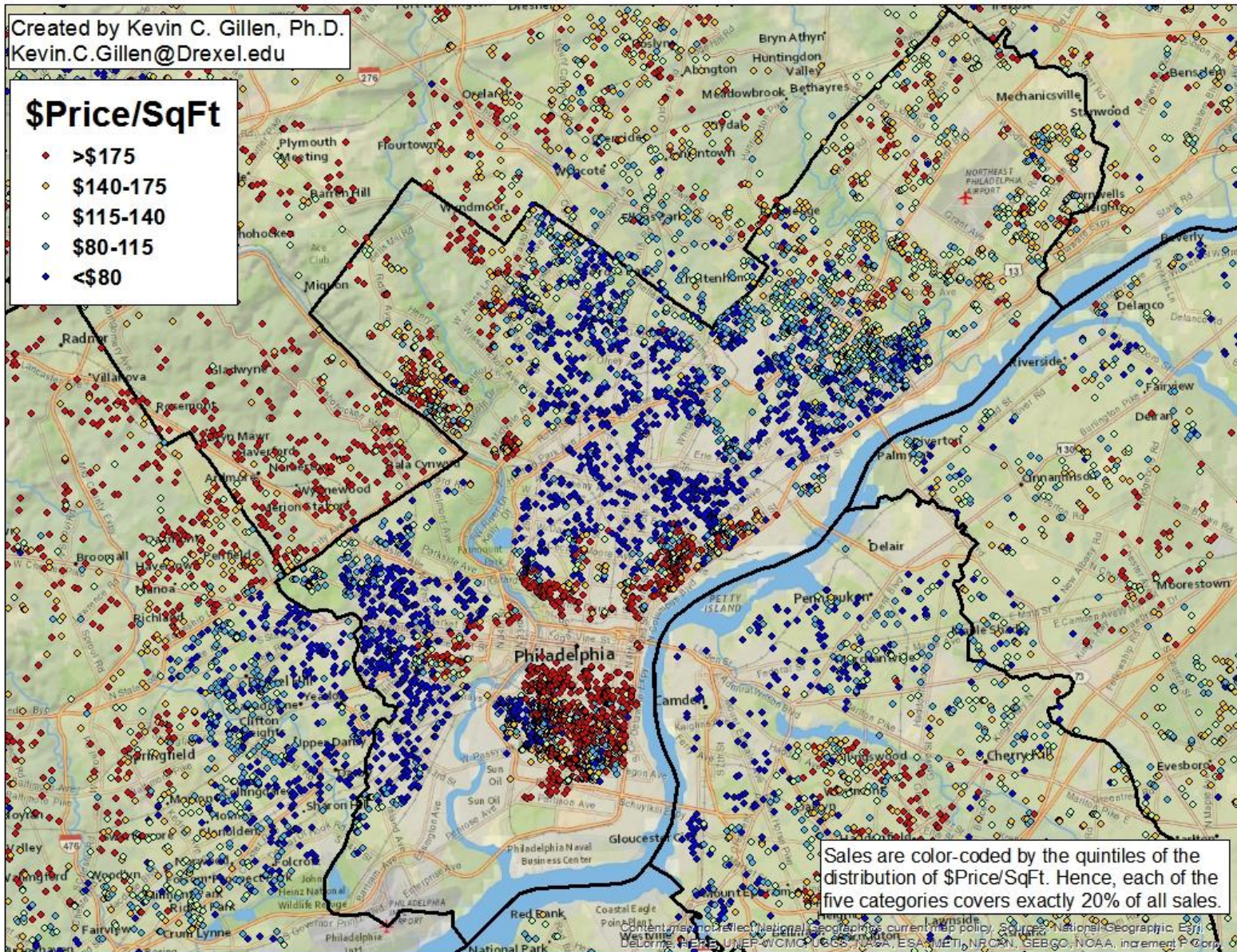


# Philadelphia County House Sales in 2016 Q3

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

- ◆ >\$175
- ◆ \$140-175
- ◆ \$115-140
- ◆ \$80-115
- ◆ <\$80



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.

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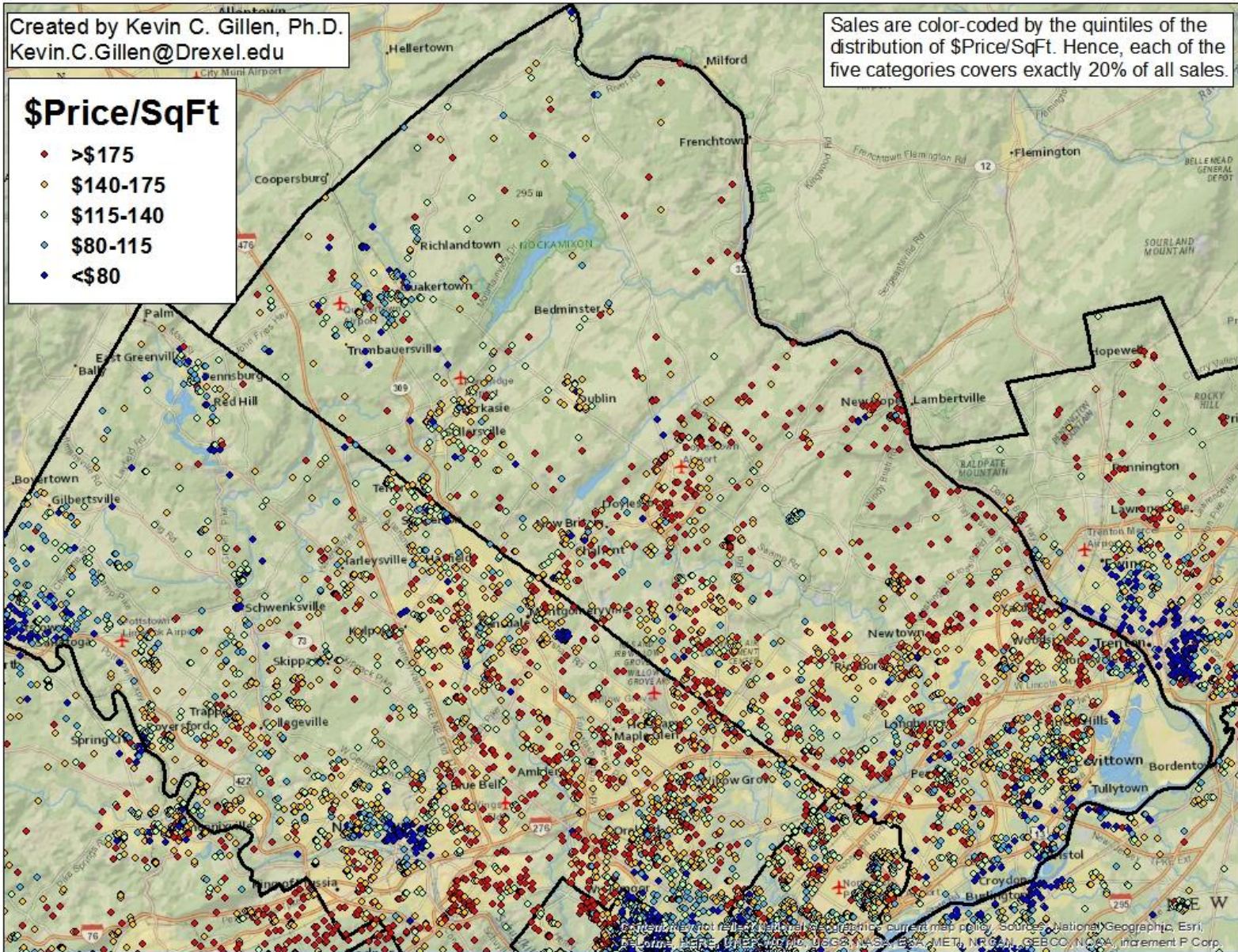
# Bucks County House Sales in 2016 Q3

Created by Kevin C. Gillen, Ph.D.  
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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

- >\$175
- ◊ \$140-175
- ◊ \$115-140
- ◊ \$80-115
- <\$80



Source: National Geographic, Esri, DeLorme, HERE, UNEP, UNIS, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



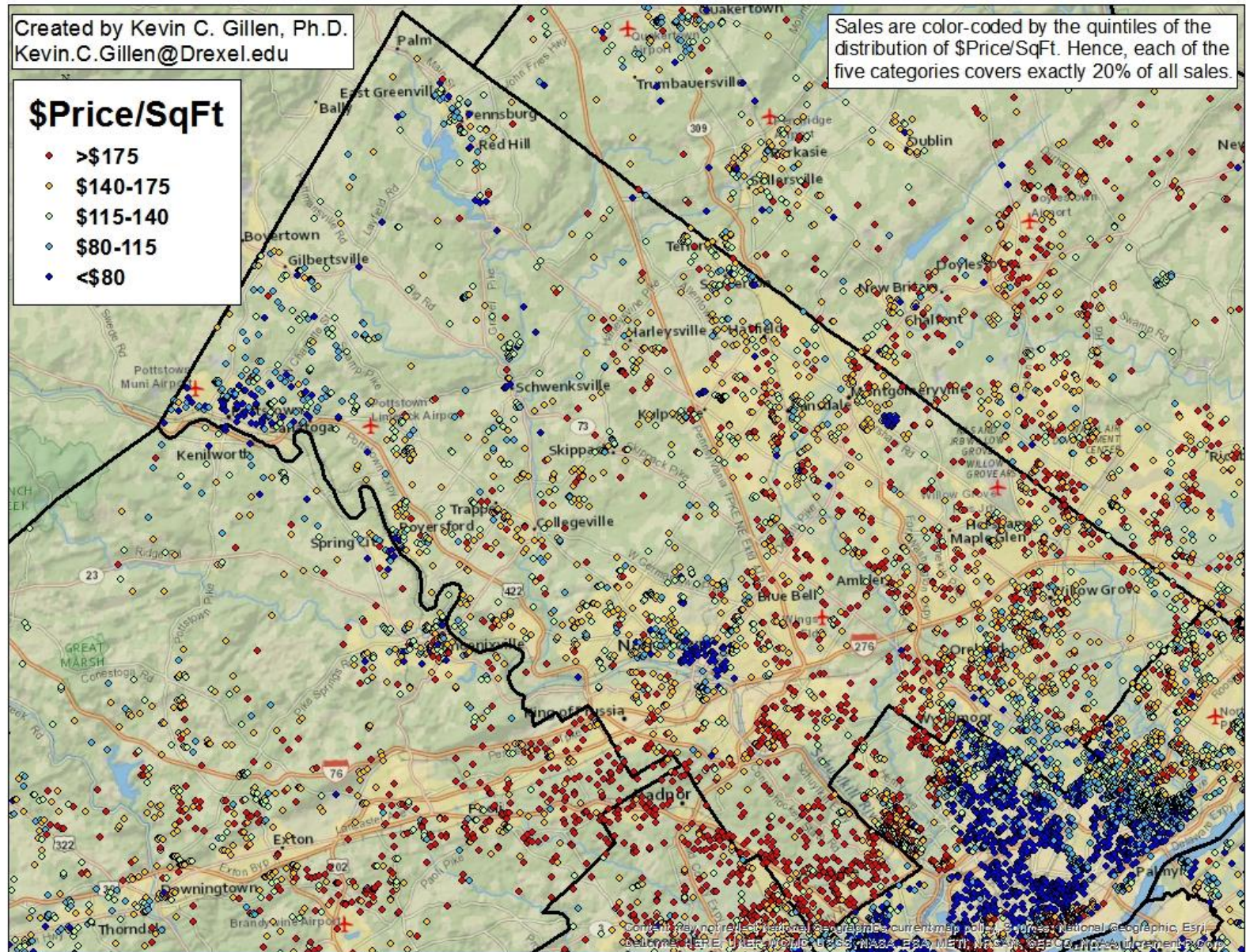
# Montgomery County House Sales in 2016 Q3

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

- ◆ >\$175
- ◆ \$140-175
- ◆ \$115-140
- ◆ \$80-115
- ◆ <\$80



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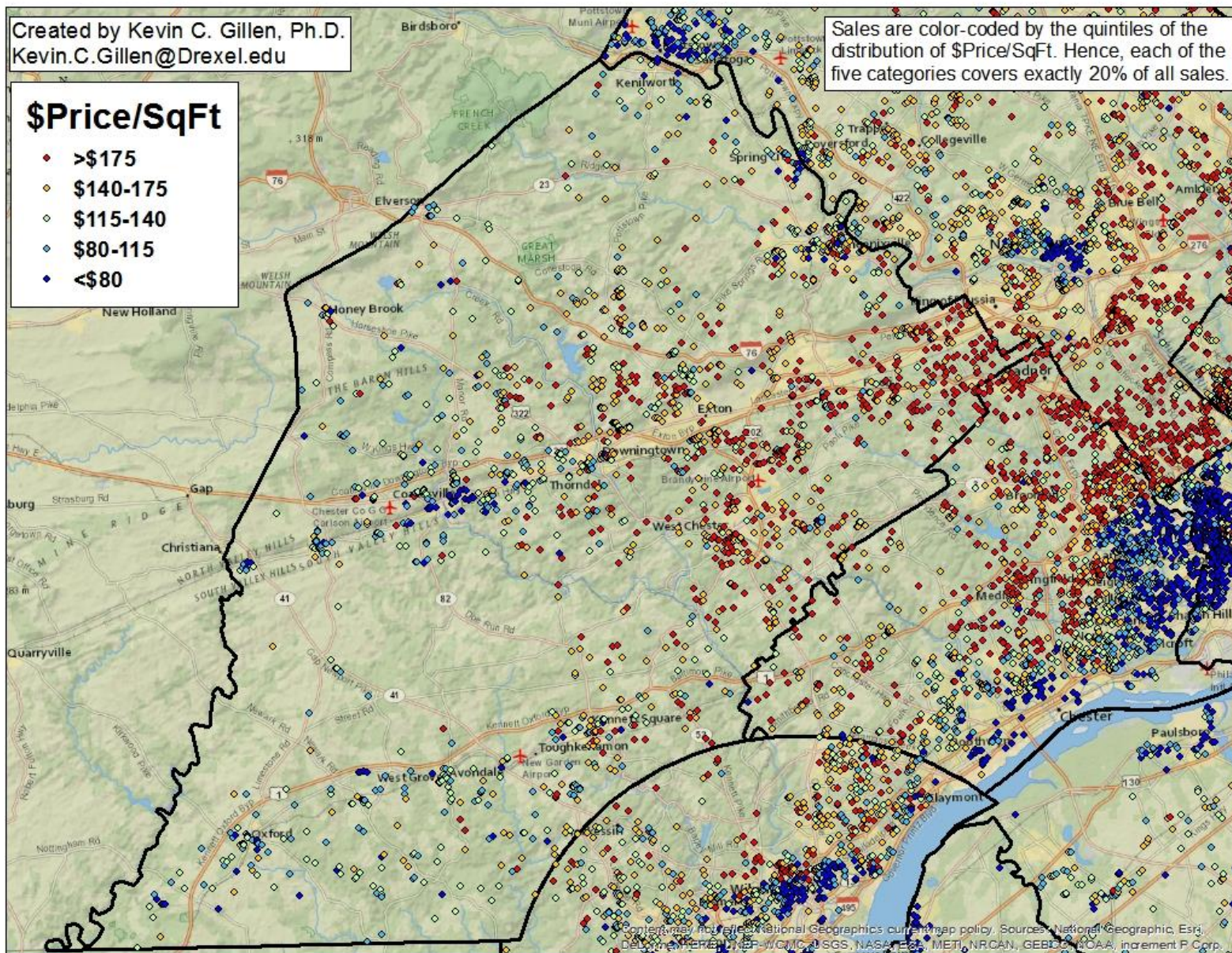


# Chester County House Sales in 2016 Q3

Created by Kevin C. Gillen, Ph.D.  
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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**
- ◆ >\$175
  - ◆ \$140-175
  - ◆ \$115-140
  - ◆ \$80-115
  - ◆ <\$80



Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, AeroGraphic, Mapbox, OpenStreetMap contributors, Swatch, NOAA, GEBCO, USGS, NOAA, increment P Corp.



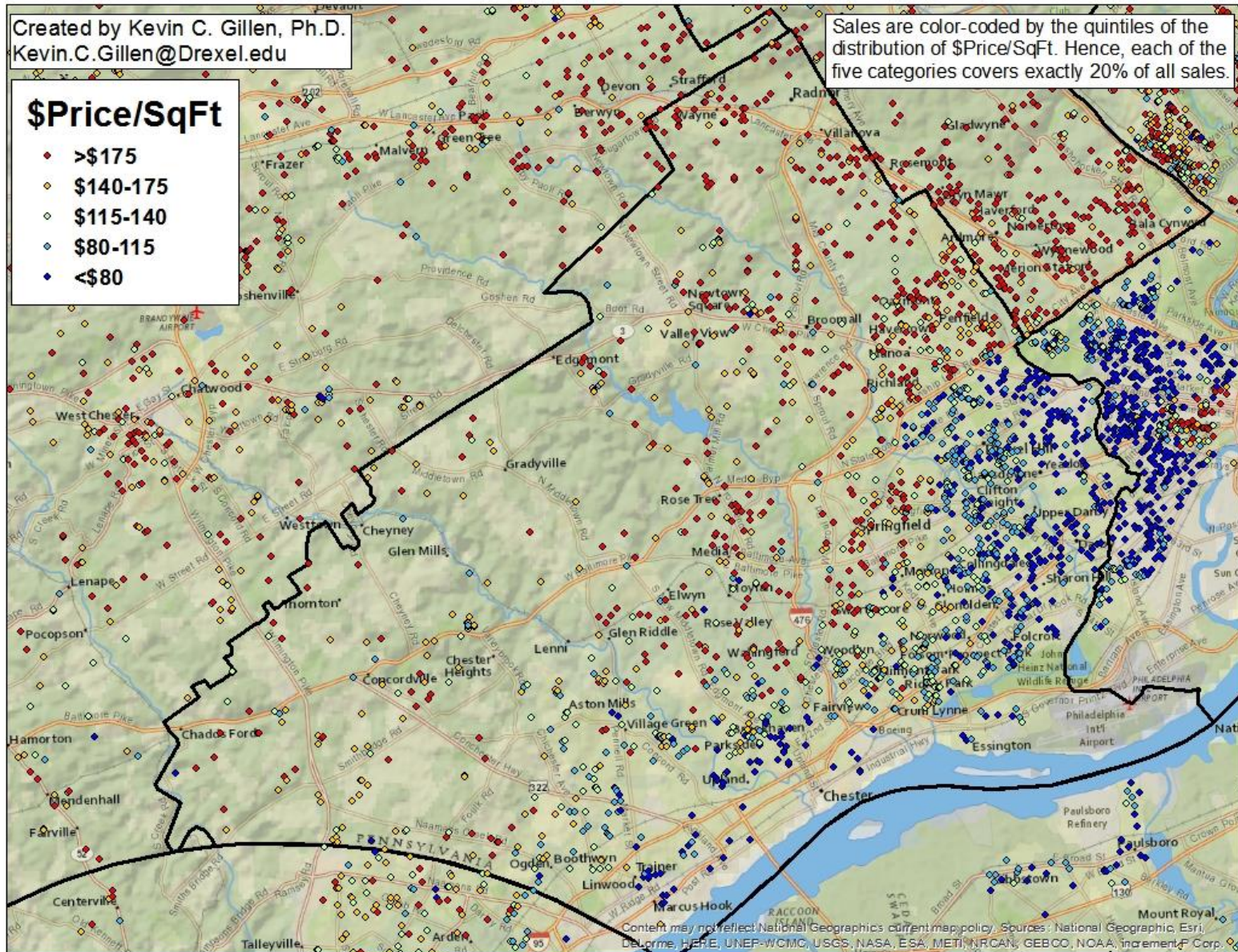
# Delaware County House Sales in 2016 Q3

Created by Kevin C. Gillen, Ph.D.  
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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

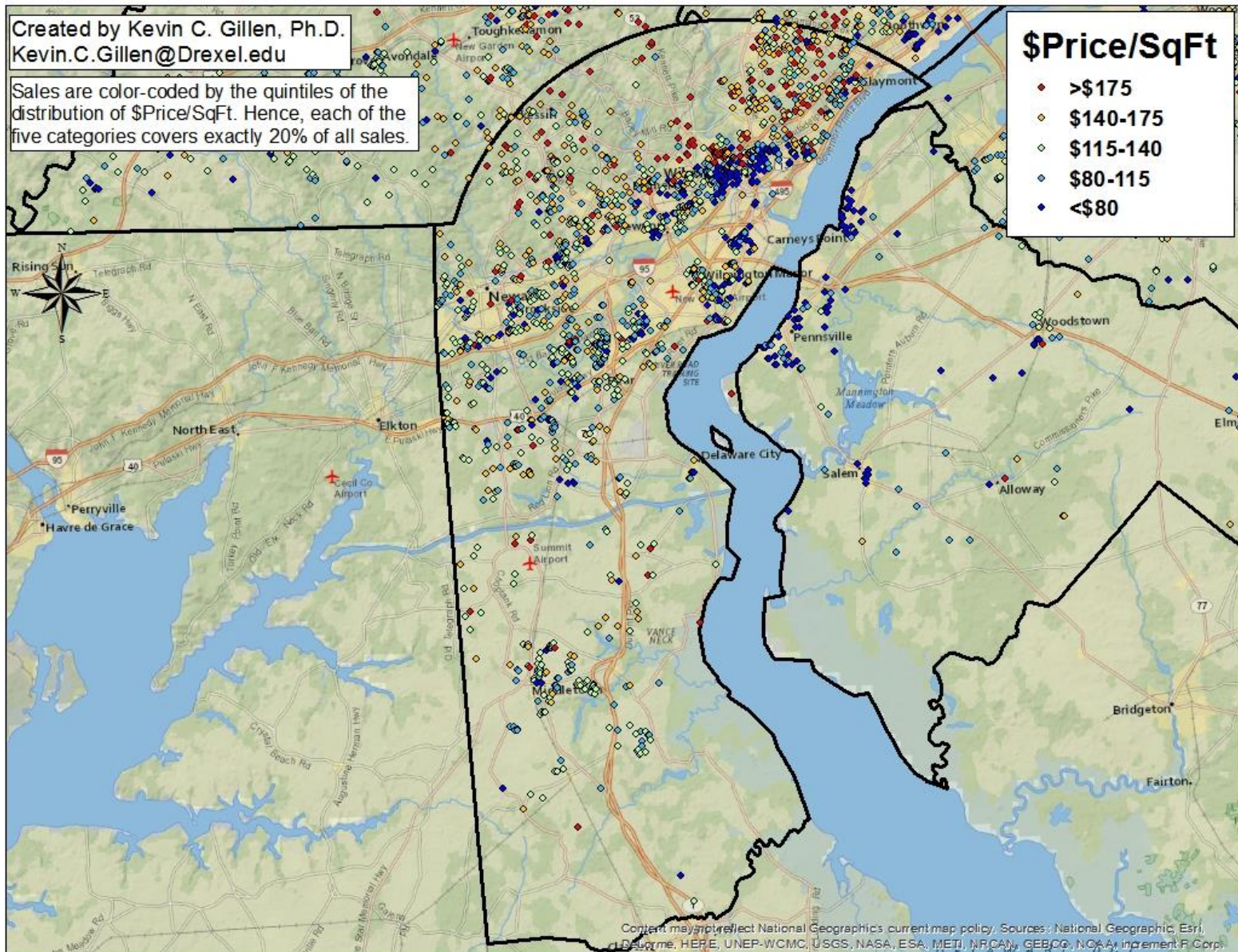
- ◆ >\$175
- ◆ \$140-175
- ◆ \$115-140
- ◆ \$80-115
- ◆ <\$80



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, incrementP Corp.



# New Castle County House Sales in 2016 Q3





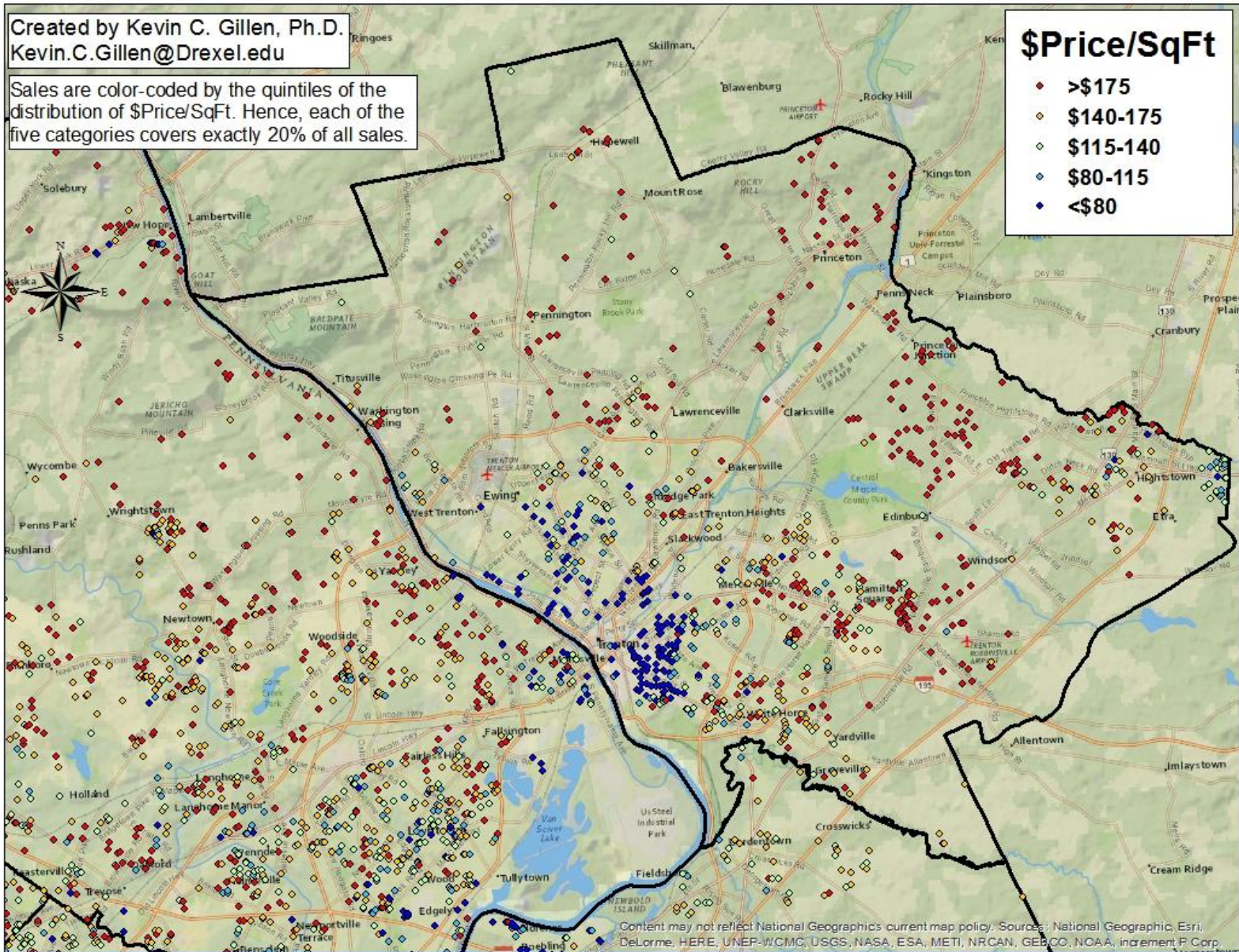
# Mercer County House Sales in 2016 Q3

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

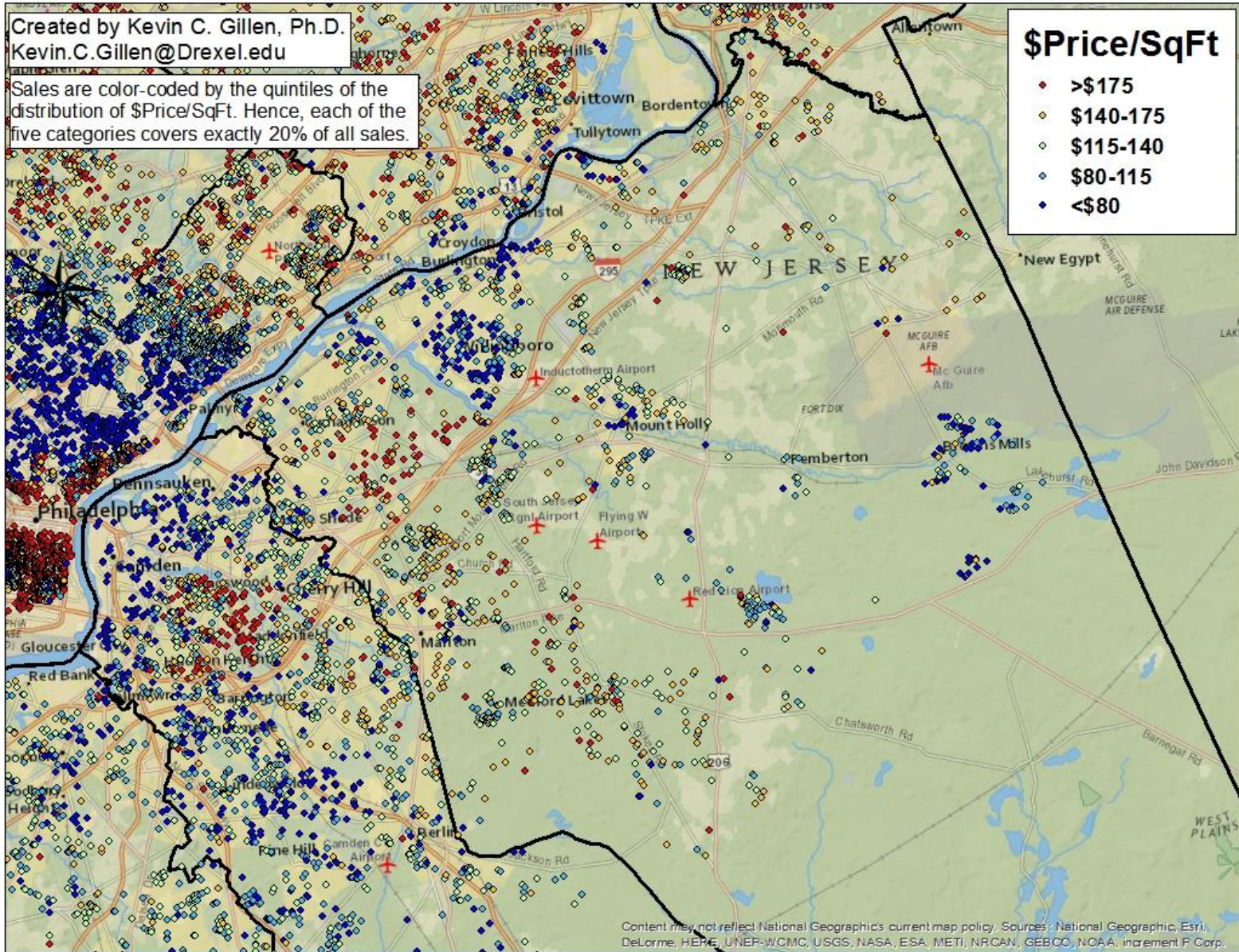
- ◆ >\$175
- ◆ \$140-175
- ◆ \$115-140
- ◆ \$80-115
- ◆ <\$80



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.

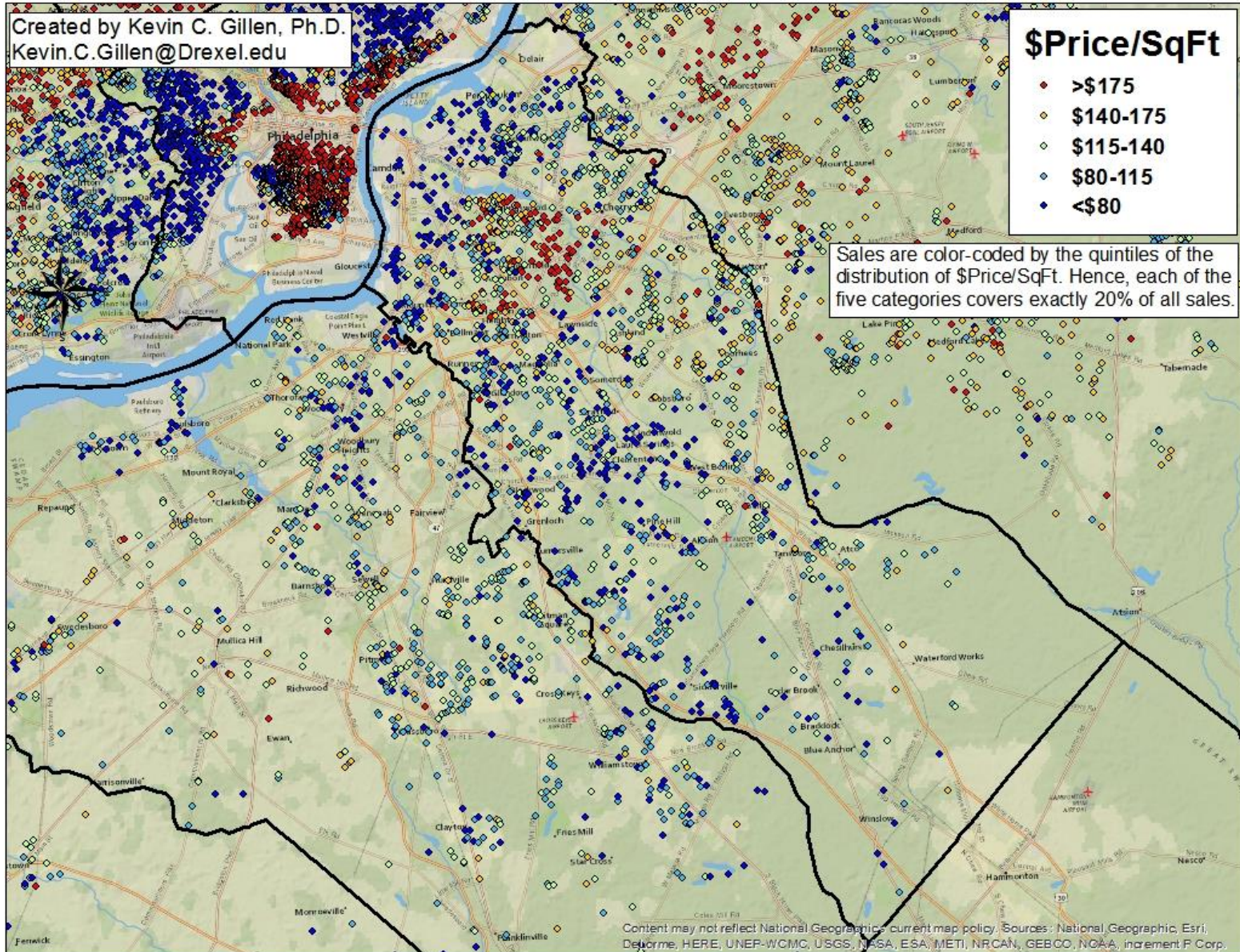


# Burlington County House Sales in 2016 Q3



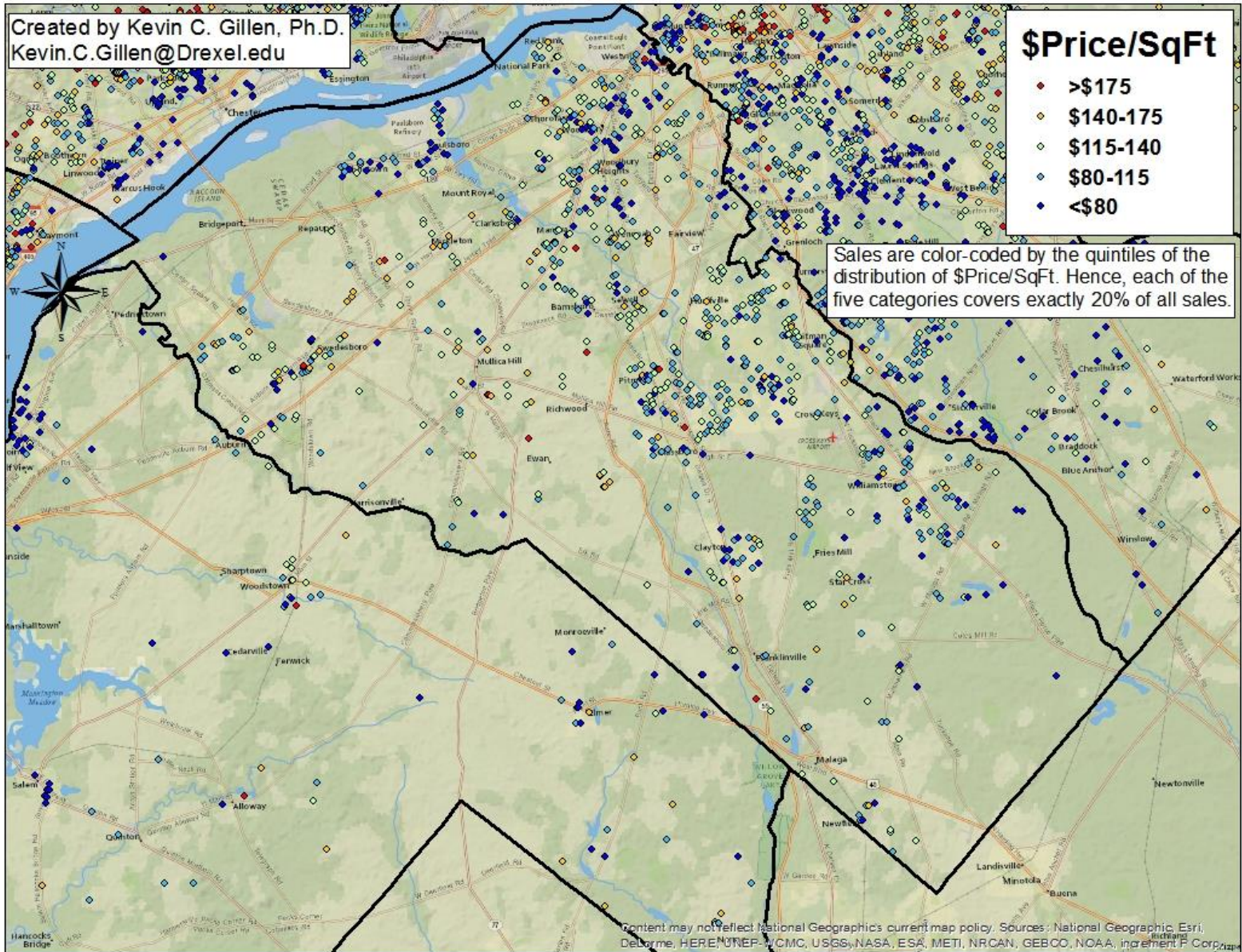


# Camden County House Sales in 2016 Q3





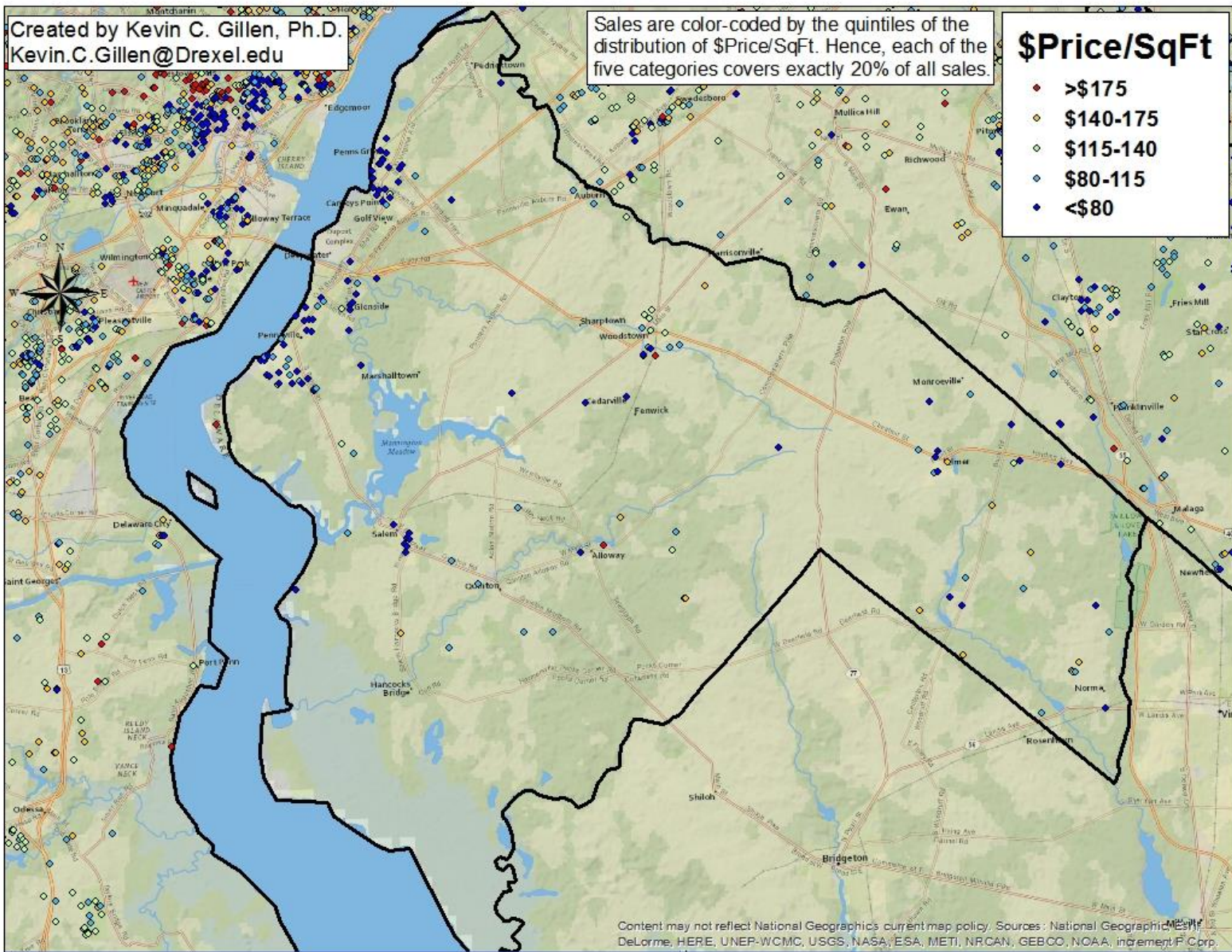
# Gloucester County House Sales in 2016 Q3



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, iNaturalist, and others.

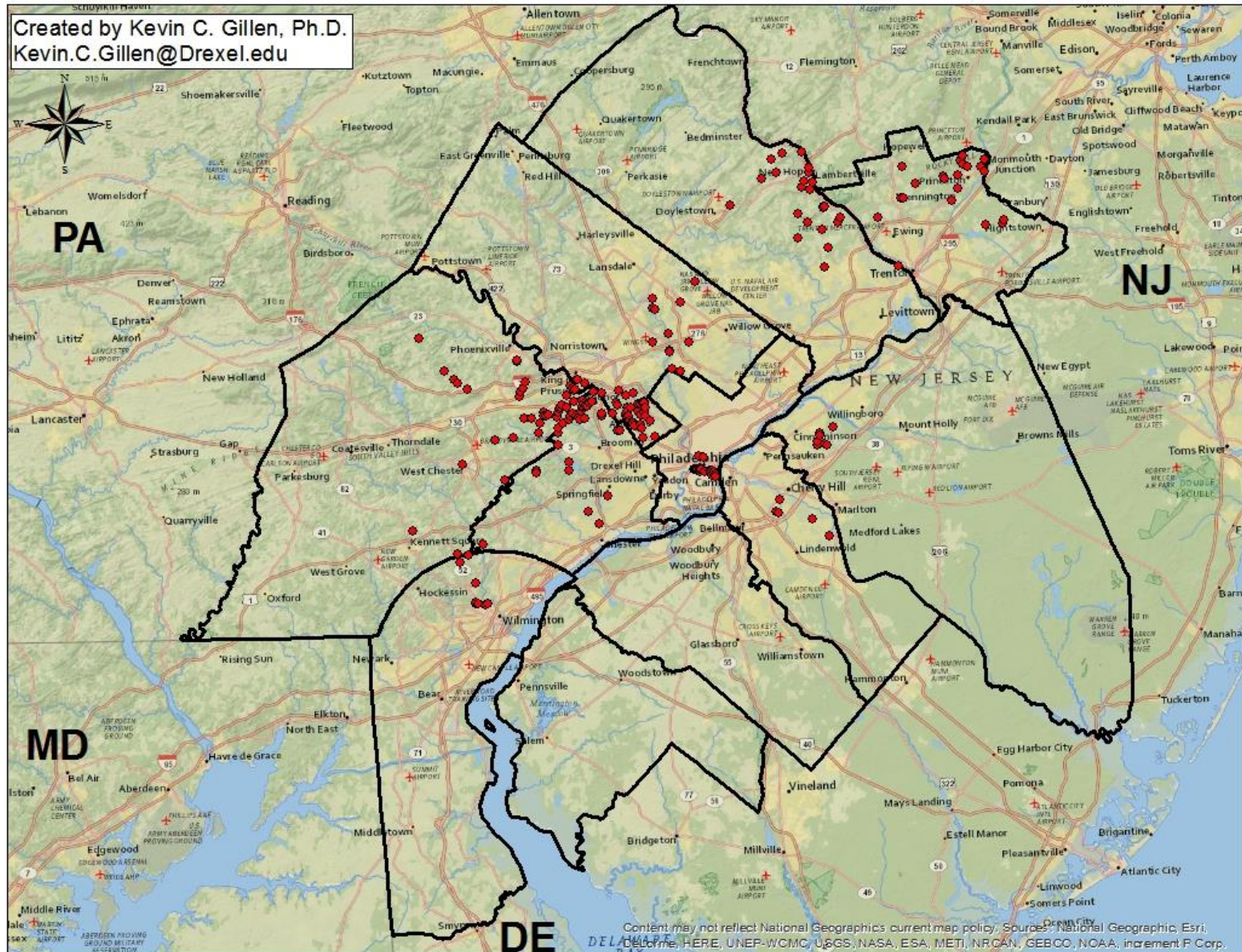


# Salem County House Sales in 2016 Q3

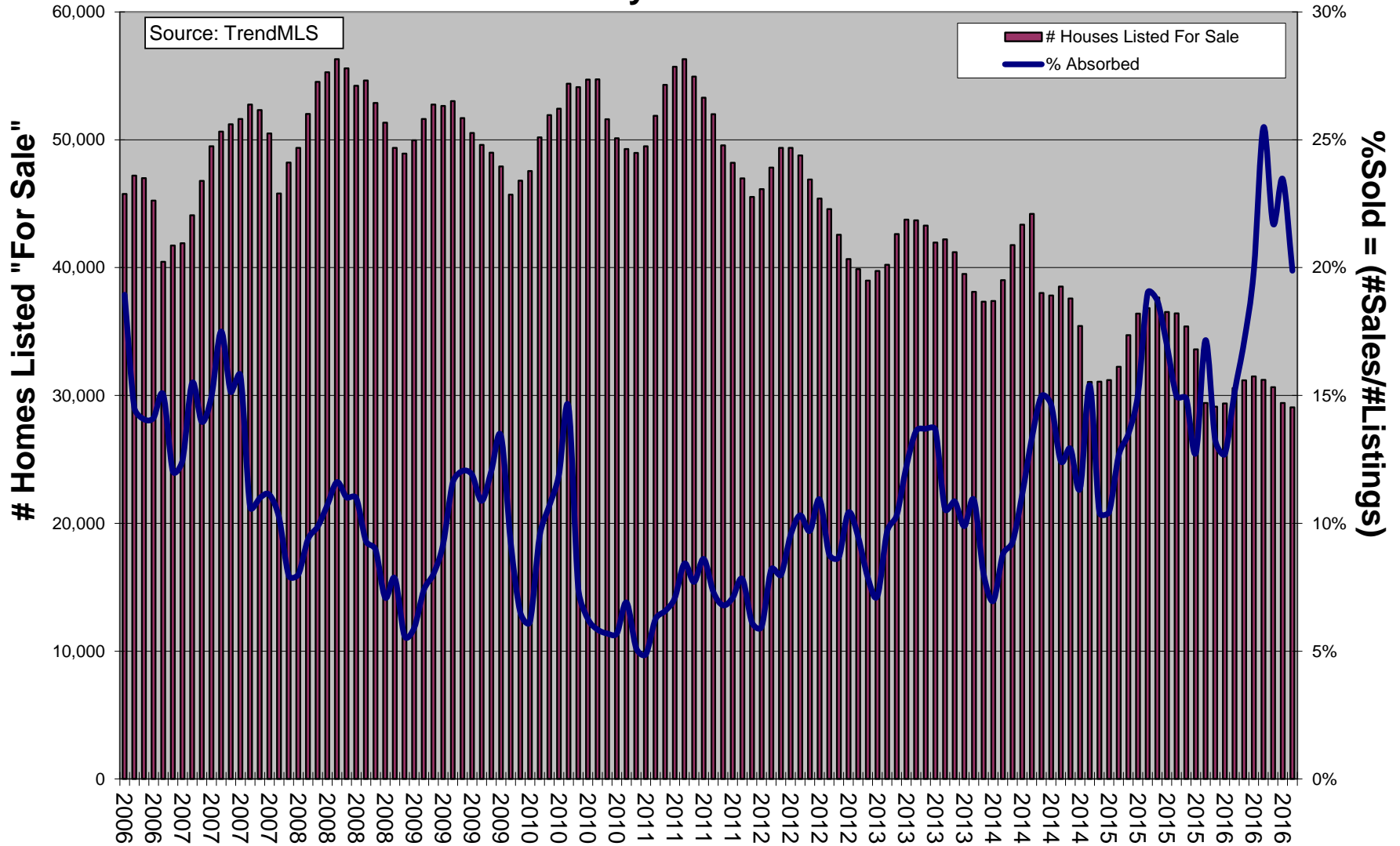




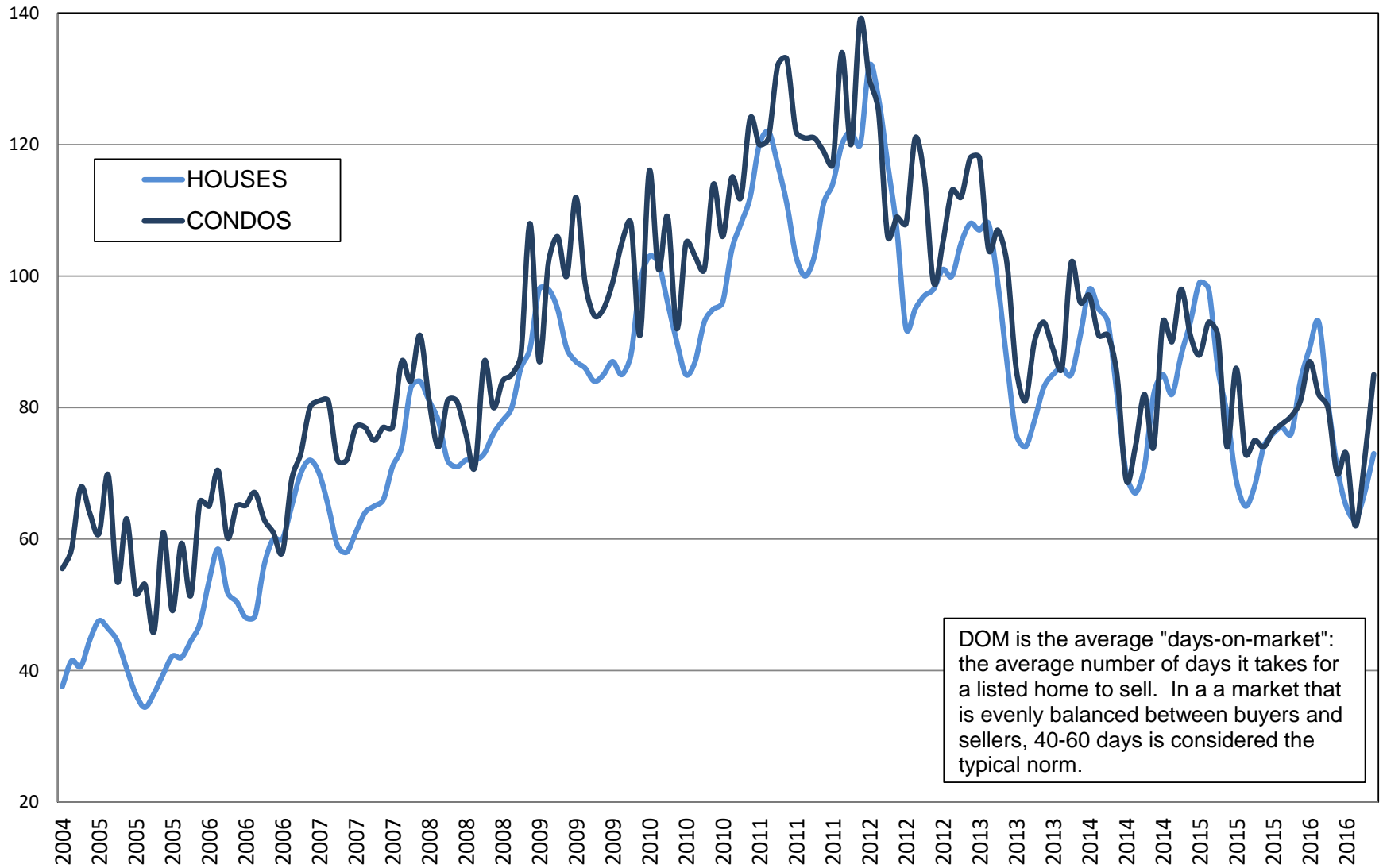
# + \$1 Million Dollar House Sales in 2016 Q3



# 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

Pennsylvania  
1 in every 1243

### Top 5 Counties

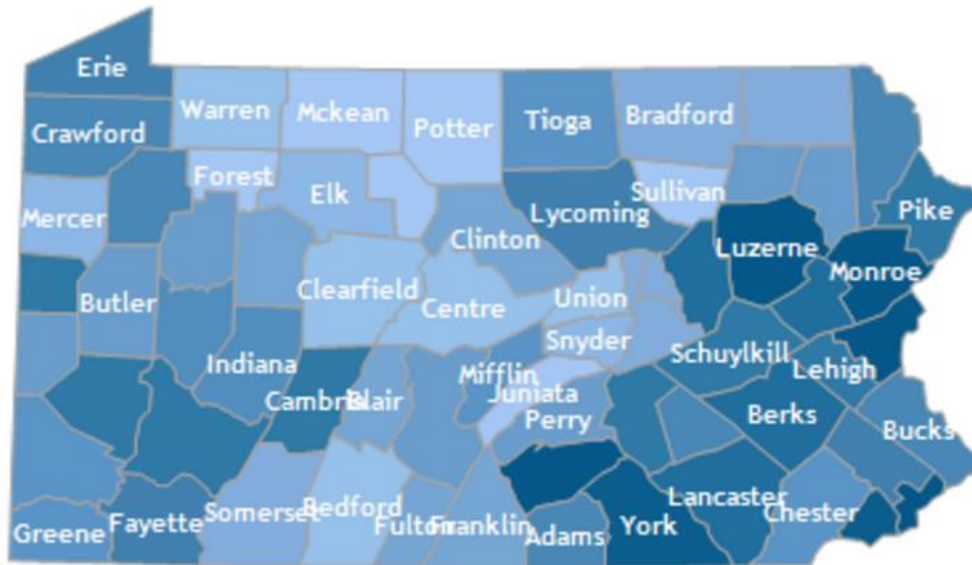
Cumberland  
1 in every 162

Monroe  
1 in every 462

Luzerne  
1 in every 657

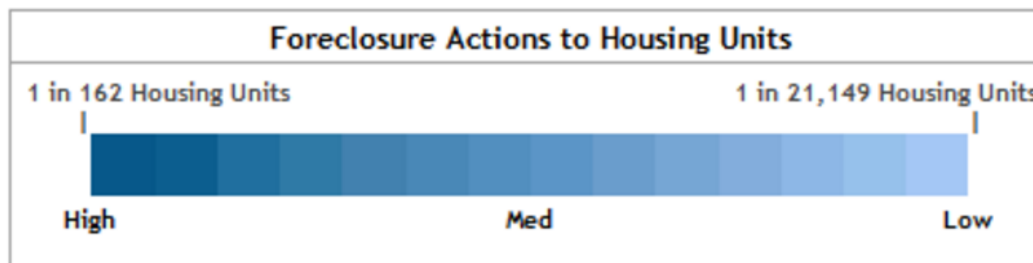
Philadelphia  
1 in every 877

Northampton  
1 in every 941



1 out of every 877 homes in Philadelphia is currently in the process of foreclosure, which is down from 1 out of every 720 homes in the previous quarter.

In the entire Commonwealth, 1 out of every 1,243 homes in Pennsylvania is in the process of foreclosure, which is up from 1 out of every 1,510 homes in the previous quarter.



# New Jersey Foreclosure Rates

## FORECLOSURE RATES FOR NEW JERSEY

New Jersey  
1 in every 597

### Top 5 Counties

Salem  
1 in every 286

Camden  
1 in every 339

Burlington  
1 in every 357

Atlantic  
1 in every 374

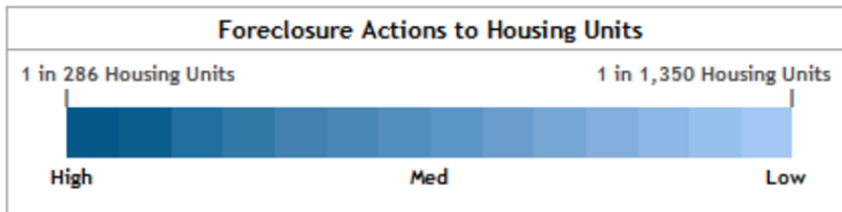
Monmouth  
1 in every 375



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 339 homes. This is well above the statewide average of 1 in every 597 homes.

The statewide foreclosure rate increased slightly in Q3, from 1 in every 608 homes to 1 in every 597 homes.



# Delaware Foreclosure Rates

## FORECLOSURE RATES FOR DELAWARE

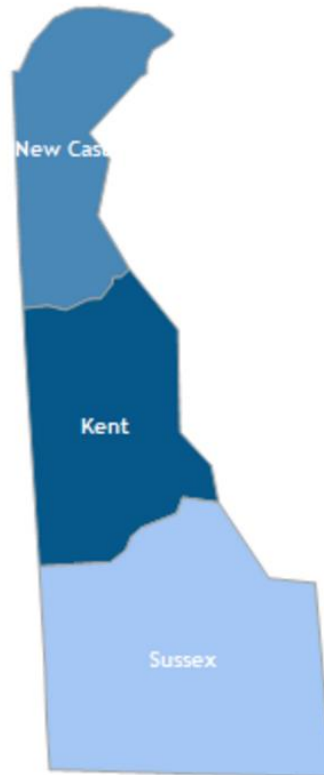
**Delaware**  
1 in every 786

### Top 3 Counties

**Kent**  
1 in every 599

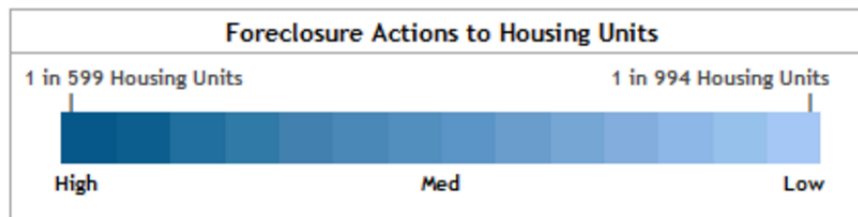
**New Castle**  
1 in every 767

**Sussex**  
1 in every 994



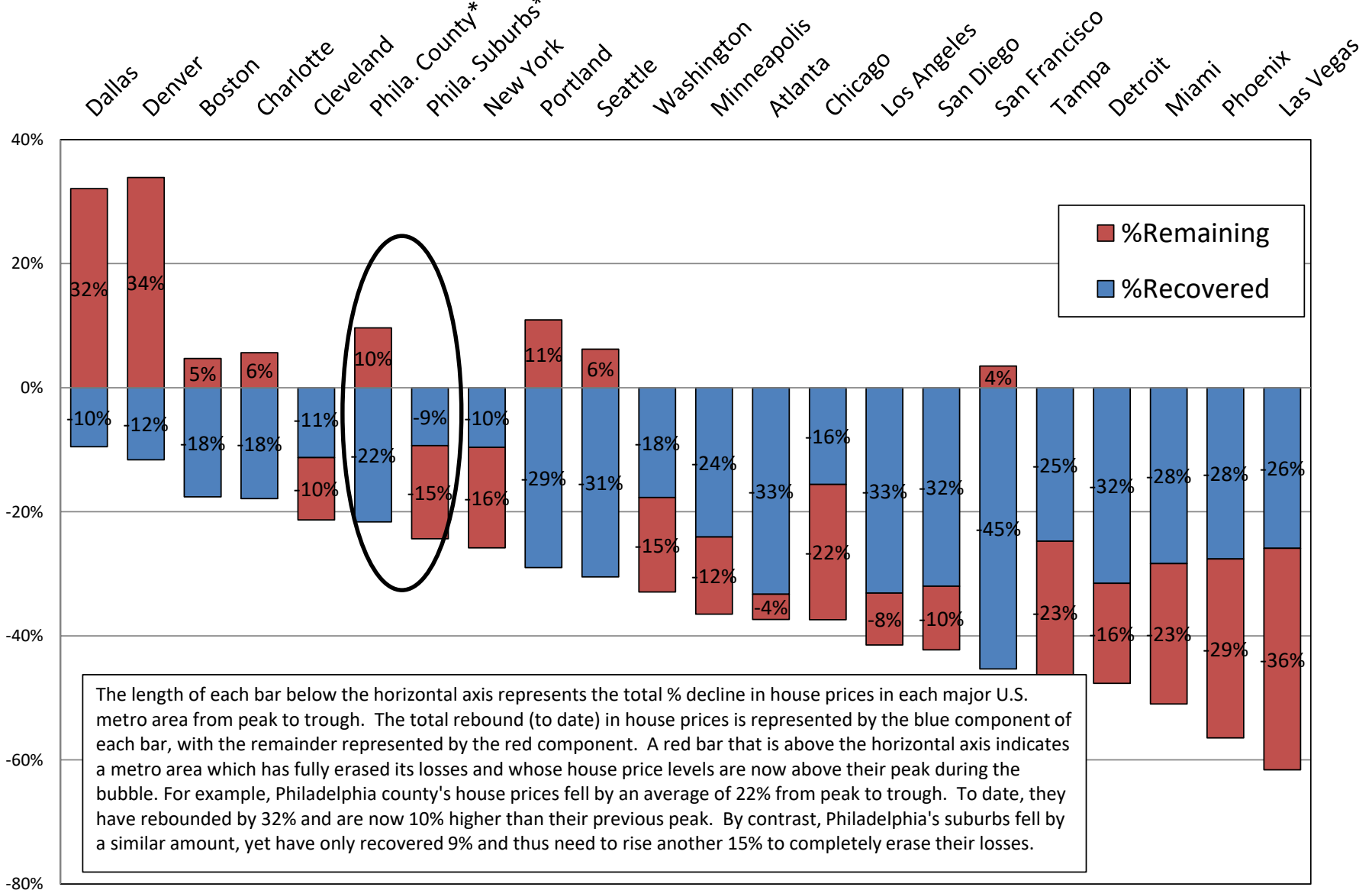
This quarter, Delaware saw significant improvements in its foreclosure rates:

- 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.





# 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 32% and are now 10% higher than their previous peak. By contrast, Philadelphia's suburbs fell by a similar amount, yet have only recovered 9% and thus need to rise another 15% to completely erase their losses.

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