

PHILADELPHIA HOUSE PRICE INDICES

January 26, 2023



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KEVIN C. GILLEN, Ph.D.

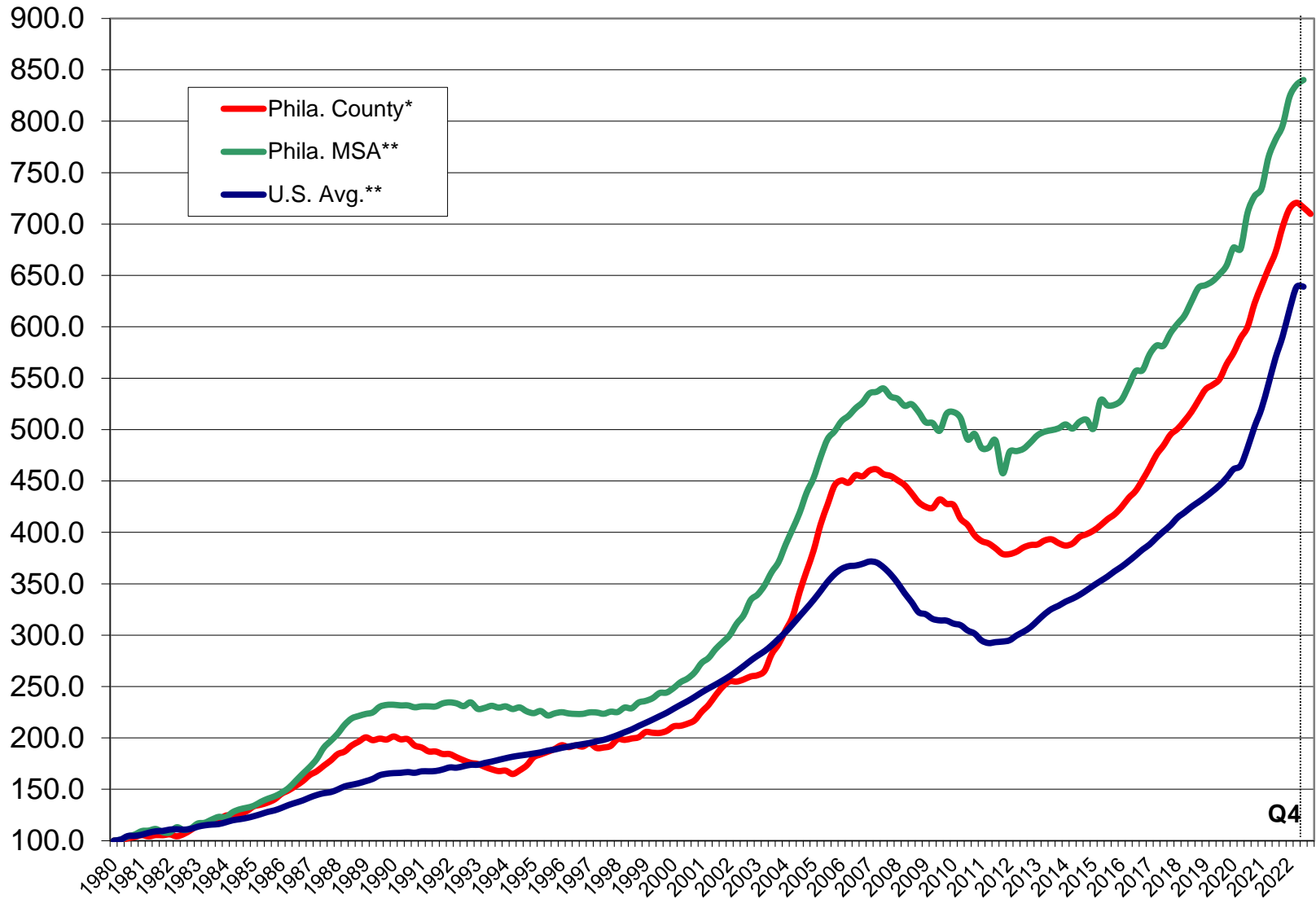
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***Disclaimers and Acknowledgments:** The Lindy Institute for Urban Innovation at Drexel University provides this report free of charge to the public. The report is produced by Kevin C. Gillen Ph.D.. The author thanks Azavea.com, the Philadelphia Office 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. © 2023, Drexel University, All Rights Reserved.*



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House Price Indices 1980-2022: 1980Q1=100 Philadelphia County v. Philadelphia MSA and U.S. Average



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

**Courtesy of the Federal Housing Finance Agency (FHFA).

These HPIs are current through 2022 Q3 only.

“MSA”=Metropolitan Statistical Area, which is the entire 10-county region.

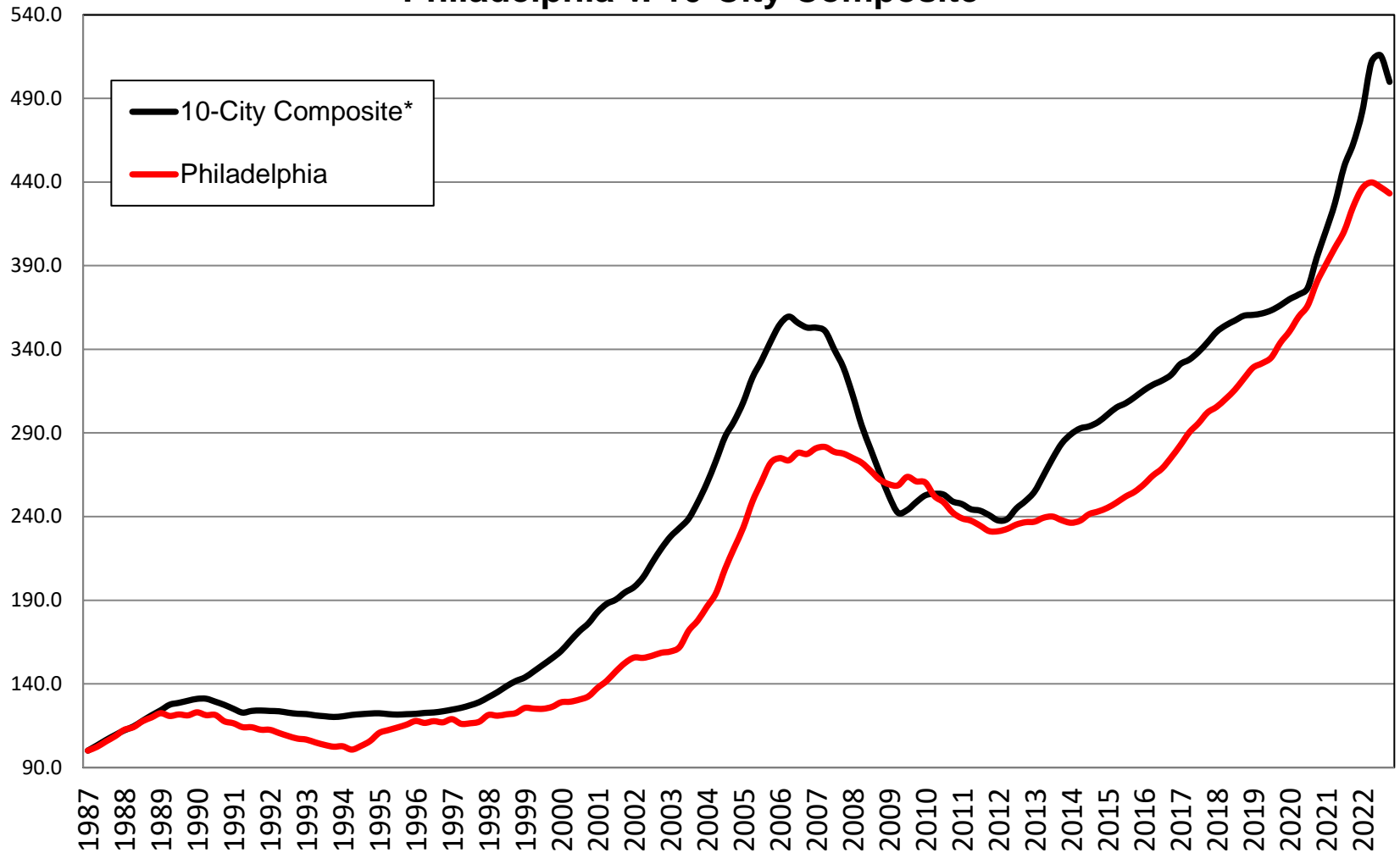
Total House Price Appreciation Rates by Geographic Market

Period	Philadelphia County*	Philadelphia MSA**	U.S.A.**
42-Year	609.7%	740.2%	538.9%
10-Year	83.1%	74.5%	110.7%
1-Year	1.9%	7.4%	12.2%
1-Quarter	-0.9%	0.6%	0.0%

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

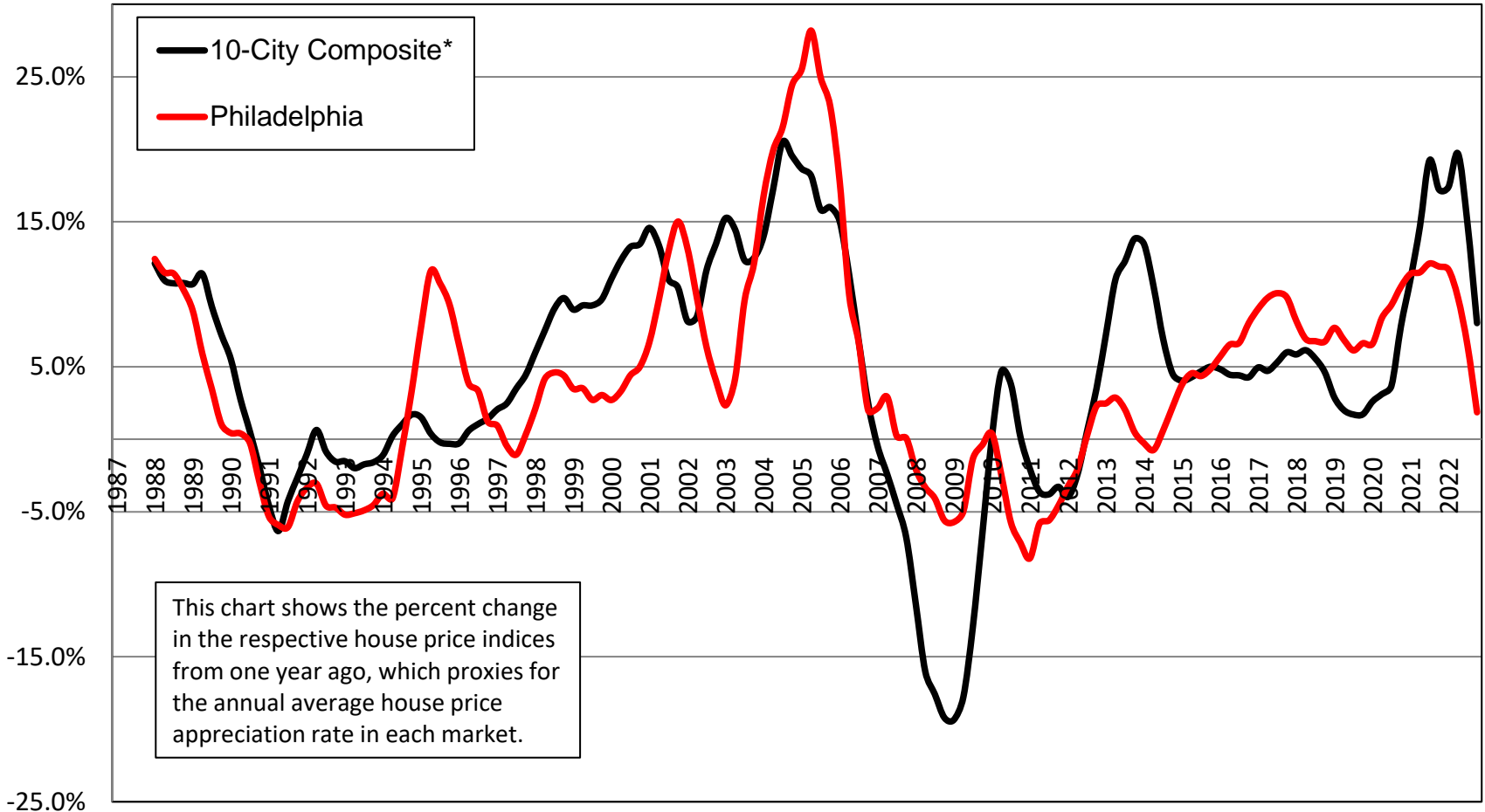
**Source: U.S. Federal Housing Finance Agency (FHFA). These numbers are through 2022Q3 only. “MSA”=“Metropolitan Statistical Area”, which is the entire 10-county region.

House Price Appreciation 1987-2022: Philadelphia v. 10-City Composite



*Source: S&P/Case-Shiller. 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.

YoY House Price Change (%) 1987-2022: Philadelphia v. 10-City Composite

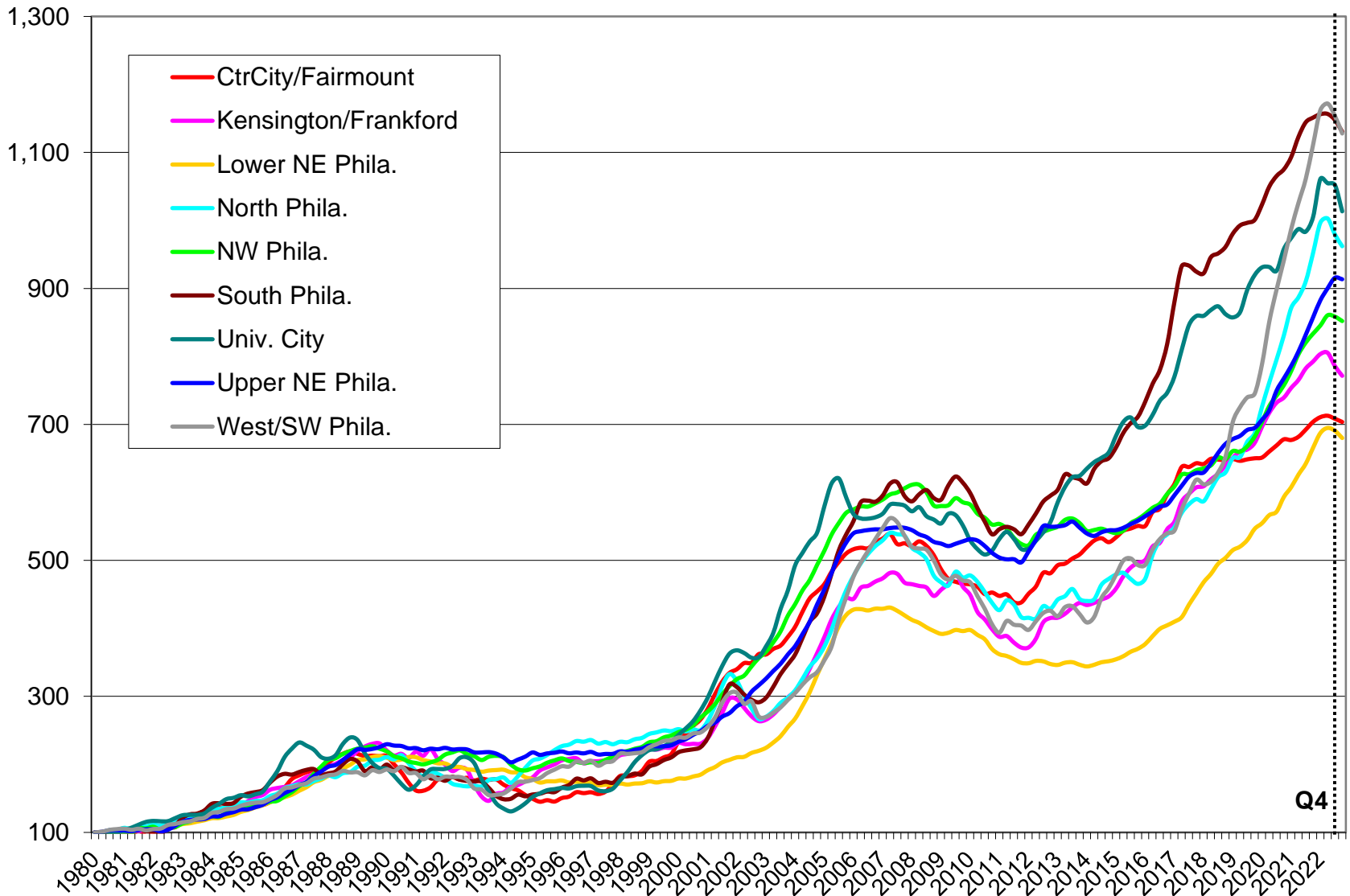


This chart shows the percent change in the respective house price indices from one year ago, which proxies for the annual average house price appreciation rate in each market.

*Source: S&P/Case-Shiller. 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.

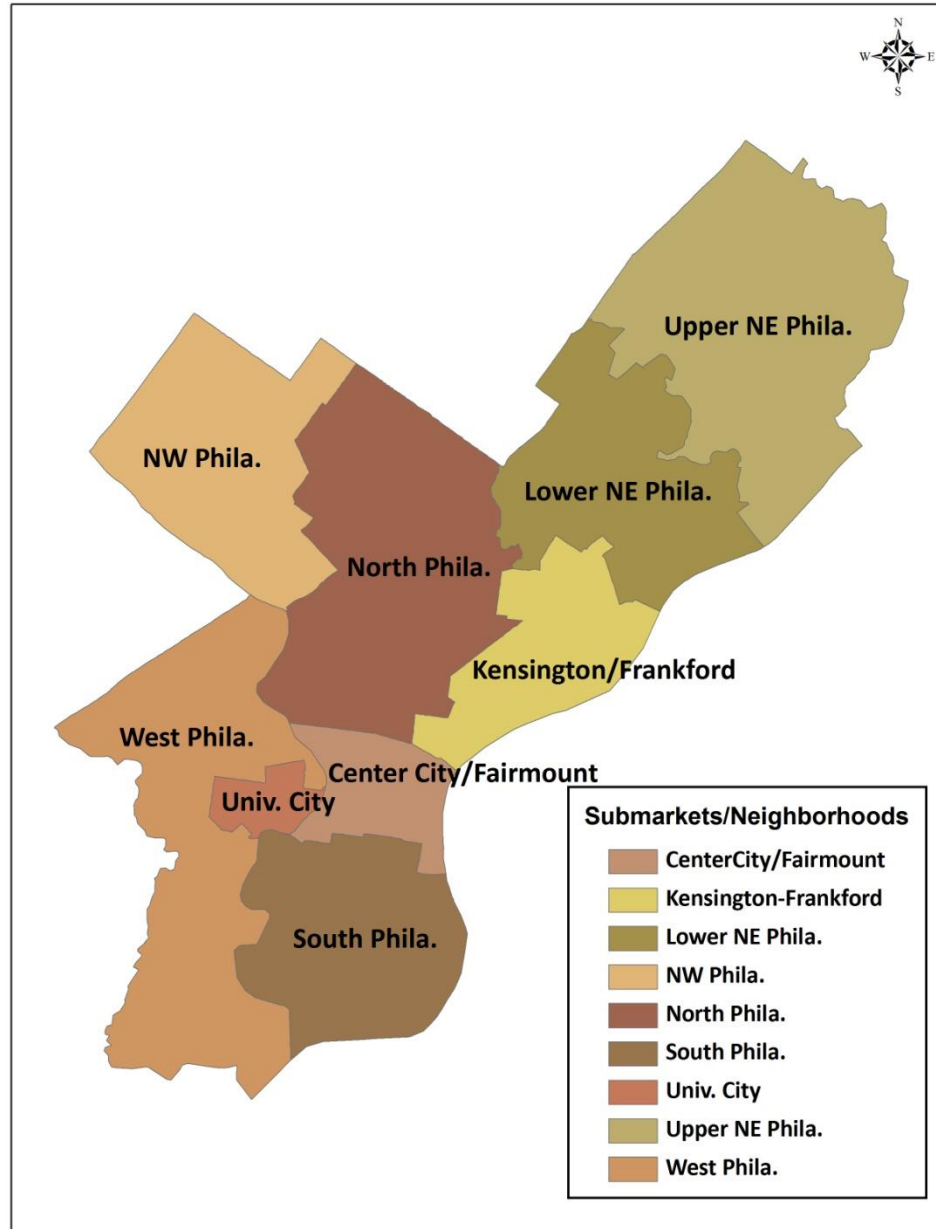
Philadelphia House Price Indices by Neighborhood: 1980-2022

1980Q1=100



* All indices empirically estimated by Kevin C. Gillen, Ph.D.

Philadelphia Submarket Boundaries



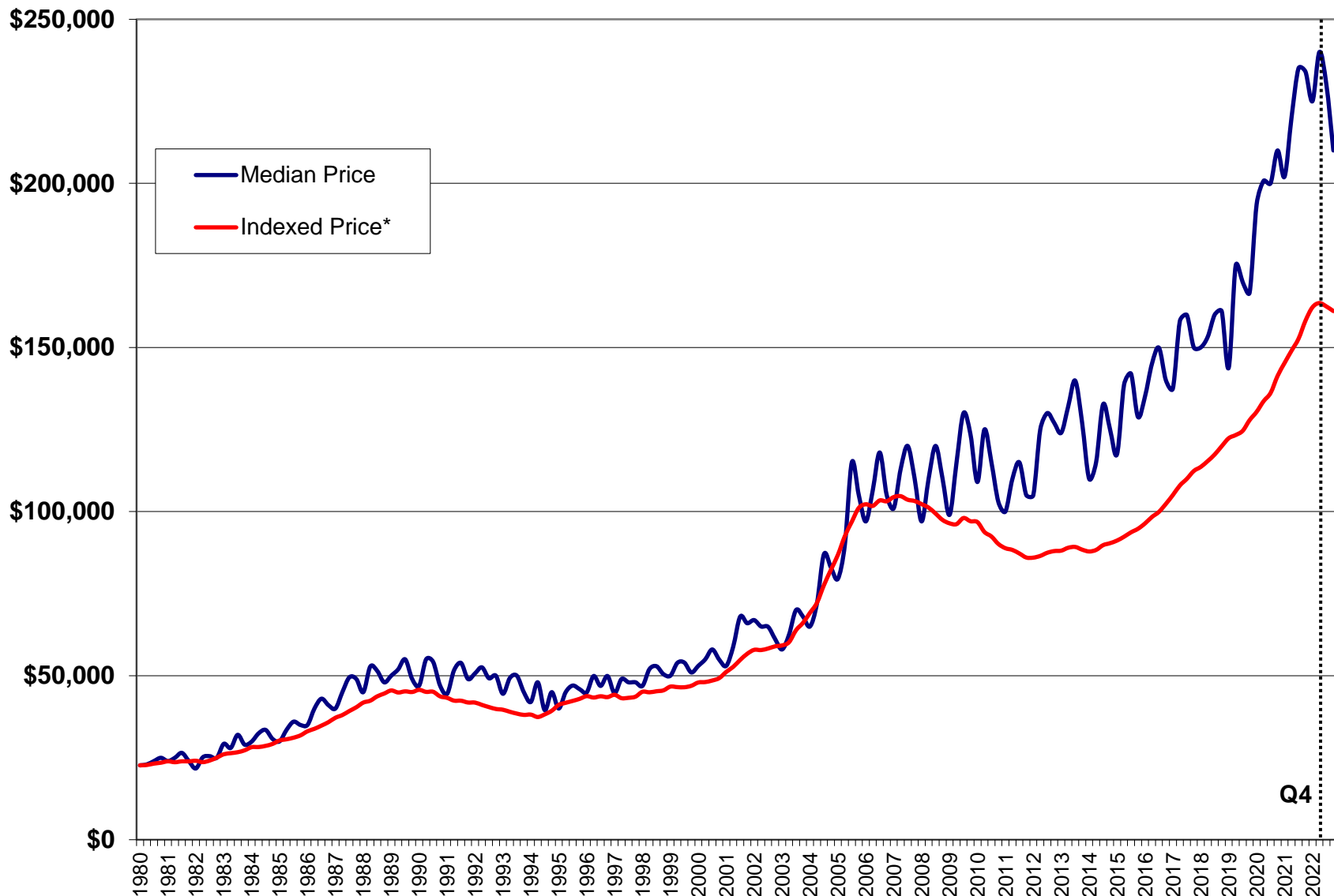
Philadelphia House Price Appreciation Rates by Submarket

Period	Center City/ Fairmount	Kensington /Frankford	Lower NE Phila.	North Phila.	NW Phila.	South Phila.	Univ. City	Upper NE Phila.	West/ SW Phila.
42-year	603.7%	671.6%	580.1%	862.2%	751.9%	1030.4%	913.4%	813.5%	1028.0%
10-year	46.3%	85.9%	95.7%	124.3%	56.0%	89.9%	82.1%	66.3%	164.9%
1-Year	0.0%	-2.6%	2.2%	1.1%	2.2%	-1.8%	0.9%	6.6%	1.5%
1-Quarter	-0.7%	-1.8%	-1.5%	-1.8%	-0.8%	-1.5%	-3.7%	-0.2%	-2.2%

This table gives the total % change in average house values by submarket, through 2022 Q4, from different starting points in time.

Note: Unlike the citywide index, the submarket indices are smoothed out by a three-period moving average.

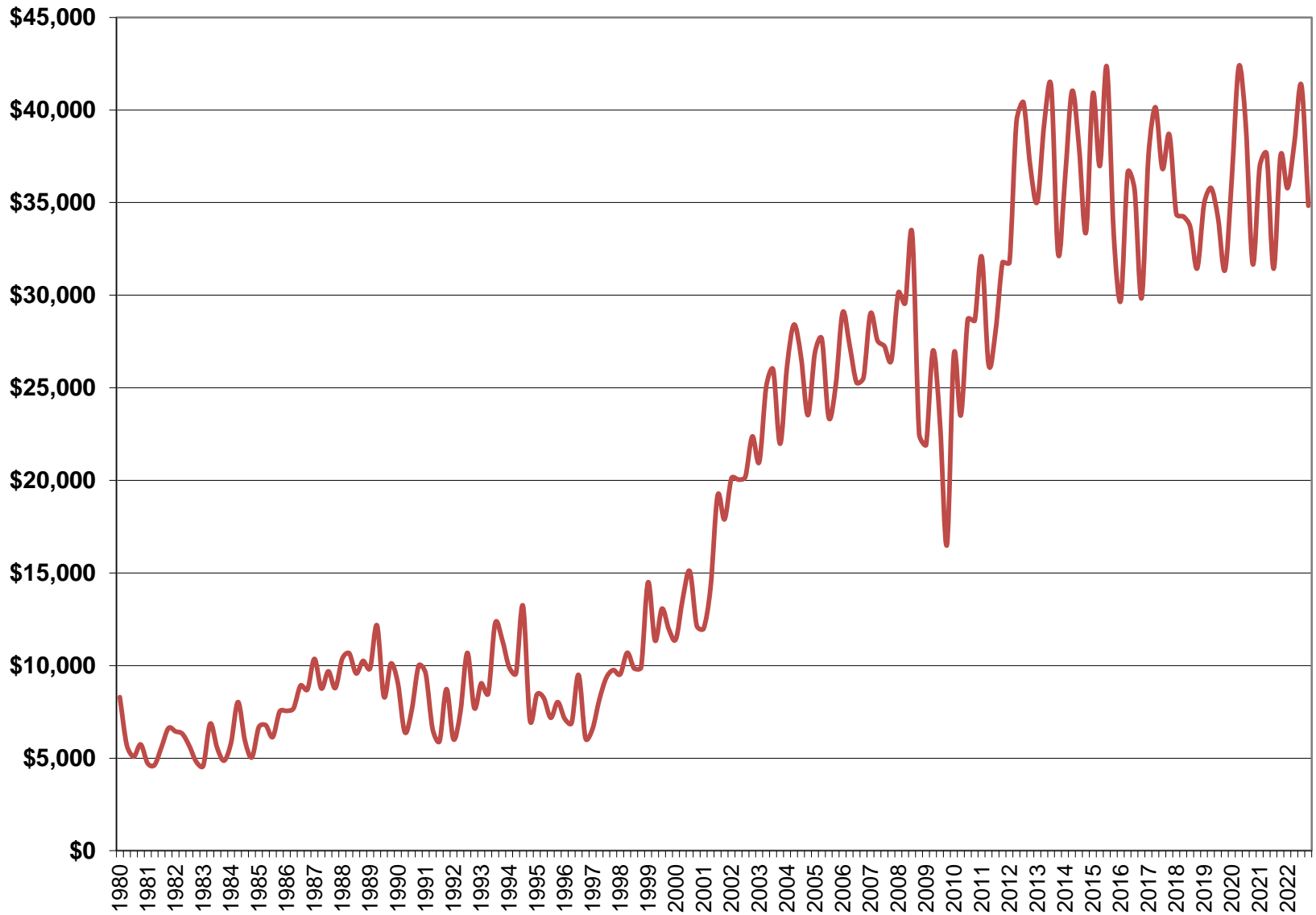
Median Philadelphia House Price v. Indexed Philadelphia House Price 1980-2022



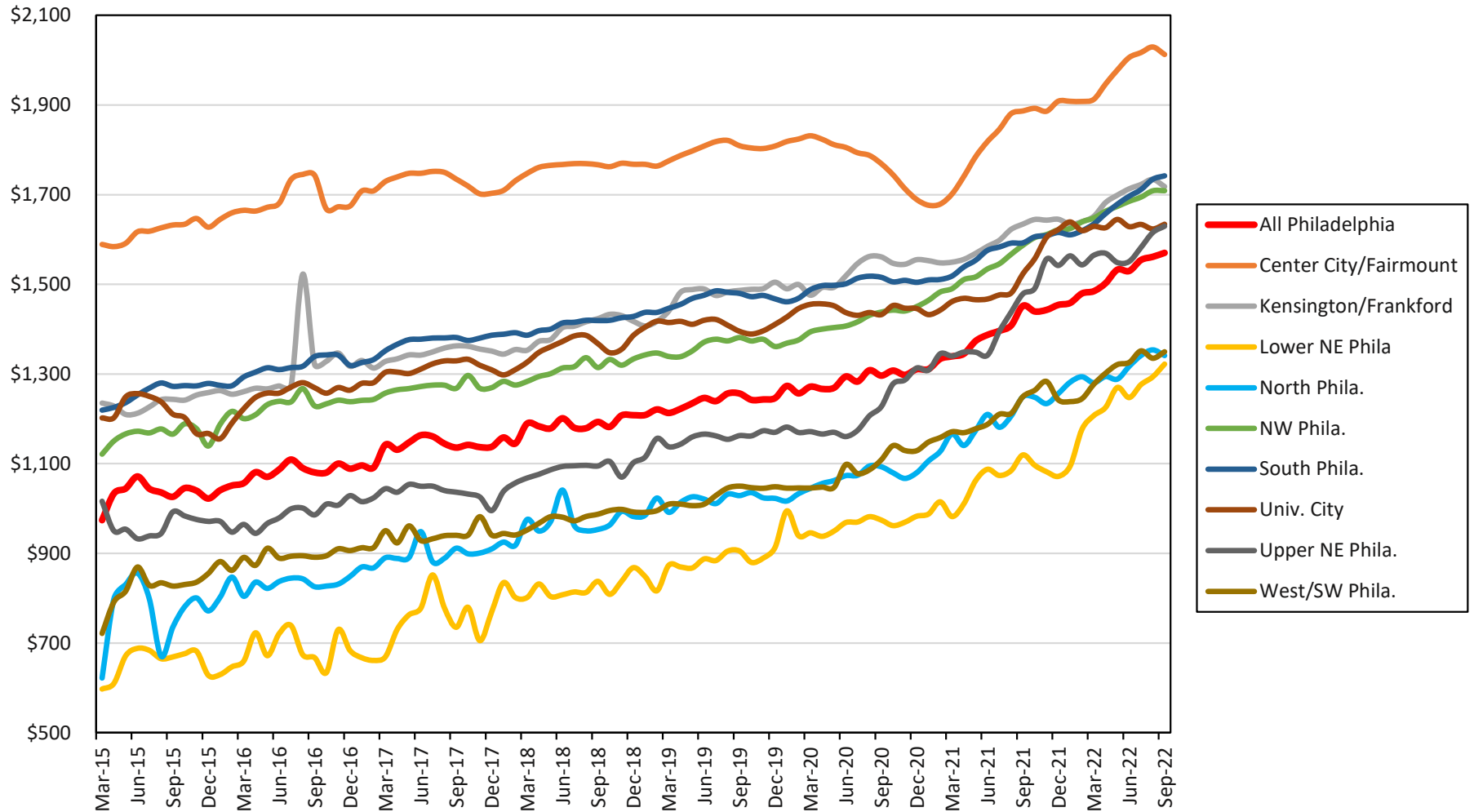
* Empirically estimated by Kevin C. Gillen, Ph.D.

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Average Philadelphia House Price Minus Median House Price: 1980-2022

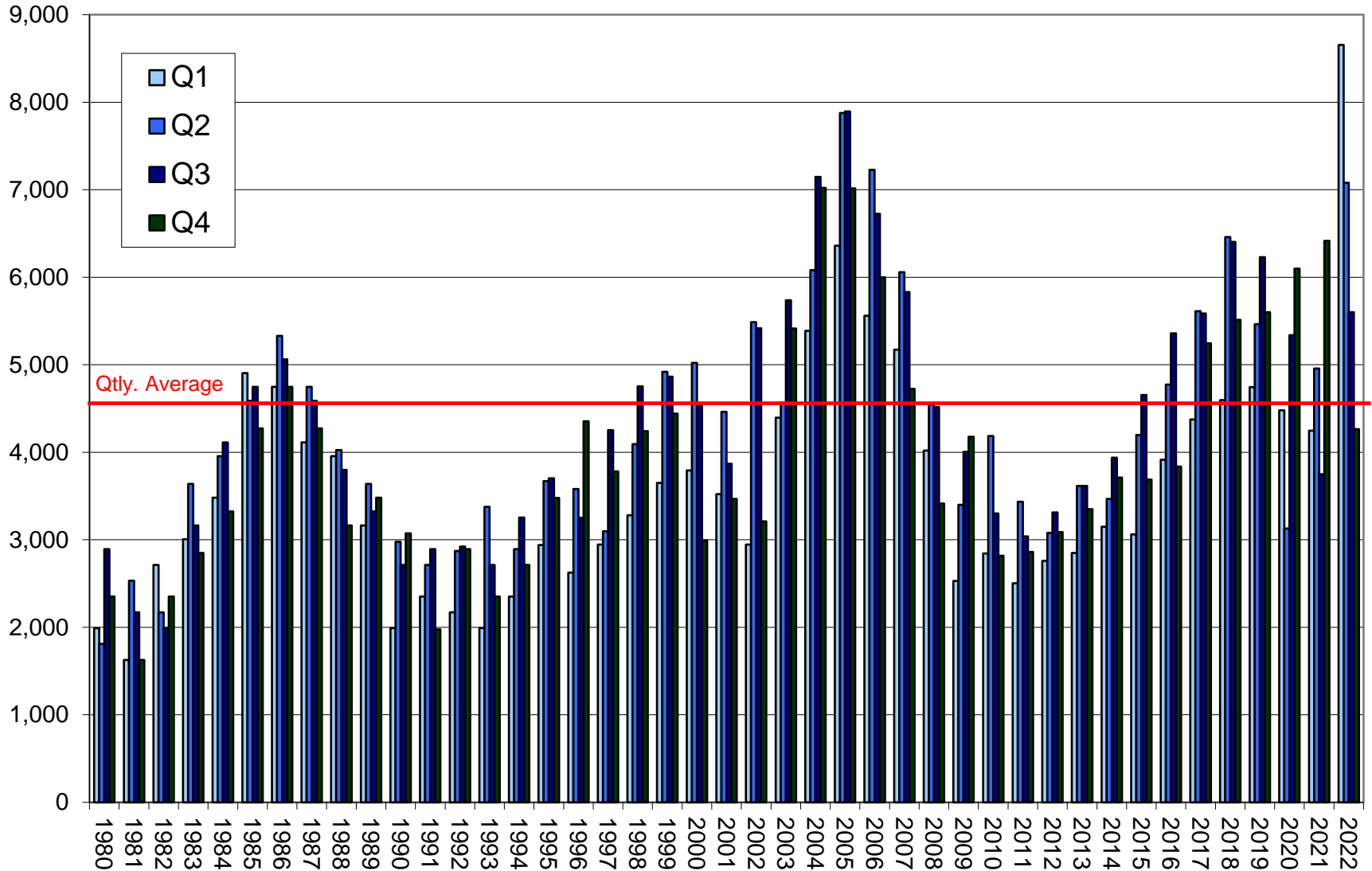


Average Monthly Rent of Philadelphia Dwellings: All Philadelphia v. Philadelphia Submarkets



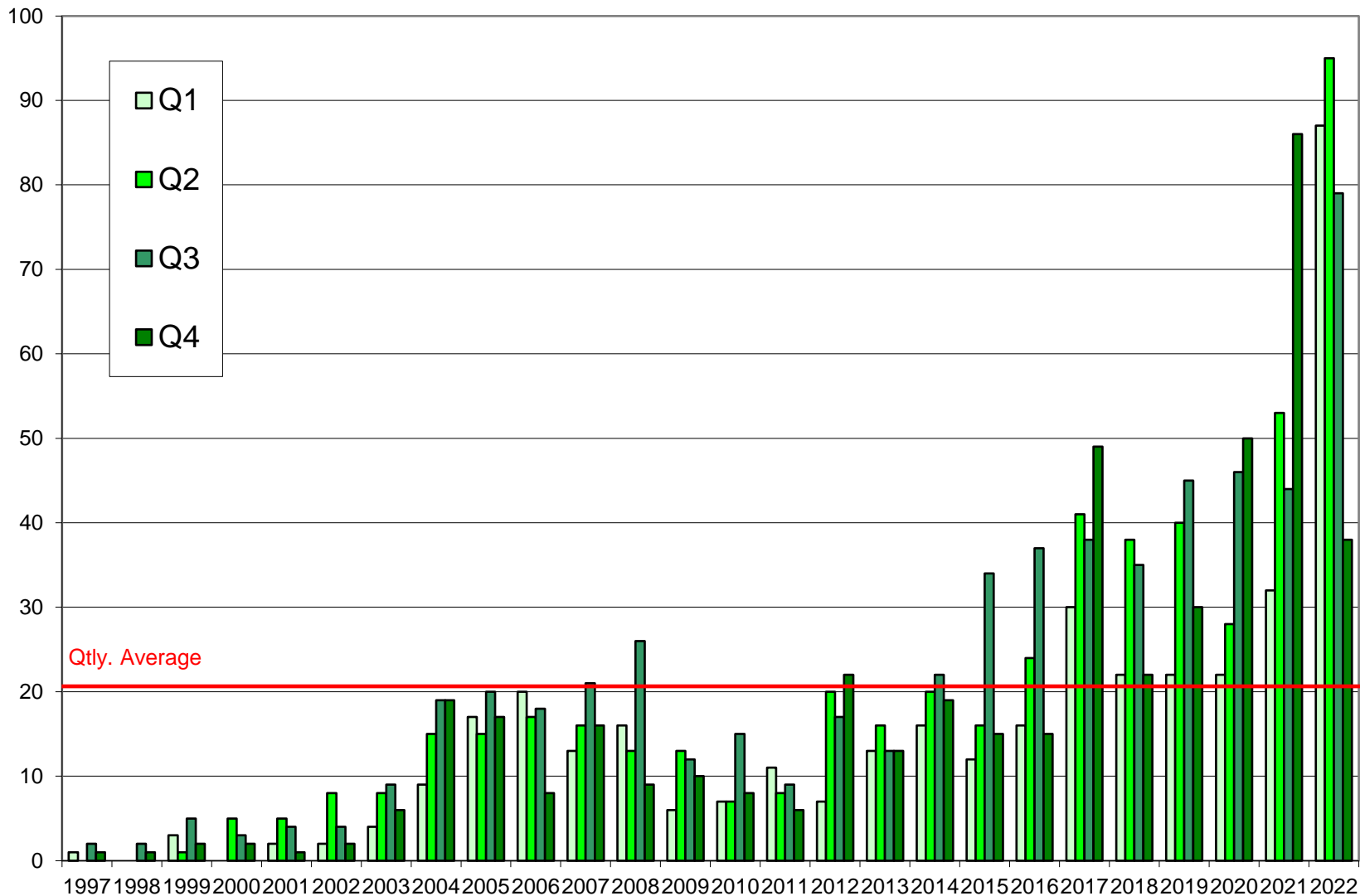
Source: <https://www.zillow.com/research/data> Note: Zillow's measure of average rents is heavily weighted towards apartment units—as opposed to single-family houses. So, these rent levels almost certainly underestimate the cost of renting a house, since renting a house is typically more expensive than renting an apartment.

Number of Philadelphia House Sales* per Quarter: 1980-2022



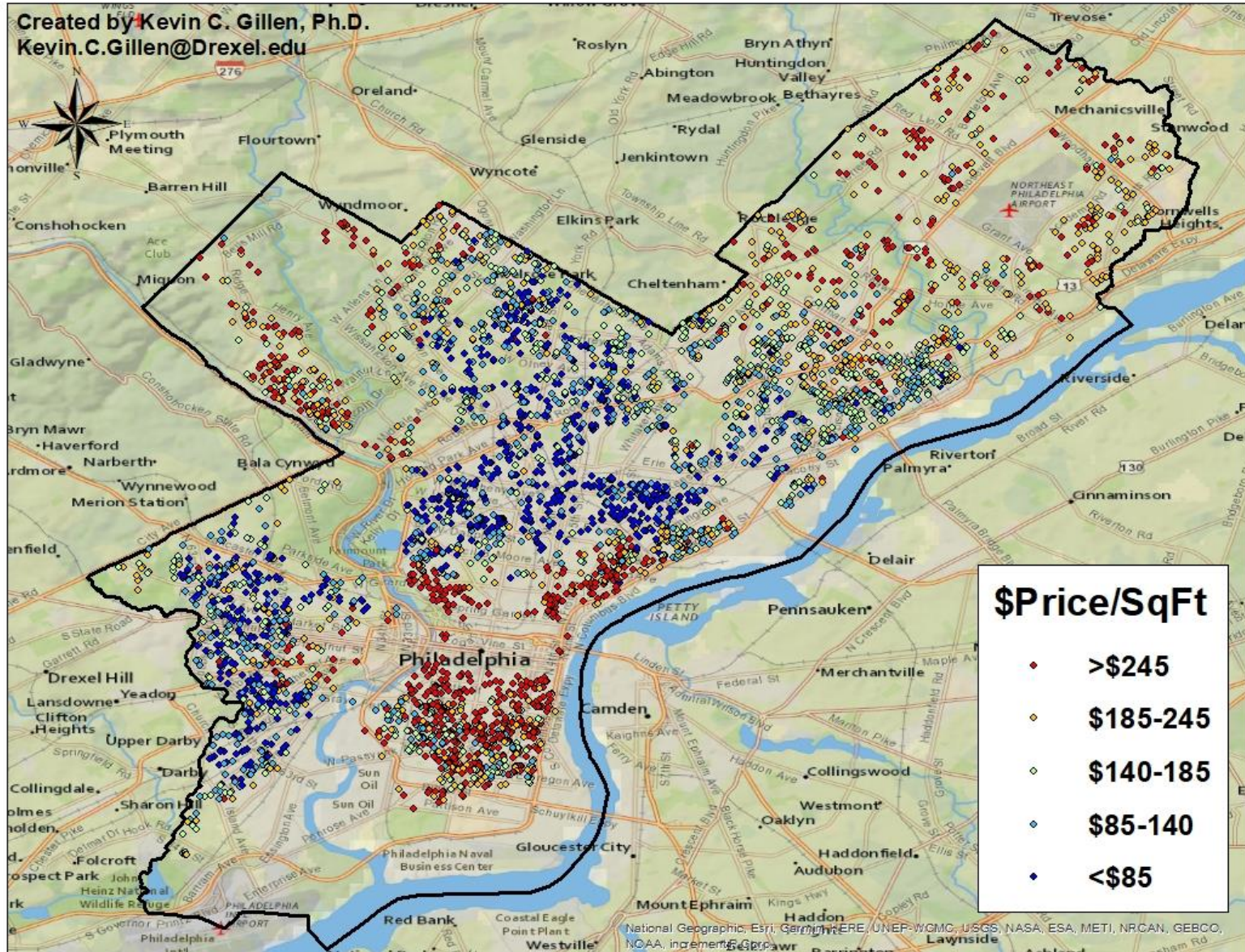
*Only arms-length transactions between private sector entities were included in these numbers.

Number of Philadelphia House Sales* per Quarter with Price >= \$1 Million: 1997-2022



*Only arms-length transactions between private sector entities were included in these numbers.

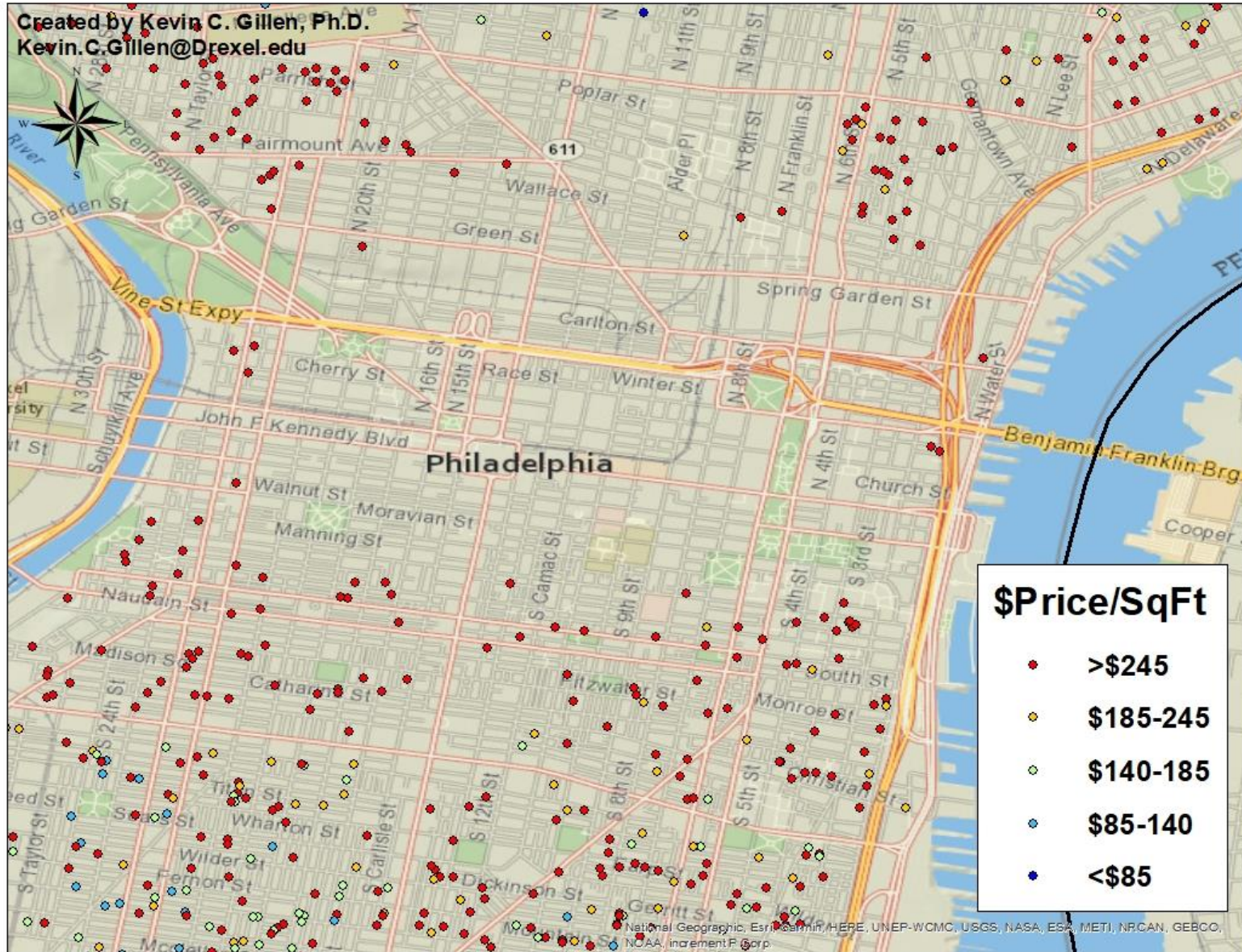
Philadelphia House Sales in 2022 Q4



Note: 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.

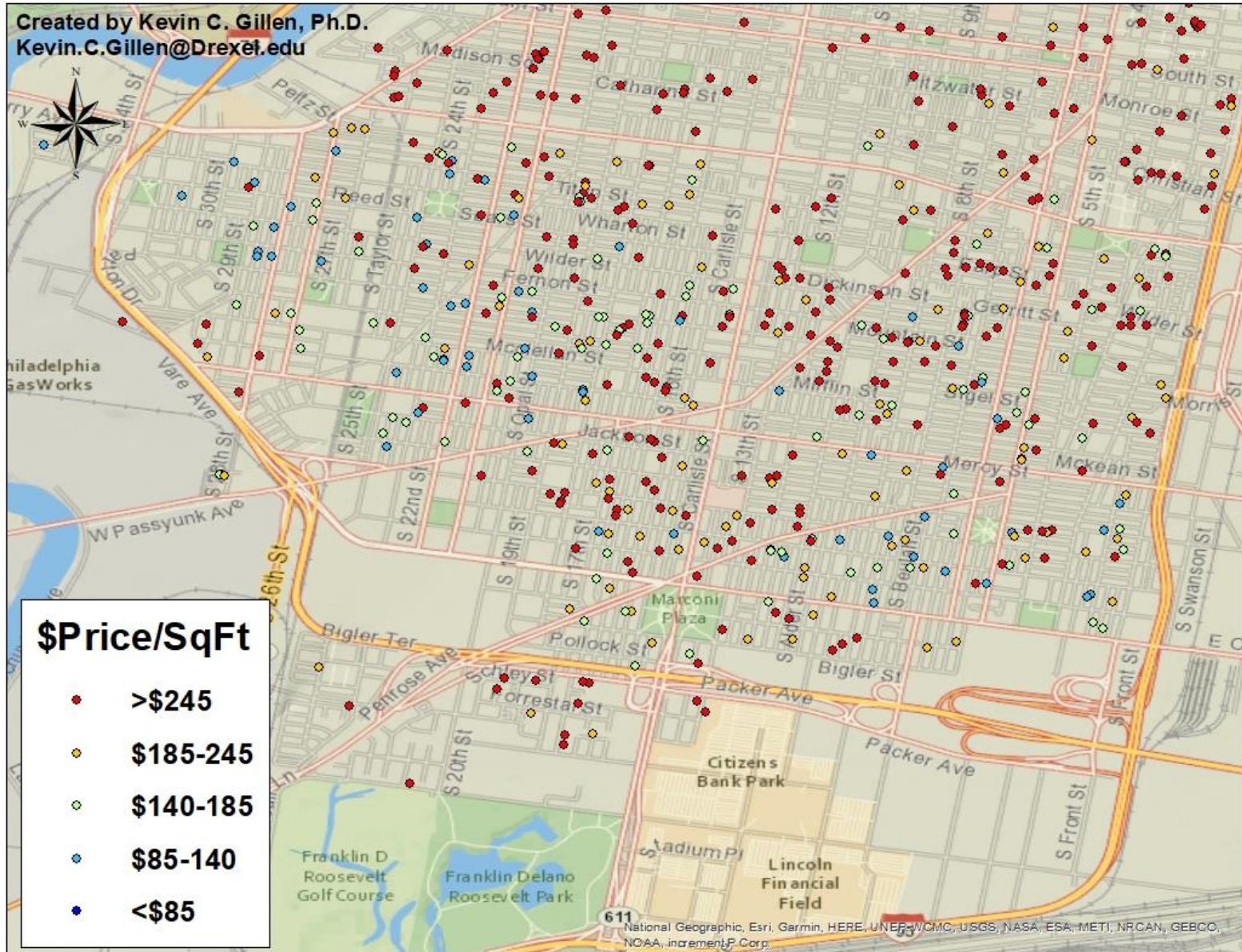
Center City House Sales in 2022 Q4

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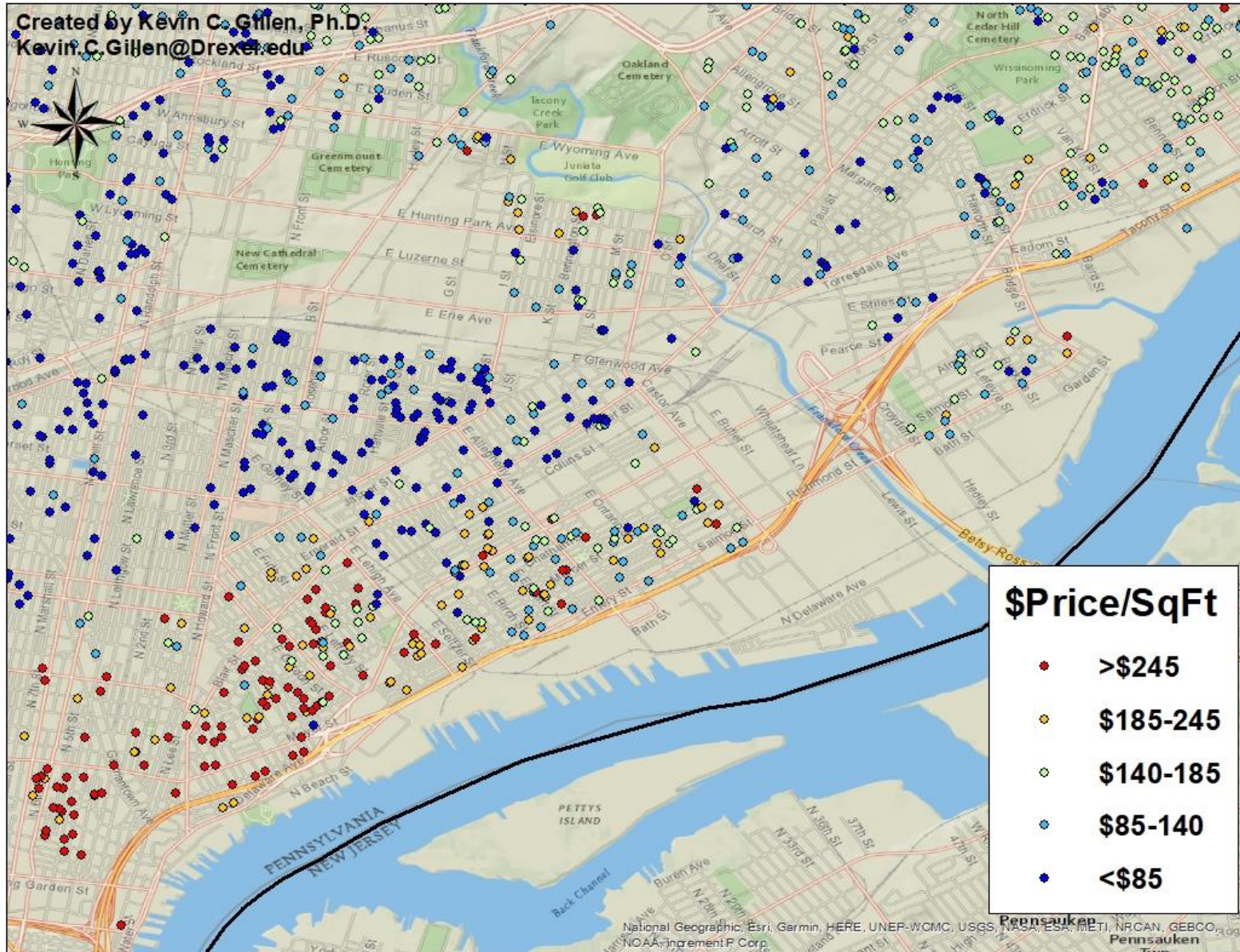


South Philadelphia House Sales in 2022 Q4

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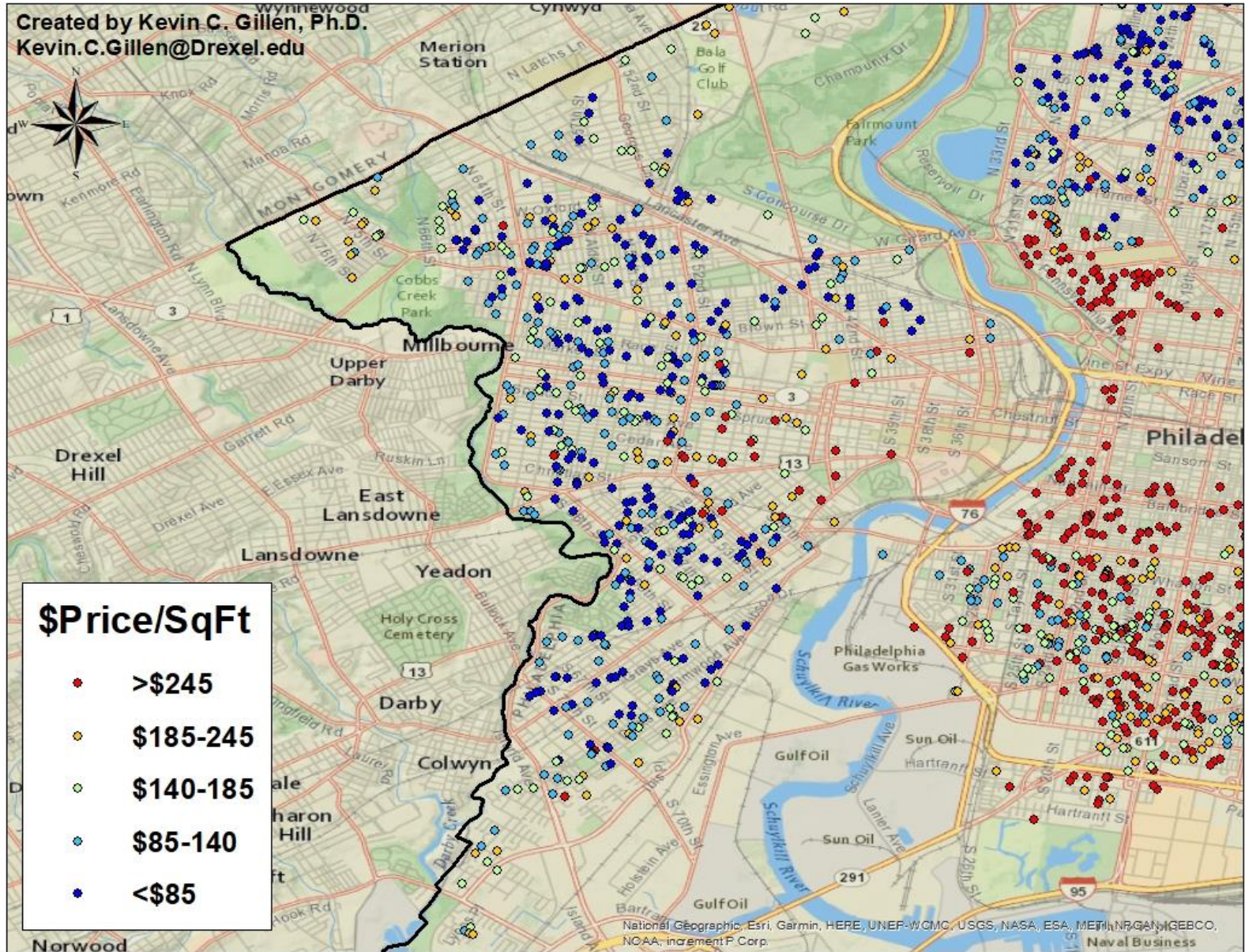


Kensington/Frankford House Sales in 2022 Q4

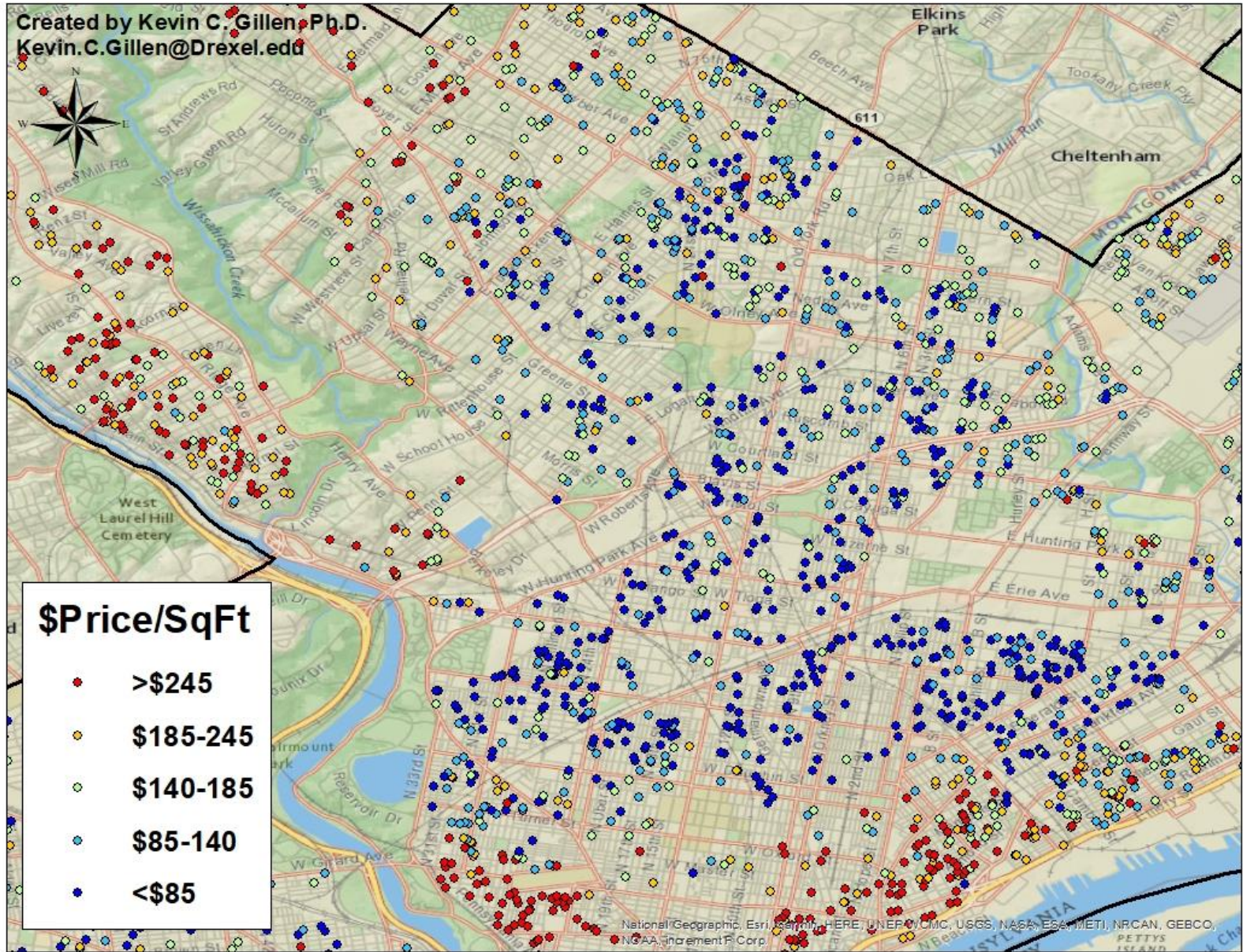


West/Southwest Philadelphia House Sales in 2022 Q4

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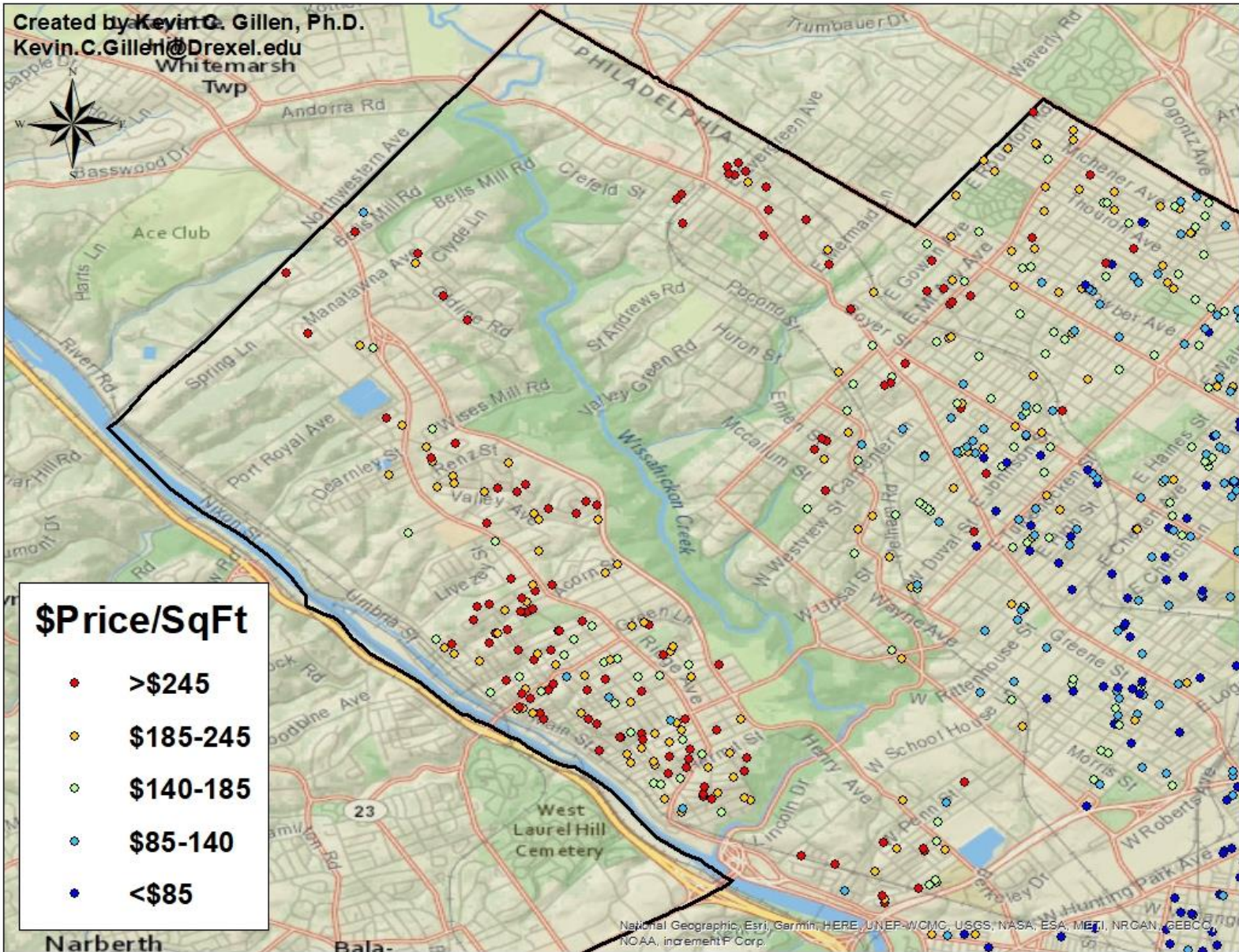


North Philadelphia House Sales in 2022 Q4



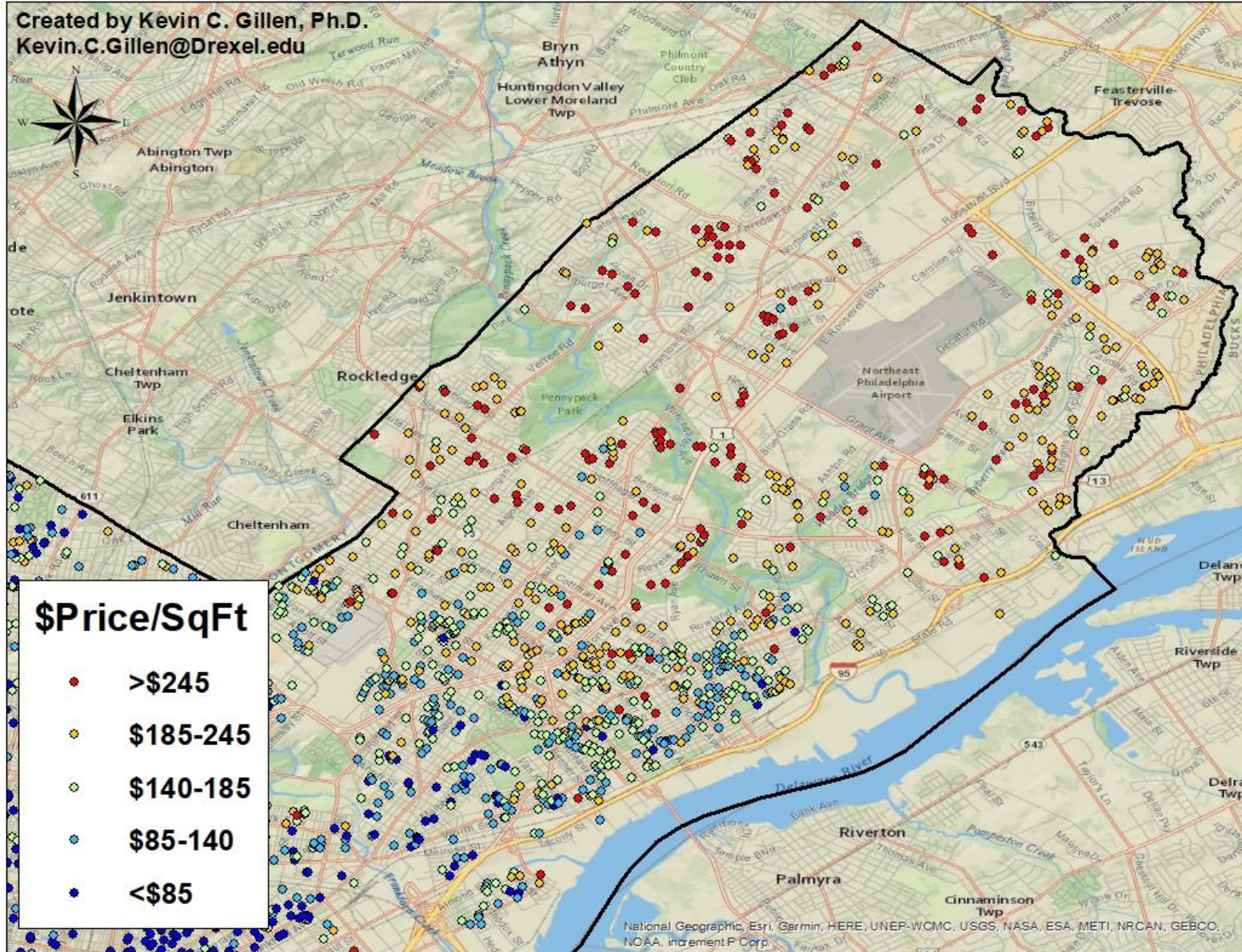
Northwest Philadelphia House Sales in 2022 Q4

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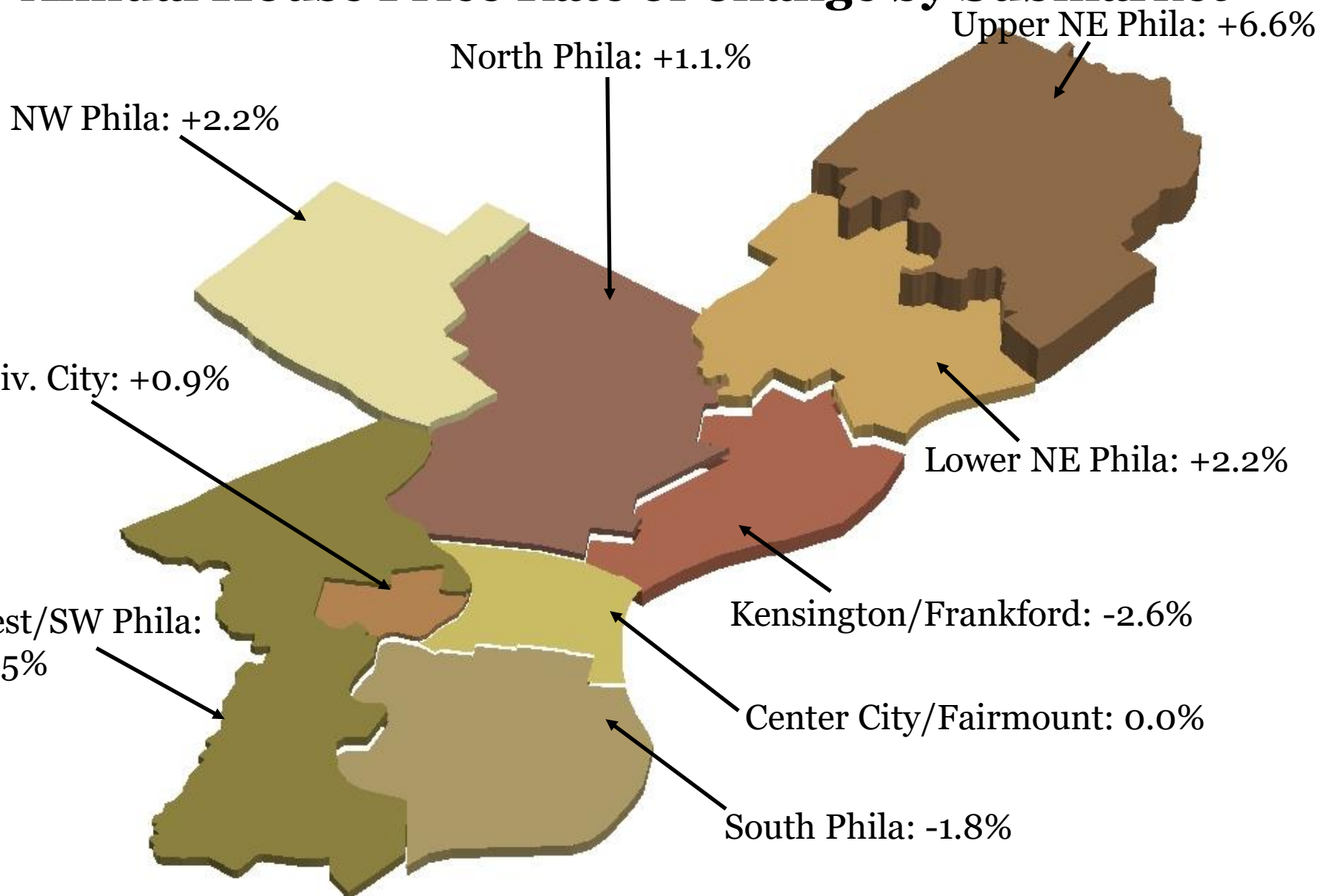


National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment F Corp.

Northeast Philadelphia House Sales in 2022 Q4



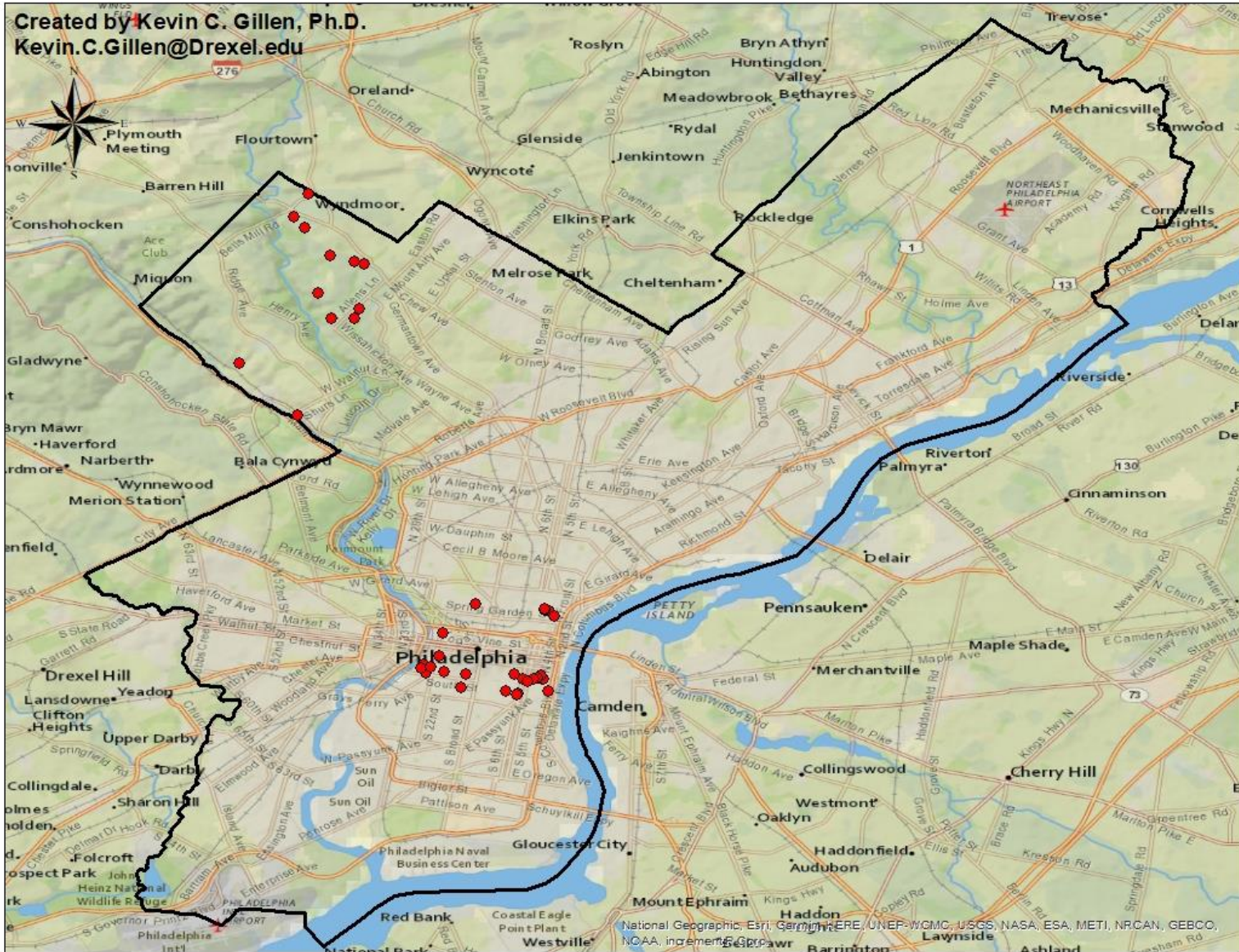
Annual House Price Rate of Change by Submarket



Note: Each submarket is extruded by its average change in house values over the course of the past year (from 2021 Q4 to 2022 Q4) in order to reflect its growth (or depreciation) rate relative to other neighborhoods.

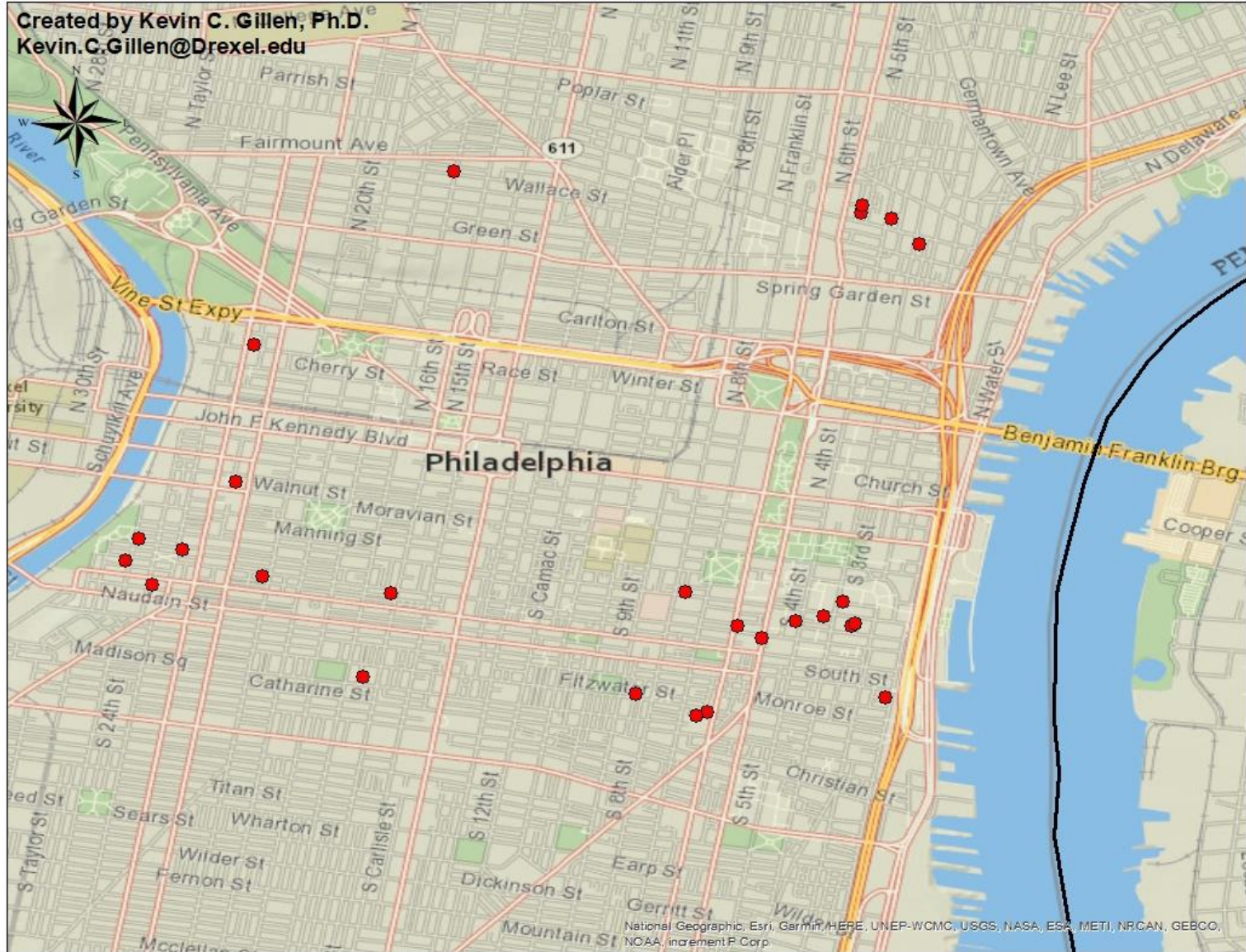
+ \$1 Million Dollar House Sales in 2022 Q4

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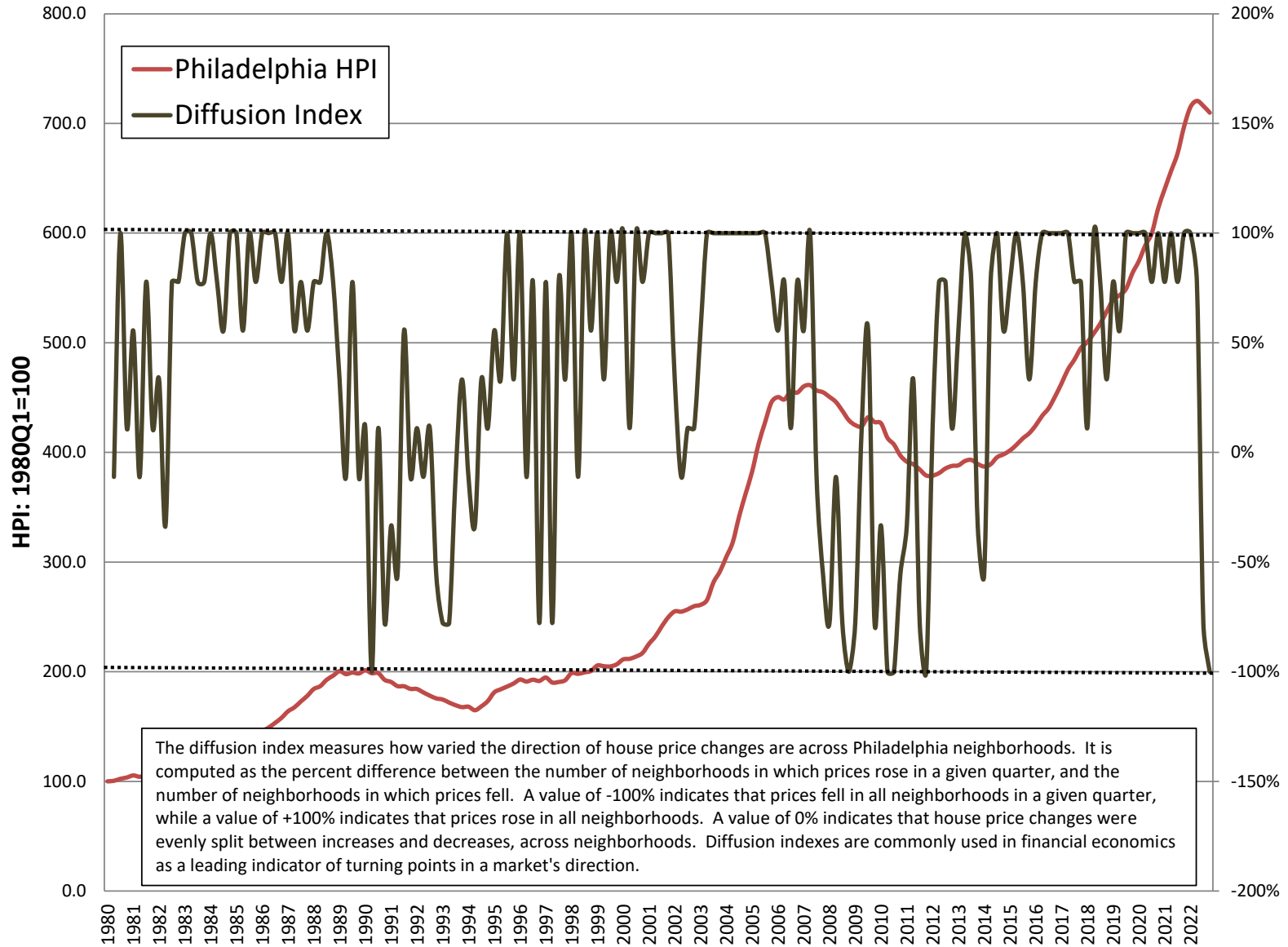
This map shows the location of all houses that sold at a recorded price of one million dollars or more in 2022 Q4.

+\$1 Million Dollar House Sales in 2022 Q4

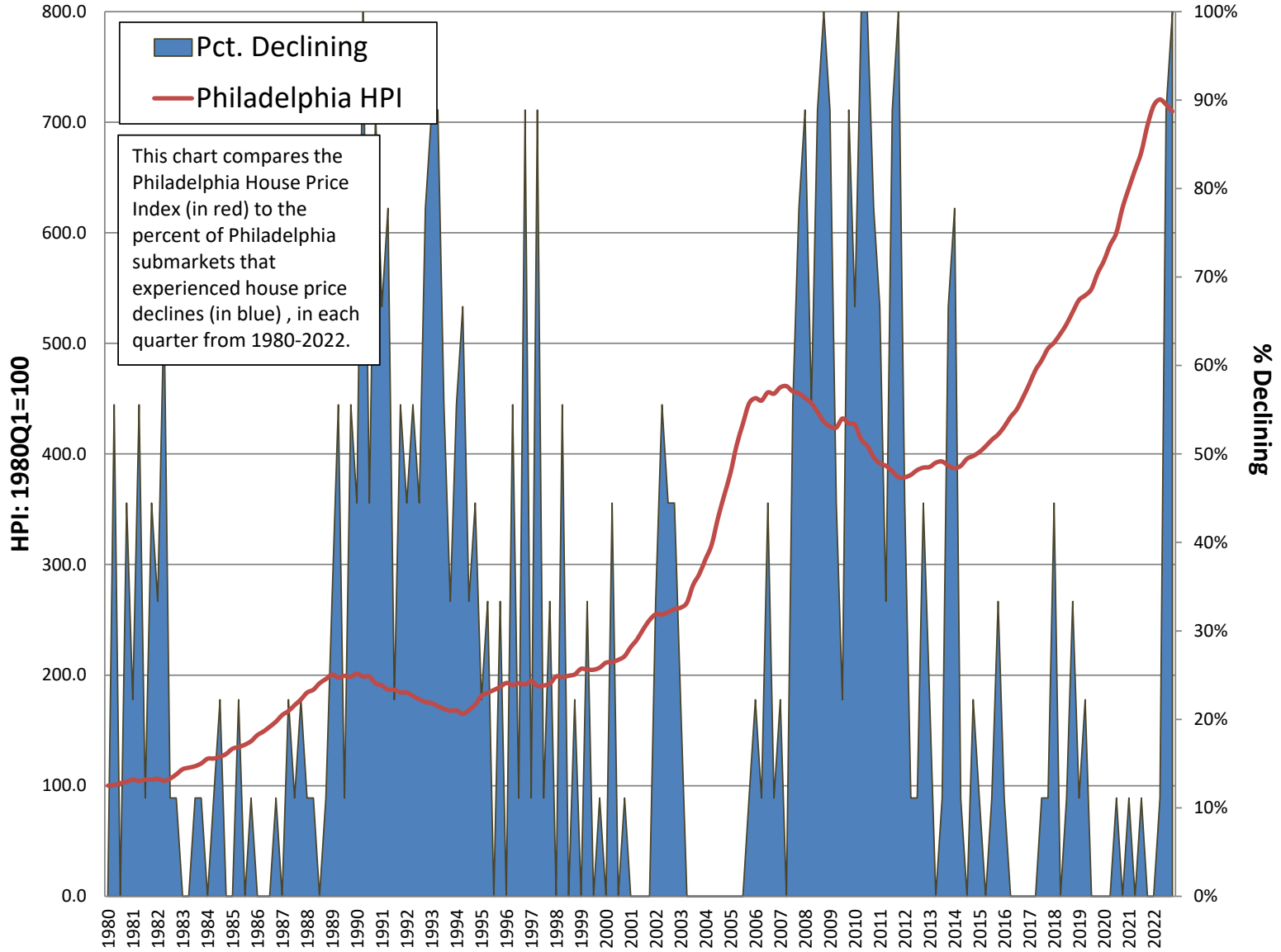


This map shows the location of all houses that sold at a recorded price of one million dollars or more in 2022 Q4.

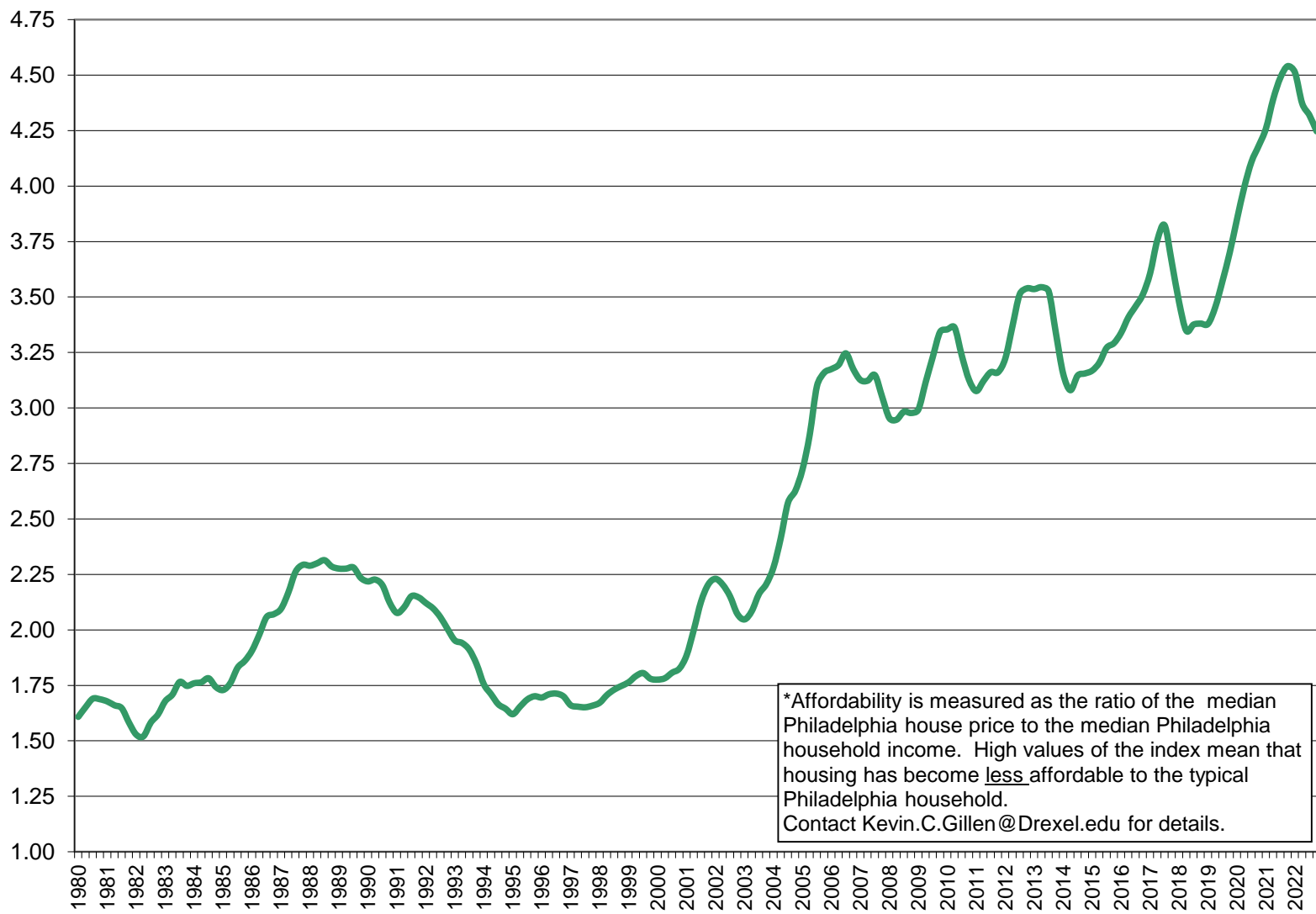
Philadelphia House Price Diffusion Index 1980-2022



Philadelphia House Prices 1980-2022: Declines v. House Price Index



Philadelphia Housing Affordability* Index: 1980-2022

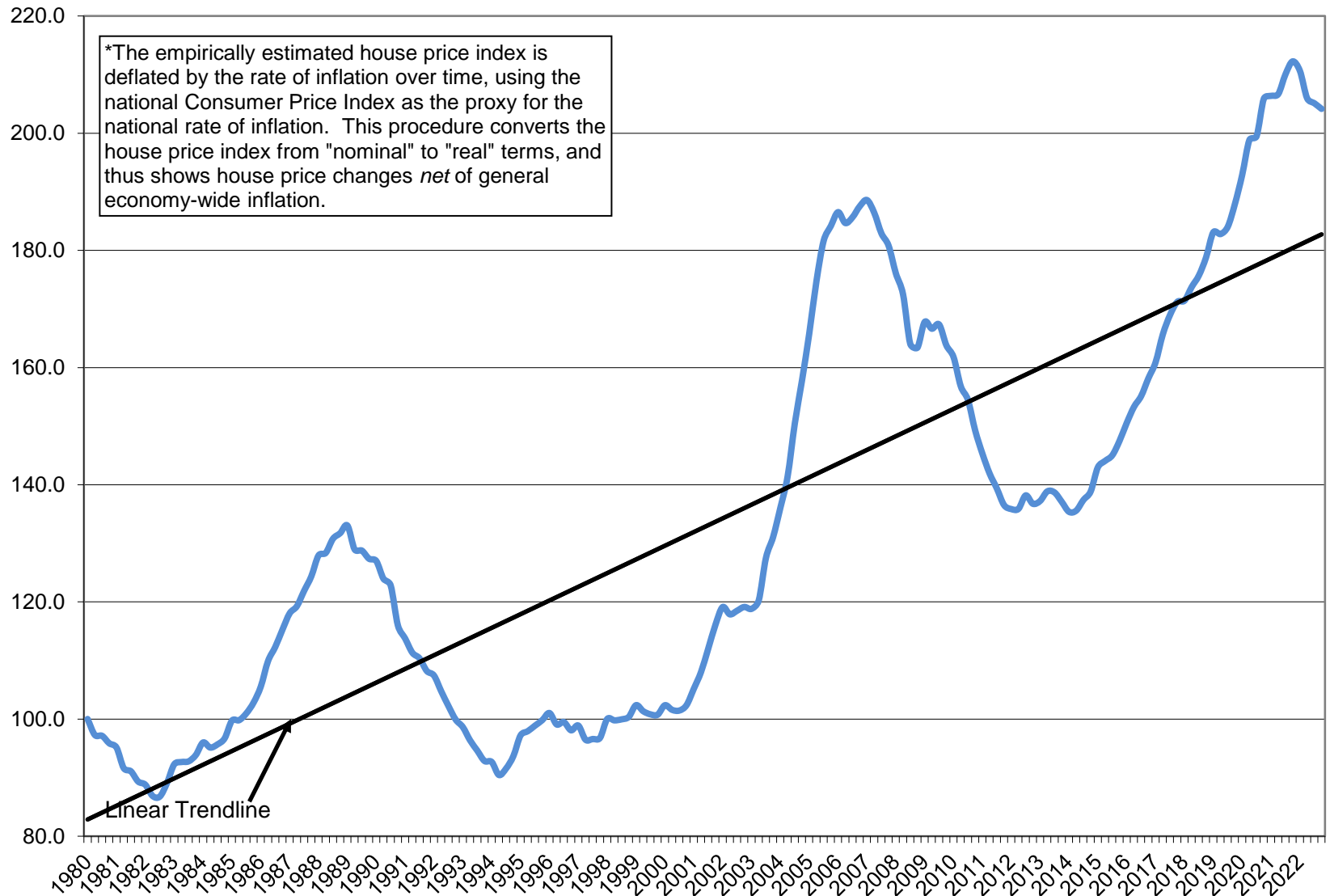


*Affordability is measured as the ratio of the median Philadelphia house price to the median Philadelphia household income. High values of the index mean that housing has become less affordable to the typical Philadelphia household.
Contact Kevin.C.Gillen@Drexel.edu for details.

Source: US Bureau of Labor Statistics

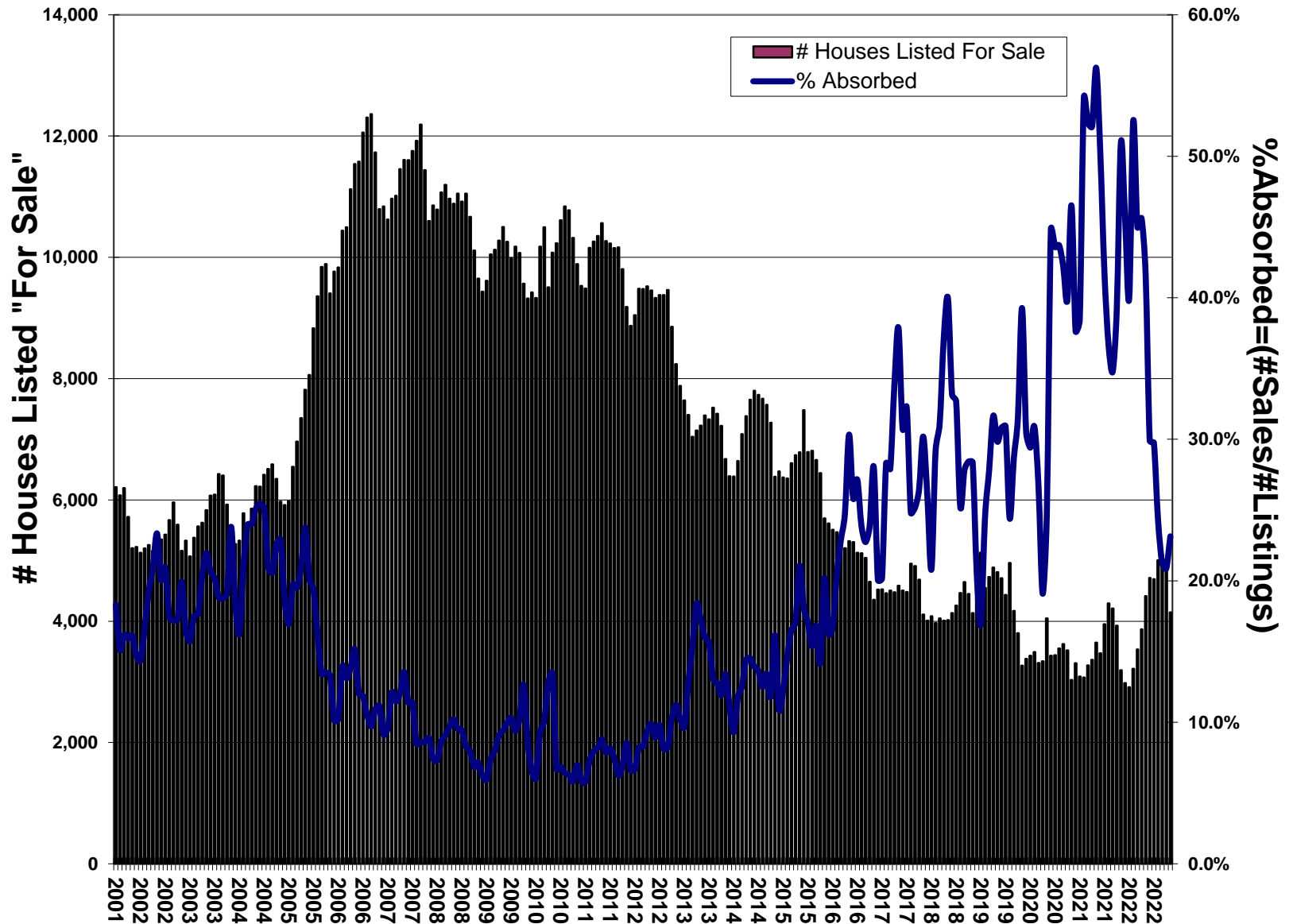
Inflation-Adjusted* Philadelphia House Price Index 1980-2022

1980Q1=100



Source: US Bureau of Labor Statistics

Philadelphia Houses Listed For Sale: Inventory v. Sales Rate

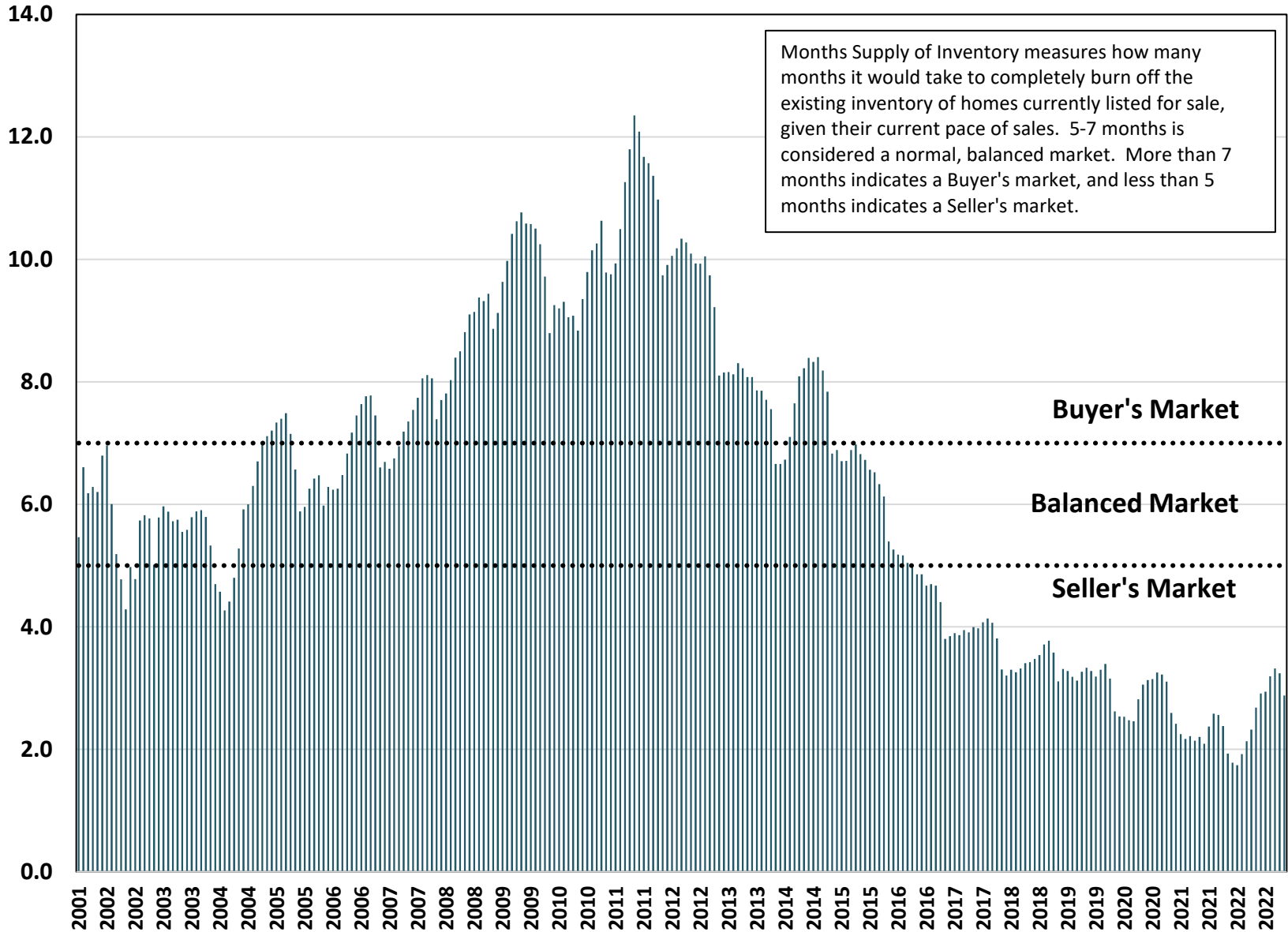


“%Absorbed” is defined as the percent of homes listed for sale in a given month that also sold in that same month.

Source: Bright MLS



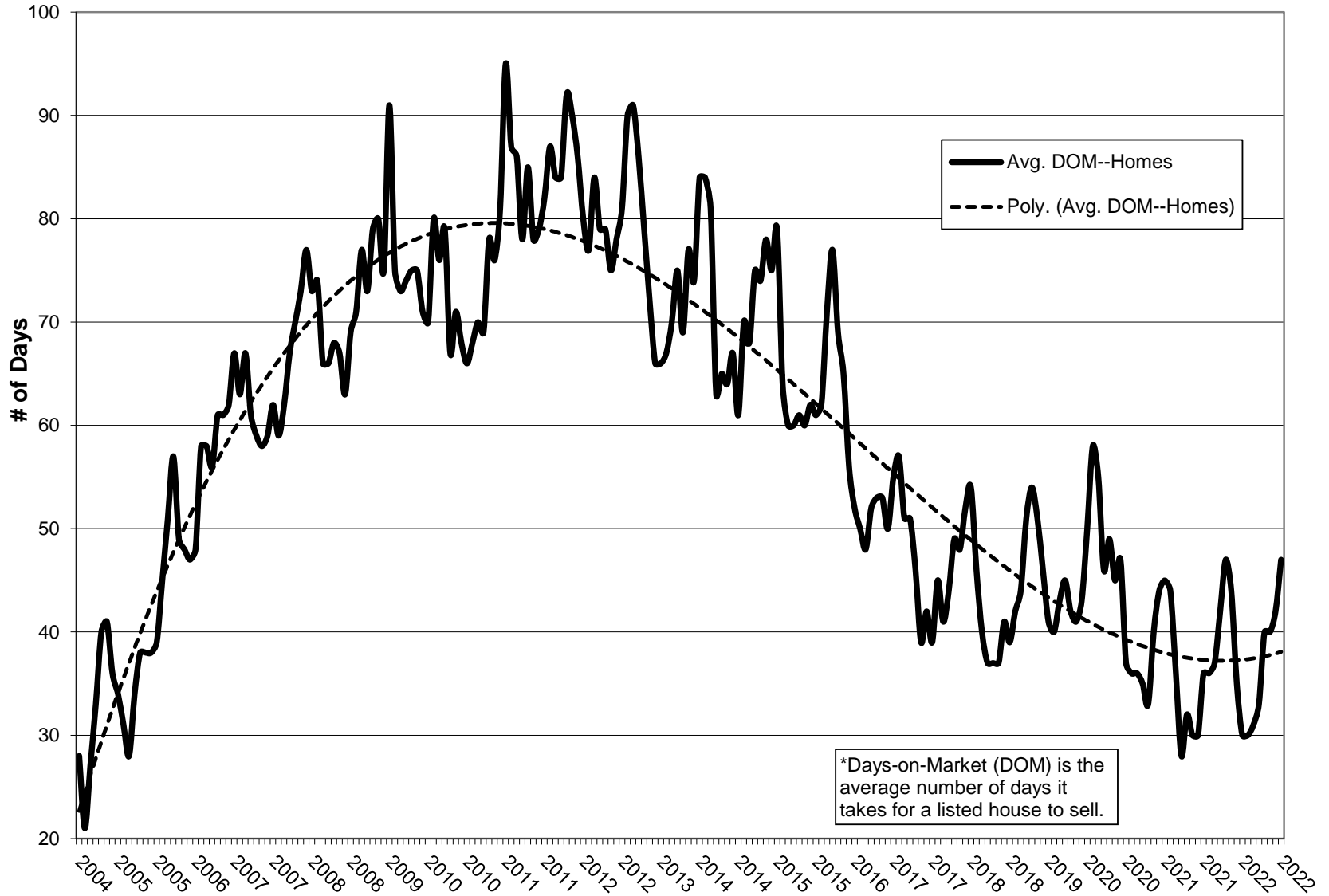
Months Supply of Inventory in Philadelphia



Source: Bright MLS



Average Days-on-Market* for Philadelphia Homes: 2004-2022

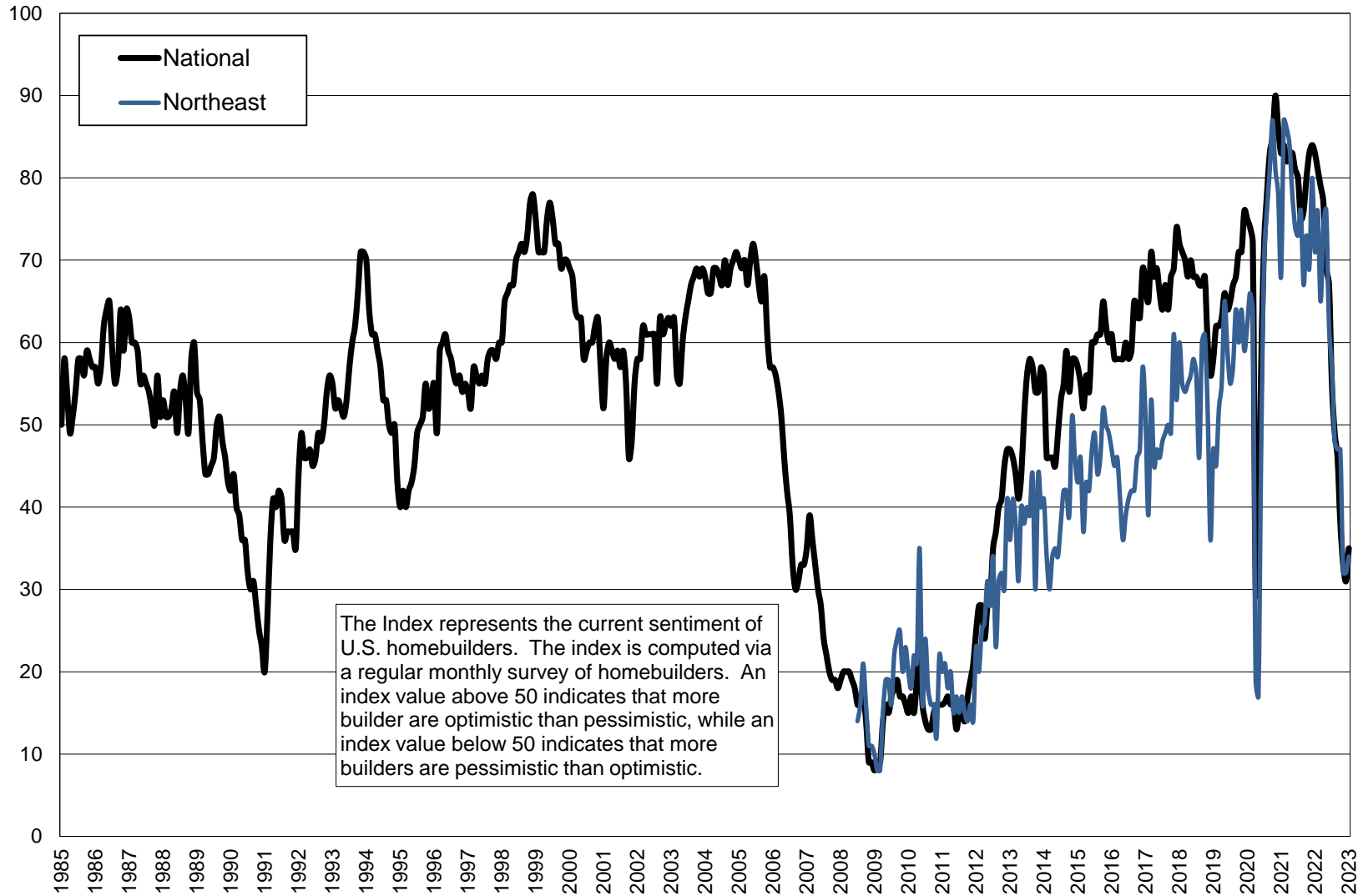


*Days-on-Market (DOM) is the average number of days it takes for a listed house to sell.

Source: Bright MLS

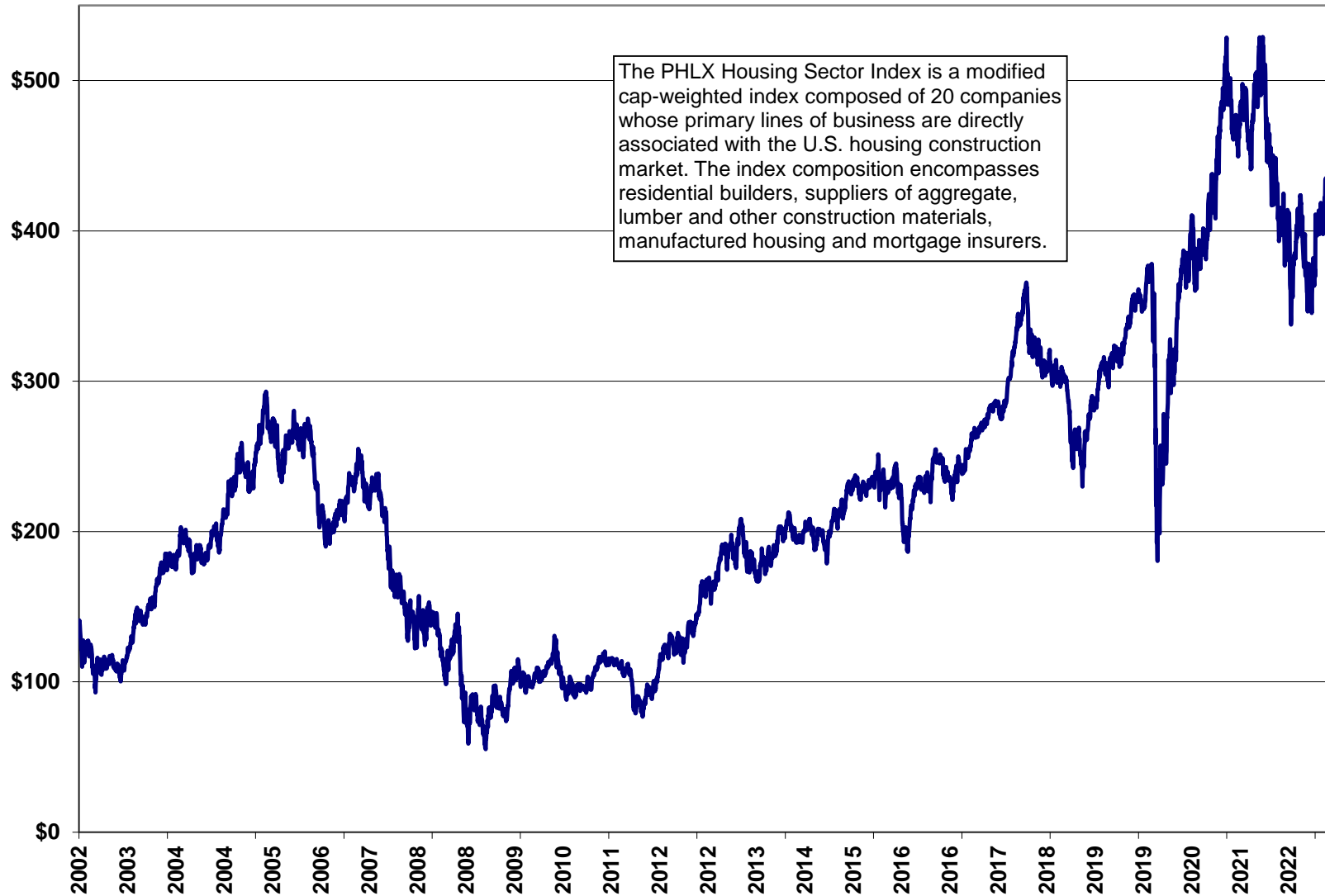


Index of Homebuilder Sentiment: 1985-2022 (Seasonally Adjusted)



Source: National Assoc. of Homebuilders (NAHB)/Wells Fargo

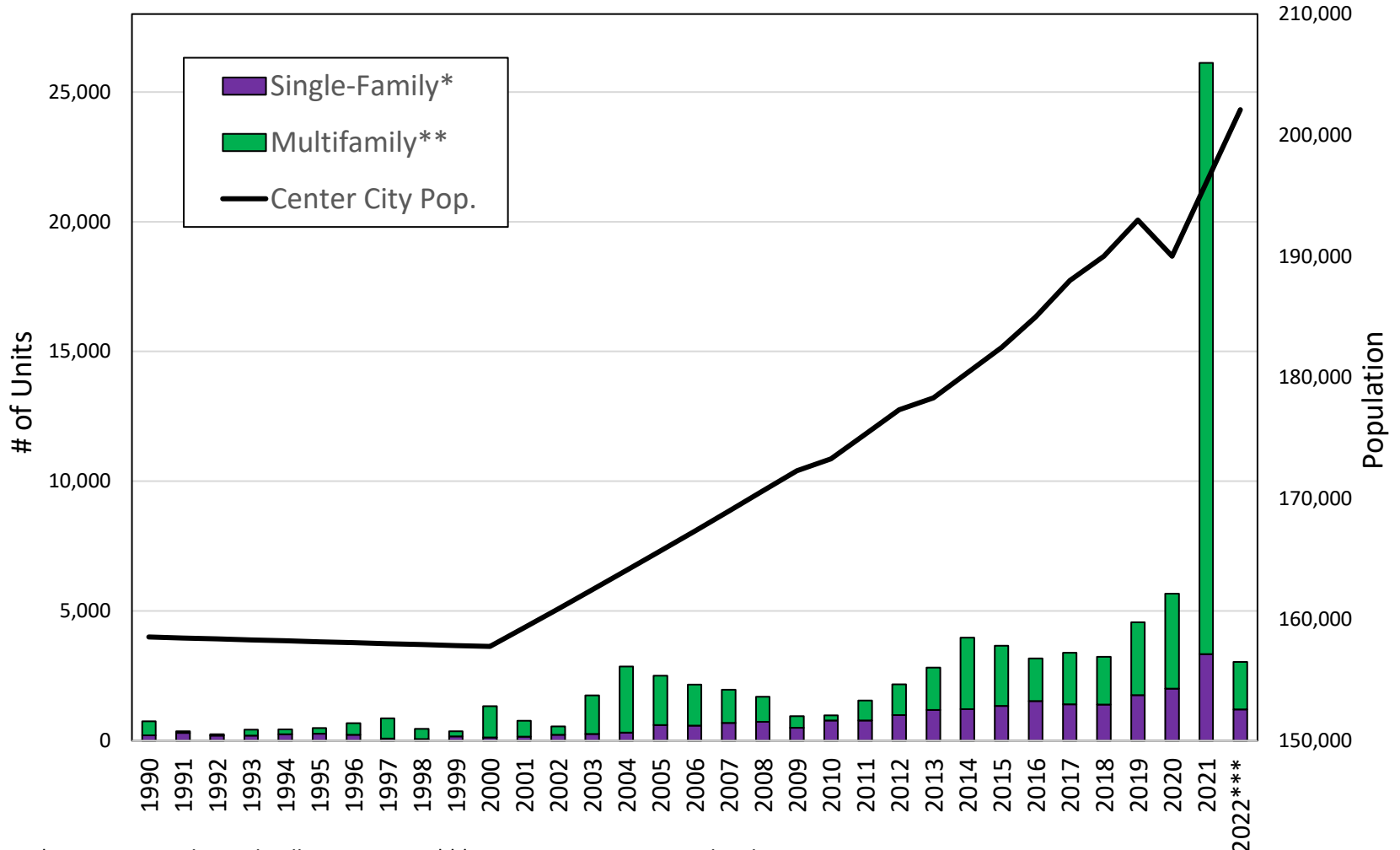
Philadelphia Stock Exchange Housing Sector Index: 2002-2023



The PHLX Housing Sector Index is a modified cap-weighted index composed of 20 companies whose primary lines of business are directly associated with the U.S. housing construction market. The index composition encompasses residential builders, suppliers of aggregate, lumber and other construction materials, manufactured housing and mortgage insurers.

Source: <https://finance.yahoo.com/quote/%5EHGX/history>

Building Permits Issued for Construction of Residential Units in Philadelphia 1990-2022: Single-Family v. Multifamily



*Structures with 1-4 dwelling units
 **Structures with >=5 dwelling units

***2022 permits are annualized using the number of permits filed YTD.

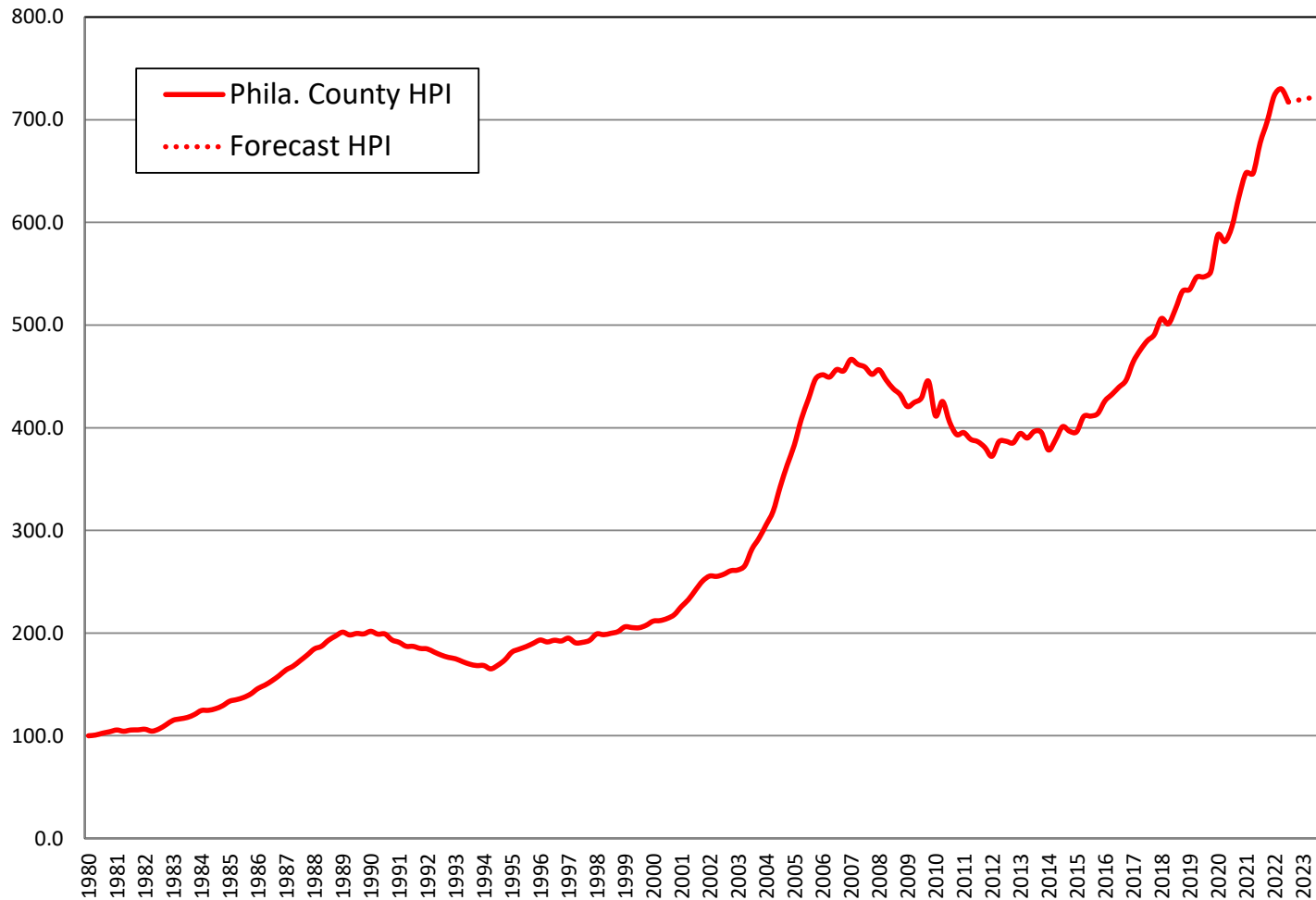
Sources: U.S. Dept. HUD
 Center City District

Note: The large spike in building permits in 2021 is due to many developers seeking approval for their projects before legislated changes to the city's 10-year tax abatement took effect when the new year rolled over.



Philadelphia House Price Index and 1-Year Forecast

Philadelphia House Price Index: Actual v. Forecast



Zillow's most recent forecast projects an increase of 0.7% in Philadelphia's general level of house prices over the next 12 months. This is a substantial downgrade from their previous forecast of 6.2% released in the previous quarter, which was also a substantial downgrade from that quarter's previous forecast of 12%.

Source: <https://www.zillow.com/research/data/>