Revisions to Second District Banking Markets

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I. Contents:

II. How 2nd District Banking Markets Are Defined

We largely follow FRBNY's (1994, 2006) historical three-step process for defining market boundaries, but introduce a methodological innovation in step two. First, we use Journey to Work data (previously from the Census, now from the American Community Survey) to define market cores according to the same criteria used in prior years. Second, we repeatedly identify the two most highly integrated counties in our sample and merge them into one market, with the restriction that two cores cannot be merged, until only single-core markets remain. (This approach has desirable characteristics relative to the previous method, which we describe in detail later.) Third, we split counties that, according to our established thresholds, have significant interchange between two markets. We elaborate on all three steps below.

Step One: Establishing Cores

In approaching defining markets, Financial Intermediation assumes that a market comprises a core with its surrounding counties/townships. Every county is eligible for core status (except that the five boroughs of New York City are evaluated as a single entity and not as five distinct counties). As in previous years, we base this designation upon two employment and residency ratios, under the assumption that cores should be net importers of labor, and should employ a significant percentage of their own residents. Formally, this can be written as follows: Suppose a given county, C, is being considered as a market core. Let E = people employed in C, and W = workers living in C. To be a core, county C must have more people working in it than living there; i.e., $E/W \geq 1.0$. This criterion captures that that the county is a net importer of labor. Then let B = people both working *and* living in C. To be a core, county C must employ 80% of its own workers; i.e., $B/W \geq 0.8$. If these requirements are not perfectly met, a county might still be a core based on historical precedence and FRBNY's discretion.

Step Two: Merging by Integration

After identifying the cores, we allocate the remaining counties into markets based upon commutation rates between counties. The underlying theory is that if a given person lives in county A, and works in county B, then he or she could likely bank in either place which implies that banks in A and B are in competition, i.e., they are in the same market. For each county A/county B pair, we calculate commutation between A and B as the number of people living in A who work in B, plus the number of people living in B who work in A, divided by the population of workers living in A.

Historically, FRBNY has used a core + tier approach to market definition, wherein, after determining the core, we evaluated adjacent counties for tier 1 status based upon their commutation ratios to the core. Then the next group of counties adjacent to the core and tier 1 were examined to determine if they had

sufficient commutation to be labeled tier 2. This process continued until all counties were grouped into markets.

While the core + tier approach has served well, it has two potential problems. The first is that it implicitly assumes that markets tend to proceed radially from the core. If a county is adjacent to core A and a few counties away from core B, given its proximity to A it will be considered for—and if the ties are sufficiently strong, granted—tier 1 status relative to A, even before the strength of its relationship to B has been considered. And the second is that, if a county is adjacent to two markets, it is not clear which market it should be considered first. Eventually, it would likely be split between both, but in the interim its inclusion in one market could affect other counties' commutations to both markets in question.

Both of these issues, broadly speaking, relate to ordering. Since adding county A to a market affects other counties' commutation rates to that market (by virtue of their commutation to A), given a set of market cores and unassigned counties, which county should be assigned first? To see the importance of ordering, consider the situation where one county has marginally stronger ties to market A than to market B. In this situation, if that county is the first assigned to a market, it would be assigned to A. This may cause other counties' ties to A to increase, potentially leading them to be included in market A as well. That, in turn, could strengthen other counties' ties to A, repeating the process, and amplifying the impact of that initial decision. At the end, A could be considerably larger than B, all because the original county had marginally stronger ties to A.

Then consider the situation where one county has very strong ties to market A, and weak ties to every other market, including B. In this situation, assigning that county to market A before considering other counties seems justified. Linking the the county to A does not greatly affect future questions of how to assign other counties, and since the county and A have such strong ties, it should certainly be placed in market A eventually. This approach—identifying and assigning the county with the most lopsided ties to one market—simplifies the overall problem by reducing the number of geographies to be considered by one. The simplified problem can then be addressed the same way, leading to a further simplified version, until all the counties have been assigned.

We adopt this approach. We begin with the county with the strongest unilateral ties to another, and merge the two together. More specifically, we identify the county with the greatest differential between its top two commutation rates and merge that county in with its highest-commutation partner, repeating this process until there are no more unassigned counties. Since each market can only have a single core, the number of remaining markets will equal the number of cores.

The downside of this approach is that it does not assign tier statuses to counties in a market. However, in practice, tiers are rarely if ever referenced in antitrust analysis by the FRBNY.

Step Three: Splitting Counties

Though many counties are strongly connected to only one market, some exhibit significant commutation in two directions, and thus need to be divided between markets. Following FRBNY (1994, 2006), counties are split if either: 1) the difference in interchange between the county and two different markets is less than 10 percentage points, *or* 2) the county has interchange exceeding 15 percentage points toward a second market. Given 1) or 2), FRBNY (1994, 2006) divided counties by population in proportion to the ratio of interchange toward each direction. For example, suppose interchange from county X to markets A and B is 20% and 35%, respectively. County X does not qualify for splitting based on test 1 (since the difference in interchange is greater than 10 percentage points), but County X does qualify for splitting based on test 2 (since interchange toward both markets is greater than 15%). Following FRBNY's (1994) pro rata rule for splitting, approximately 0.2/(0.2+0.35) of the population of County X would be assigned to market A, with the balance assigned to B.

Since township-level commuting data was not made public under the new American Community Survey system, when dividing counties we rely on the assumption that proximity to a market is correlated with commutation to that market; i.e., if we are splitting a county in half between two markets, we will divide the townships based on distance from the relevant markets. We also, on the margin, try to allocate townships so as to maintain a clean boundary. Though this is not a perfect system, we believe it is a better approximation than relying solely on whole counties. In situations where there is a question, outside evidence—local newspaper flows, etc.—can be consulted to verify the boundary.

Inter-District Markets

A perennial concern is how to define markets that cross Federal Reserve District boundaries. Since district boundaries tend to be determined by state borders rather than geographical barriers to competition (one notable exception is the New York-Vermont border), there is generally no reason to believe that bordering counties in different districts are not actually in the same market, or that a market core in one district could not be strongly economically integrated with a county deep inside another district.

In the past, FRBNY dealt with this by identifying market boundaries within the Second District and then coordinating with other districts to determine whether particular counties, or portions of counties, should cross state of district lines. In practice, multiple counties from New Jersey, some from Connecticut, and counties or portions of counties from Pennsylvania were determined to be part of Second District markets. Since the final decision must be agreed upon by the various Federal Reserve districts, each of which employs a different method for determining market boundaries, the final structure will be established in a process

similar to past years. However this time, as a starting point, we decided to determine cores and calculate market boundaries using the Second District and each adjacent state as the original sample.

After conducting that analysis, and after communicating with market analysts from neighboring Federal Reserve districts—the First, Third, and Fourth Districts—we have decided on the results below.

III. Changes to 2nd District Banking Market Definitions

Tri-State Area Markets

By and large, the 2014 Second District banking market definitions closely resemble the 2005 definitions (Maps 1 and 2). The most important change is that the Second District (non-Virgin Island and non-Puerto Rico) lost two banking markets (Oneonta and Elmira-Corning) and gained a new one (Franklin). The former Elmira-Corning market comprised all or part of Chemung County, Steuben County, and Schuler County; Chemung and Steuben Counties are now in the Rochester market, while Schuler County is now divided between the Rochester market and the Ithaca market. The former Oneonta market comprised all of Delaware and Otsego counties, and part of Chenango County. Those counties are now part of the Binghamton market.

The new Franklin market comprises all of Franklin County and the western part of Essex County. Franklin County has an E/W ratio of 1.02 and a B/W ratio of 0.82 so it qualifies as a core by traditional FRNBY standards. The Franklin County seat is Malone, which is a Micropolitan Statistical Area. It is served by two airports: the Adirondack Regional Airport in Saranac and the Malone-Dufort Airport in Malone. There are two colleges in Franklin County: North County Community College and Paul Smith's College. The county population is 51,599 as of the 2010 Census.

The changes just described means there are now 13 markets instead of 14 in the Second District. It is important to note that since the commuting thresholds used to calculate cores (which determine the number of markets) did not change, this change in the number of markets is due to changes in commuting patterns, as opposed to the change in methodology described above.

Changes to the Metro market definition

The new metro market definition now includes two additional New Jersey counties that were previously counted as part of a Fourth District market: Burlington and Wayne (Maps 3 and 4). Warren County, PA, which was previously entirely in the Fourth District, is now split between the Fourth and the Second District Metro market definition. Three New Jersey counties (Mercer, Hunterdon, and Monroe) previously counted in the Second District are now split with the Fourth District. On the eastern front, very little changed: Two Connecticut counties, New Haven and Litchfield, are both still split between Second and First District markets, as before.

Other changes to the Tri-state area market

Genesee County is now split between the Erie and Monroe markets; Lewis County is no longer split; and Greene County and Columbia County are both split

between the Albany and NY Metro market. All other changes are relatively minor (individual townships that changed markets, etc.).

Except for Lewis County, all the counties that were split in 2005 were also split this year. However, the precise boundary in many cases changed due to changed commutation patterns. For the precise market definition, analysts should consult the complete market definitions in the appendix.

Changes to the Puerto Rico and the U.S. Virgin Island Markets

With respect to Puerto Rico and the Virgin Islands, FRBNY (2006) evaluated Metropolitan Statistical Areas for core status, rather than considering all municipios (the Puerto Rican county-level designation). We largely do the same by treating each MSA as one region to be evaluated for core status; however, we also allow the remaining municipios, and the municipios of MSAs that did not qualify as cores, to be considered. Since MSA definitions have changed since 2005, we list them here: San Juan-Carolina-Caguas, Aguadilla-Isabela, Arecibo, Guayama, Mayaguez, Ponce, and San German. Of those, San Juan, Guayama, Mayaguez, and Ponce reached the thresholds for core status. Vieques and Culebra, two islands east of mainland Puerto Rico, also met the requirements. Though we do not have commutation data on the U.S. Virgin Islands of St. Croix, St. Thomas, and St. John, we follow FRBNY (2006) in making St. Croix its own market, and St. John and St. Thomas their own market.

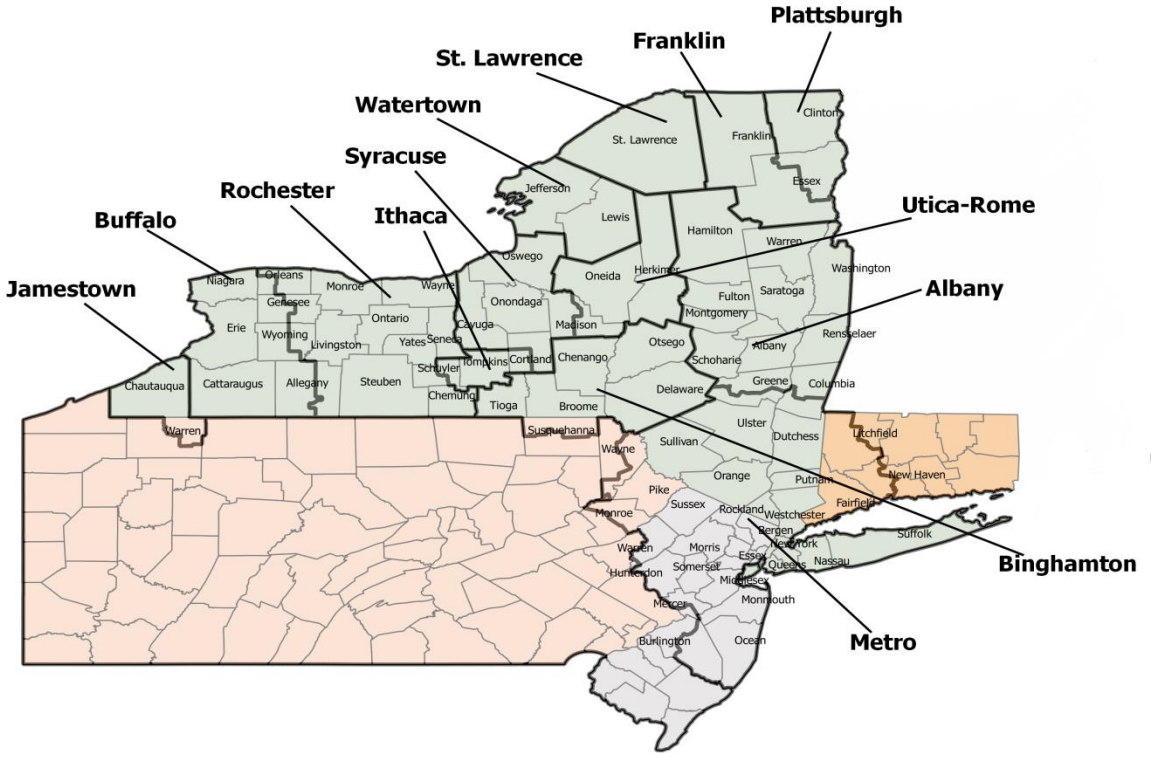
This means that, as in 2005, there are four mainland Puerto Rican markets (Maps 3 and 4). However, instead of Aguadilla and Mayaguez's being separate, they are now combined into the Aguadilla-Mayaguez market, and instead of Guayama's being a part of the San Juan market, it is now freestanding. There are now two non-mainland PR markets, Culebra and Vieques. And as before, there are two U.S. Virgin Island markets, St. Croix, and St. John/St. Thomas. As in FRBNY (2006), we do not split municipios along the township level, so the only other differences between the 2005 Puerto Rico boundaries and the 2014 boundaries are that Lares is now in the San Juan market, Jayuya is now in the Ponce market, and Salinas is now in the Ponce market.

Appendices

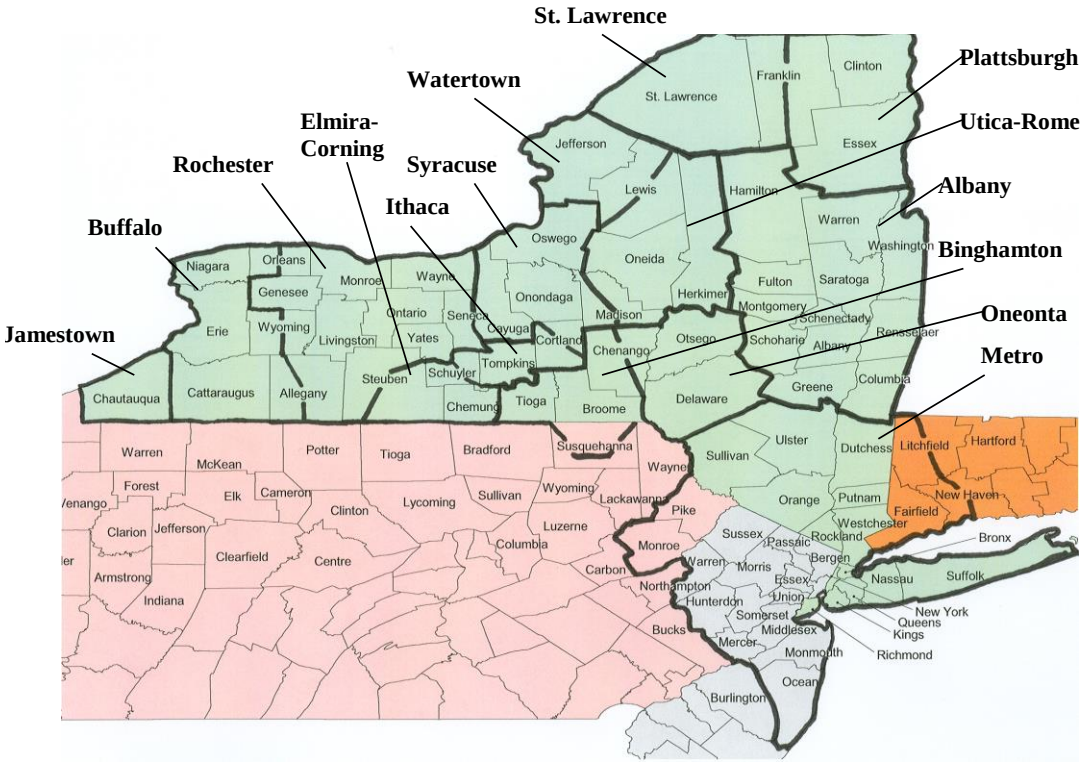
The maps in Appendix 1 (Map 7 – 24) compare how counties were split in 2005 to how they are split based on the latest commuting data. As noted above, we used the same criteria for splitting counties as in 2005 so the all the changes in how the counties were split is due to changes in commuting patterns since 2005. The split counties in are Allegany, Cortland, Litchfield, Madison, New Haven, Orleans, Schuyler, Susquehanna, and Wyoming.

IV. Comparison Maps (2014 vs 2005)

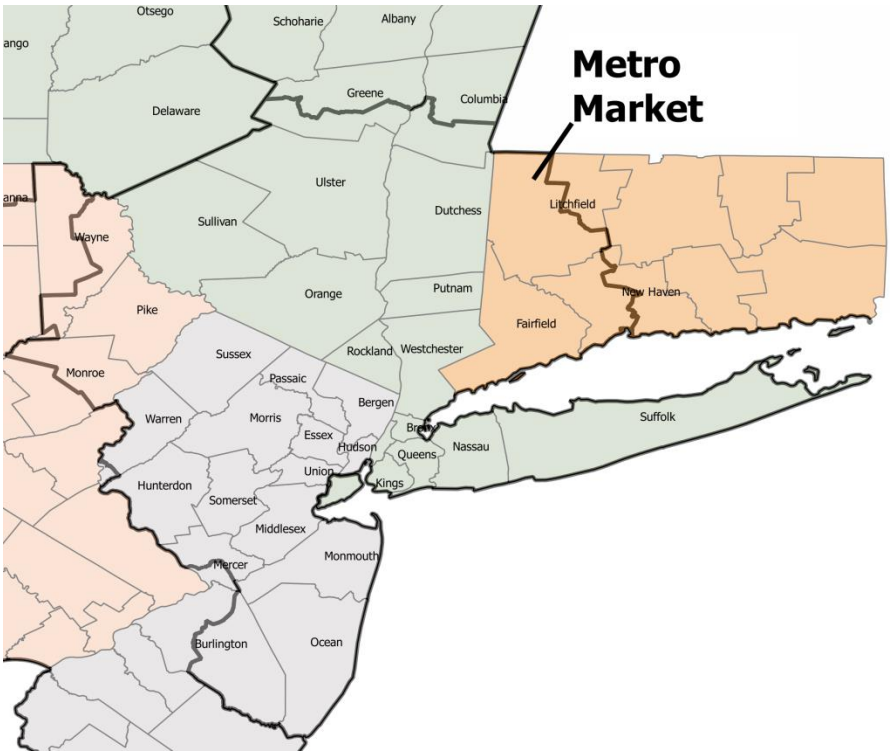
Map 1: 2014 Market Boundaries in the New York Area



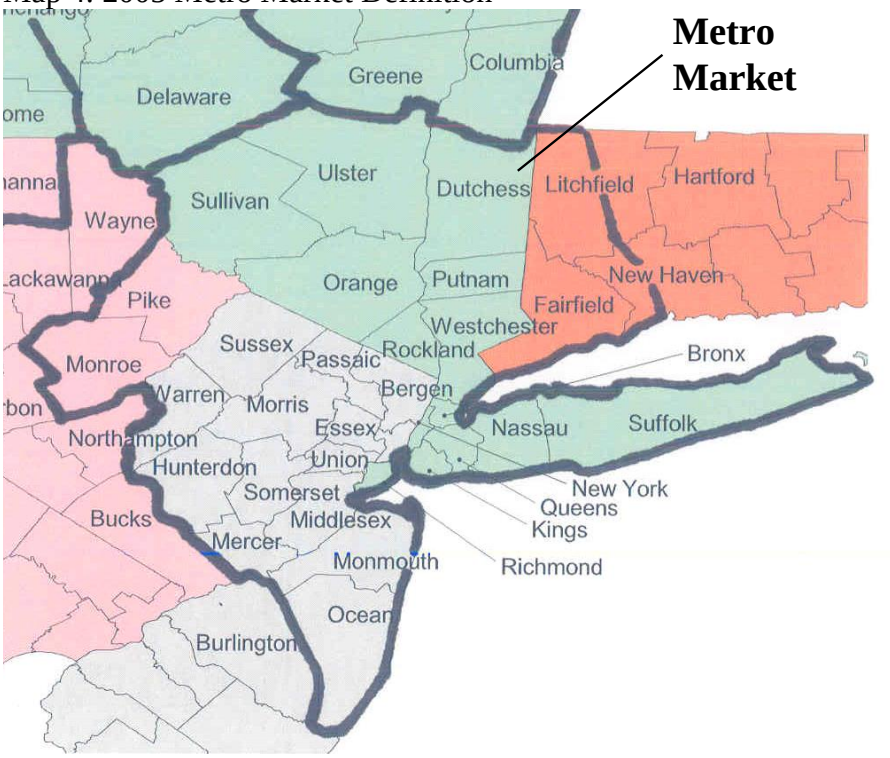
Map 2: 2005 Market Boundaries in the New York Area



Map 3: 2014 Metro Market Definition

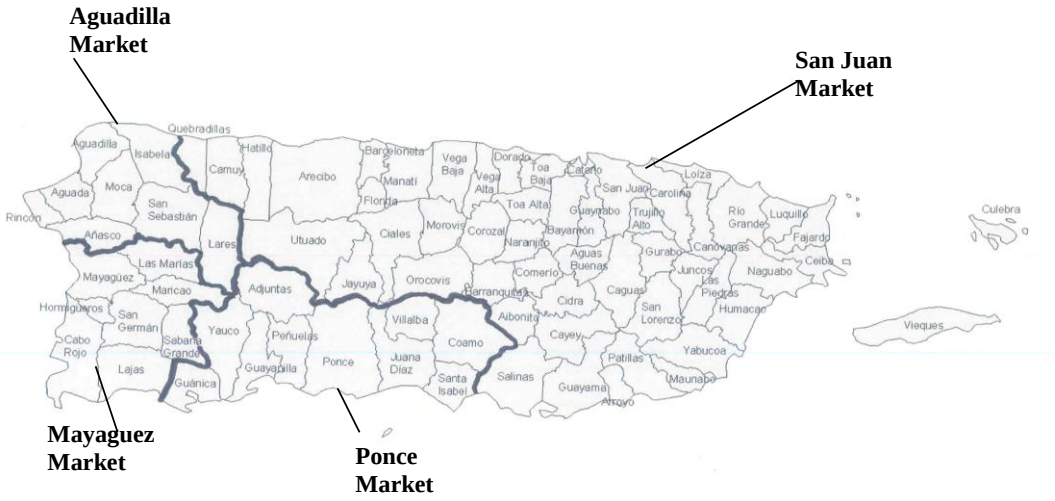


Map 4: 2005 Metro Market Definition



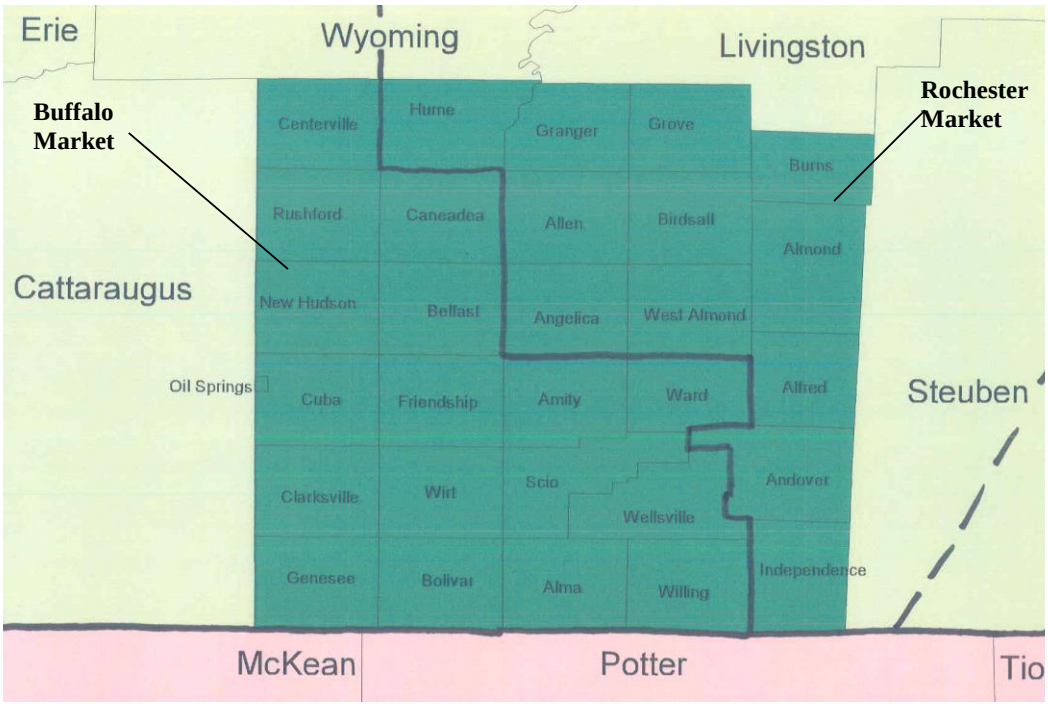
Map 5: 2014 Puerto Rico Market Definition

Map 6: 2005 Market Boundaries in Puerto Rico

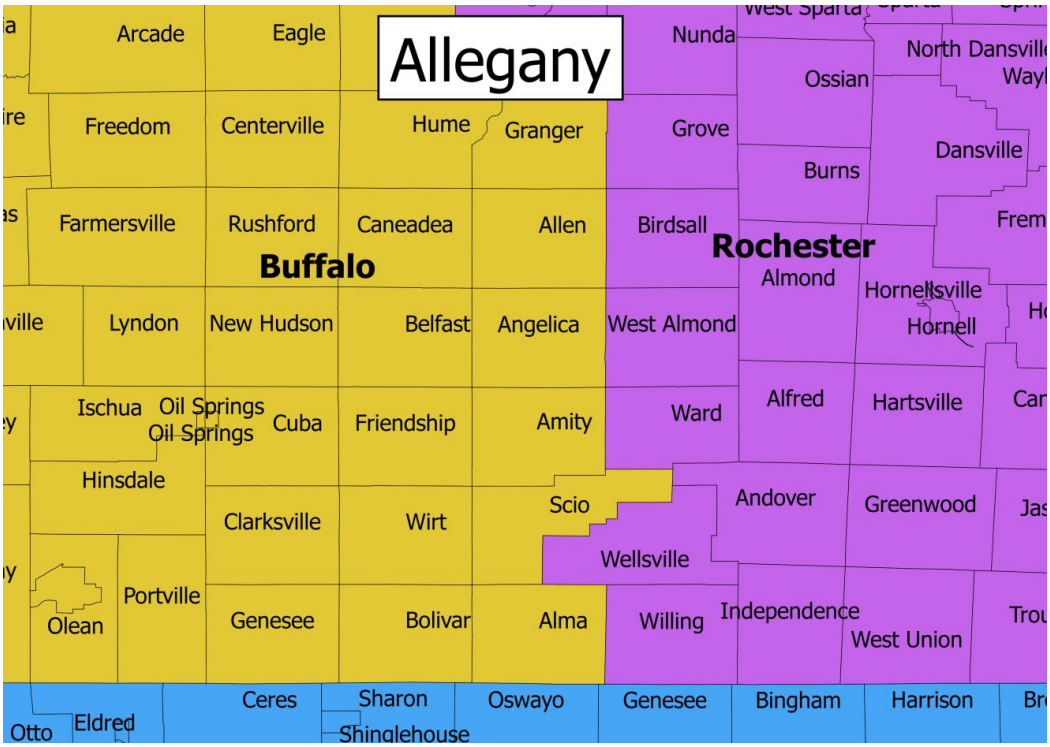


V. Comparison Maps of Counties Split in both 2005 and 2014

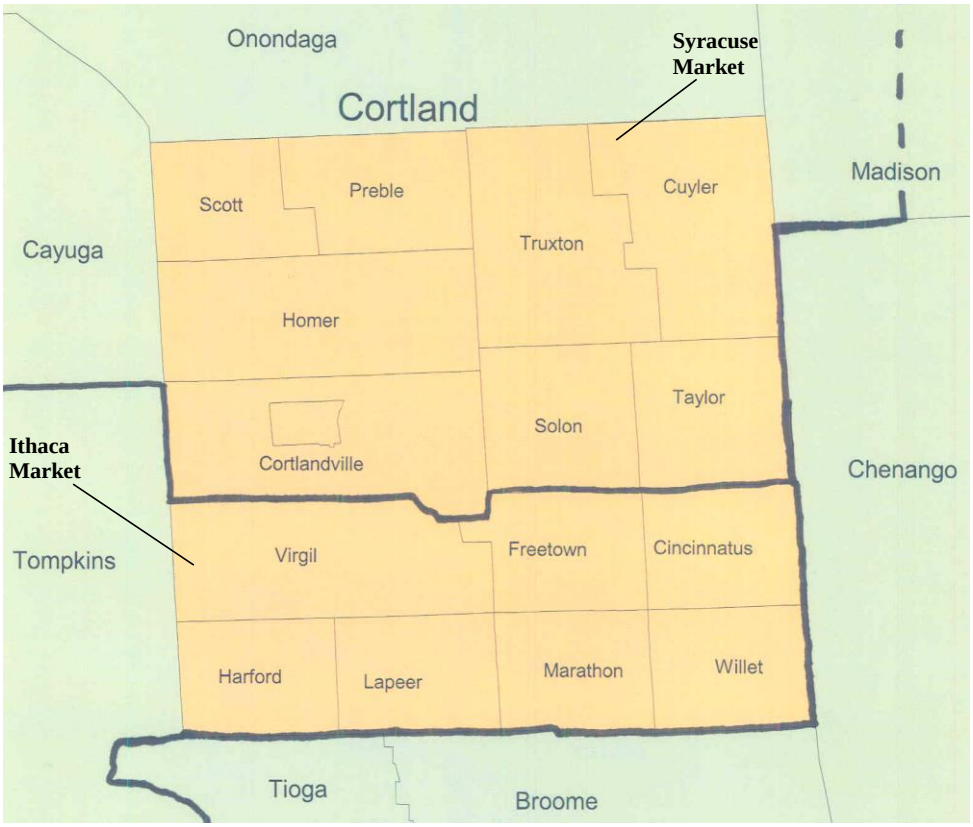
Map 7: 2005 Market Boundaries in Allegany County



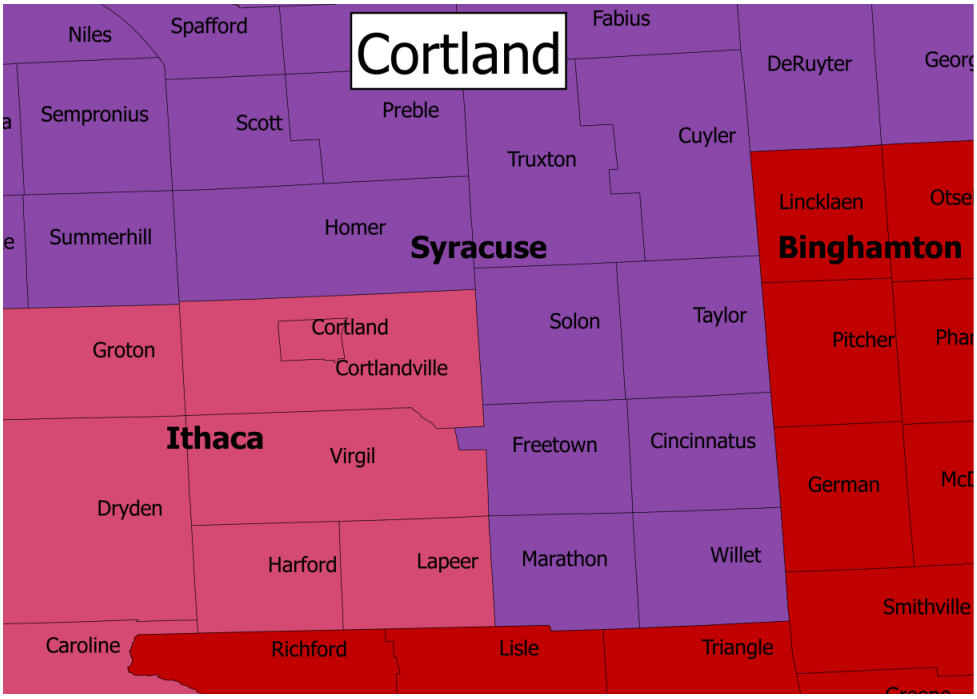
Map 8: 2014 Market Boundaries in Allegany County



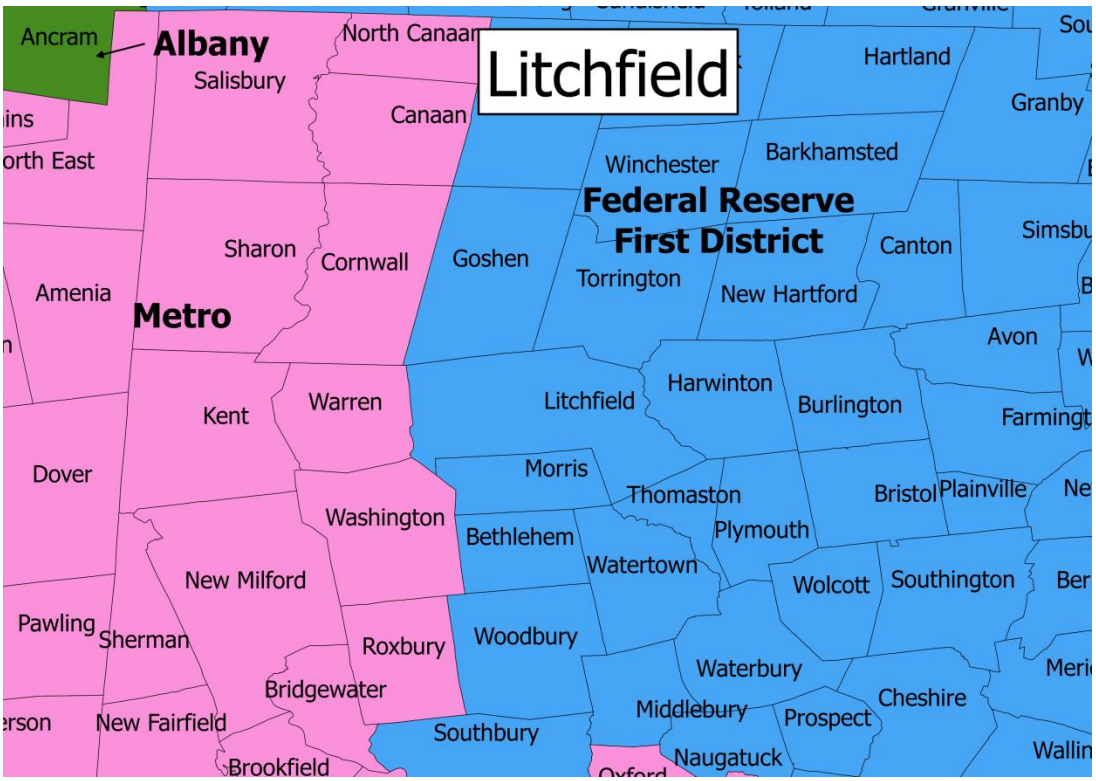
Map 9: 2005 Market Boundaries in Cortland County



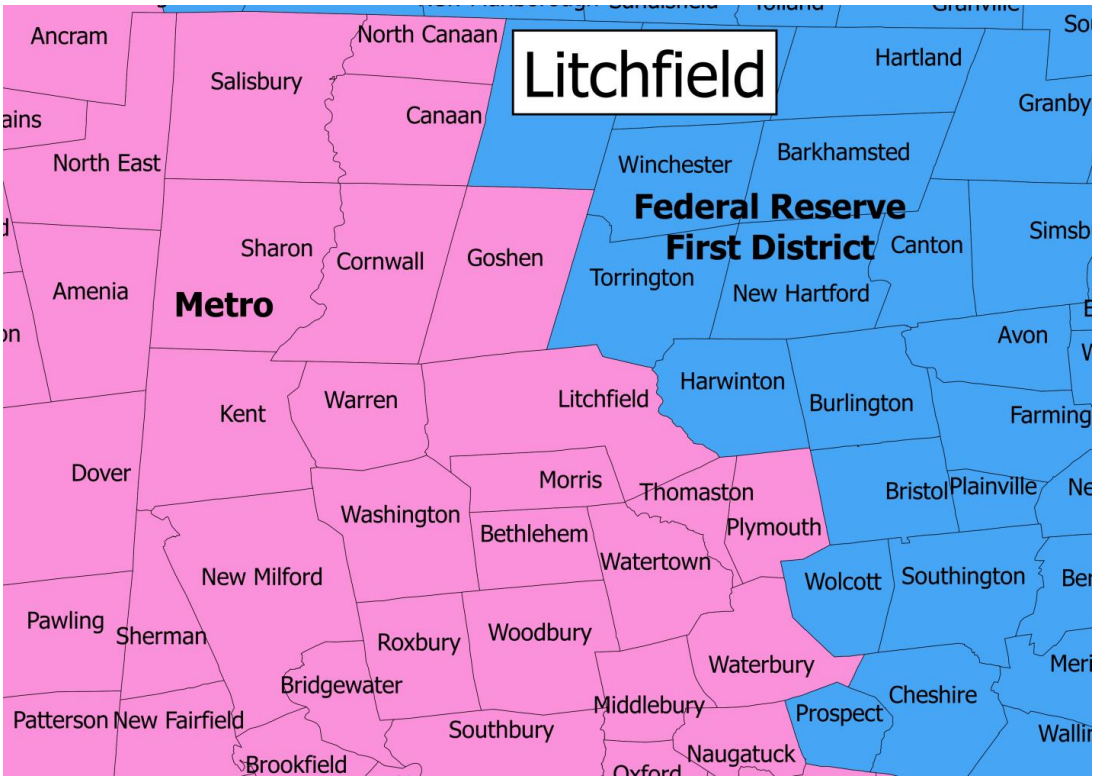
Map 10: 2014 Market Boundaries in Cortland County



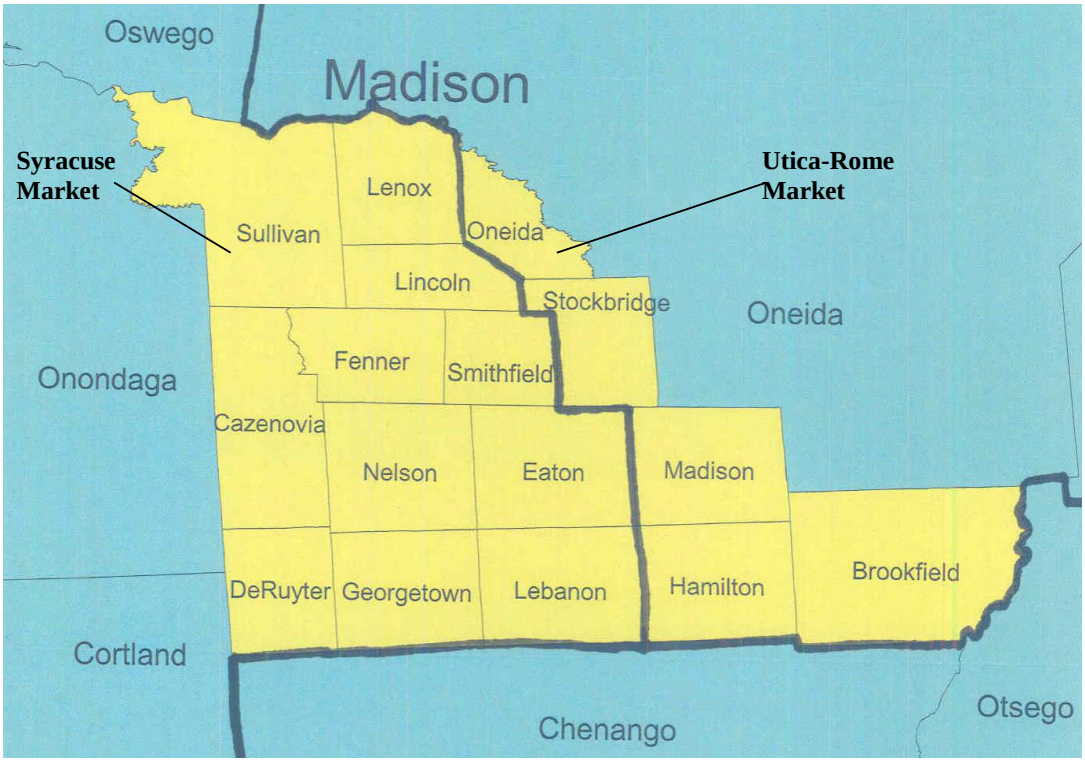
Map 11: 2005 Market Boundaries in Litchfield County



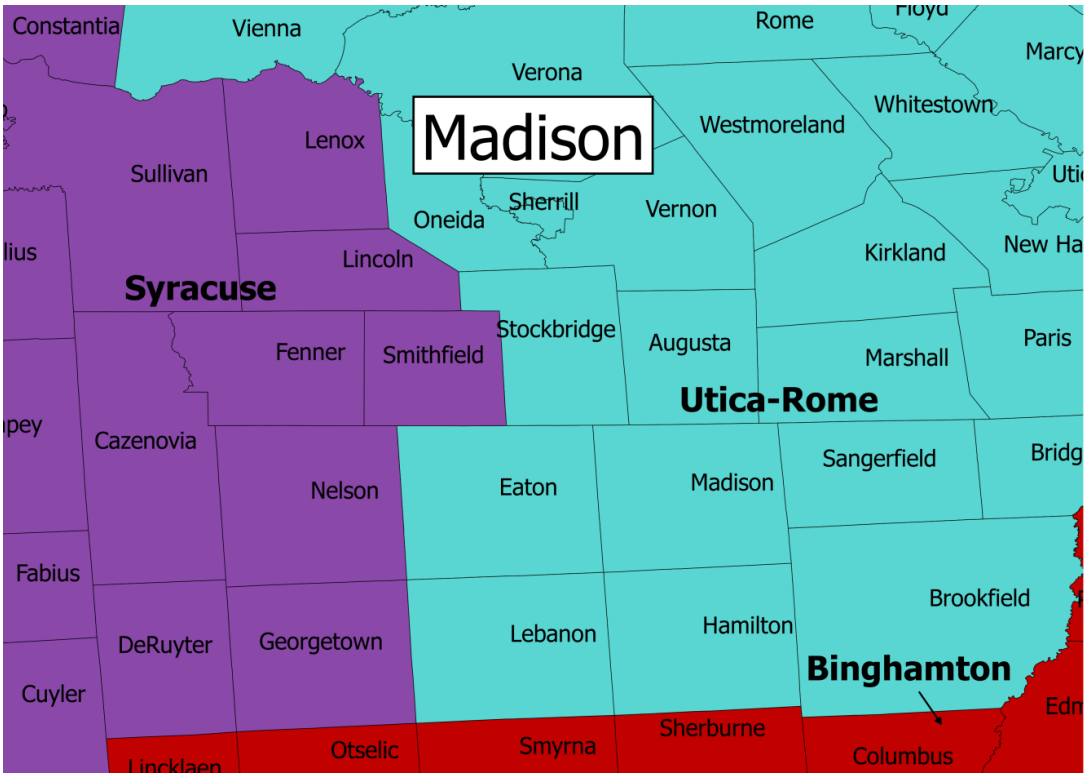
Map 12: 2014 Market Boundaries in Litchfield County



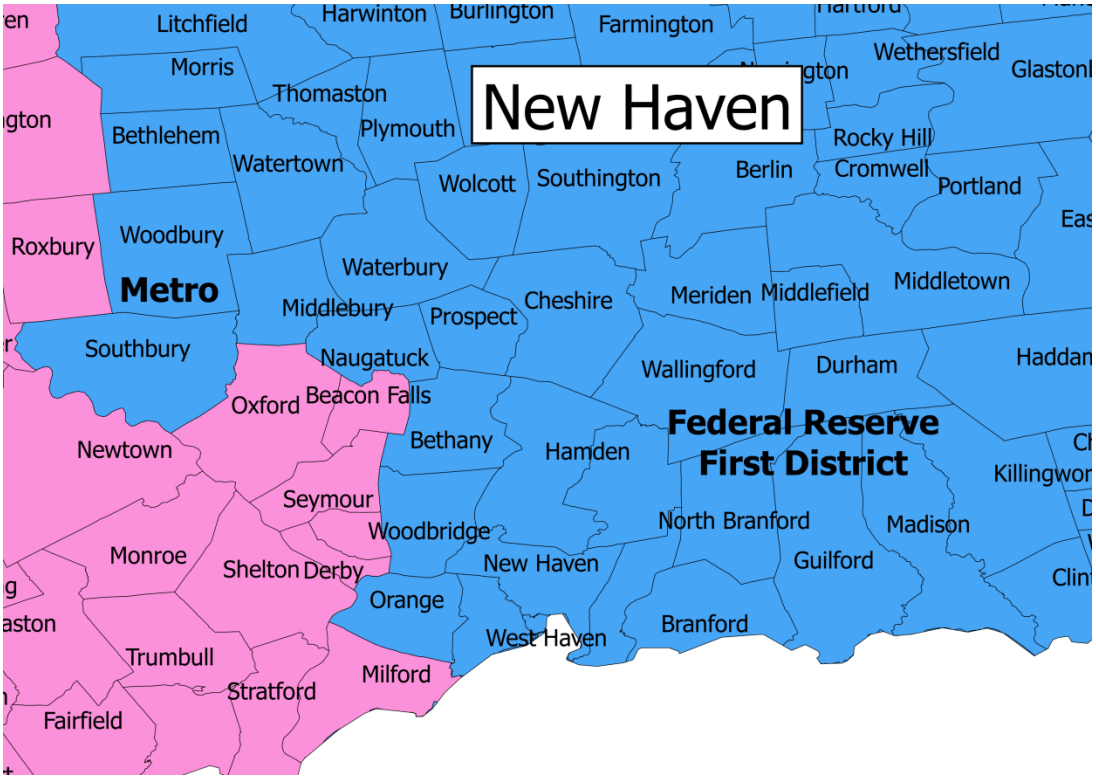
Map 13: 2005 Market Boundaries in Madison County



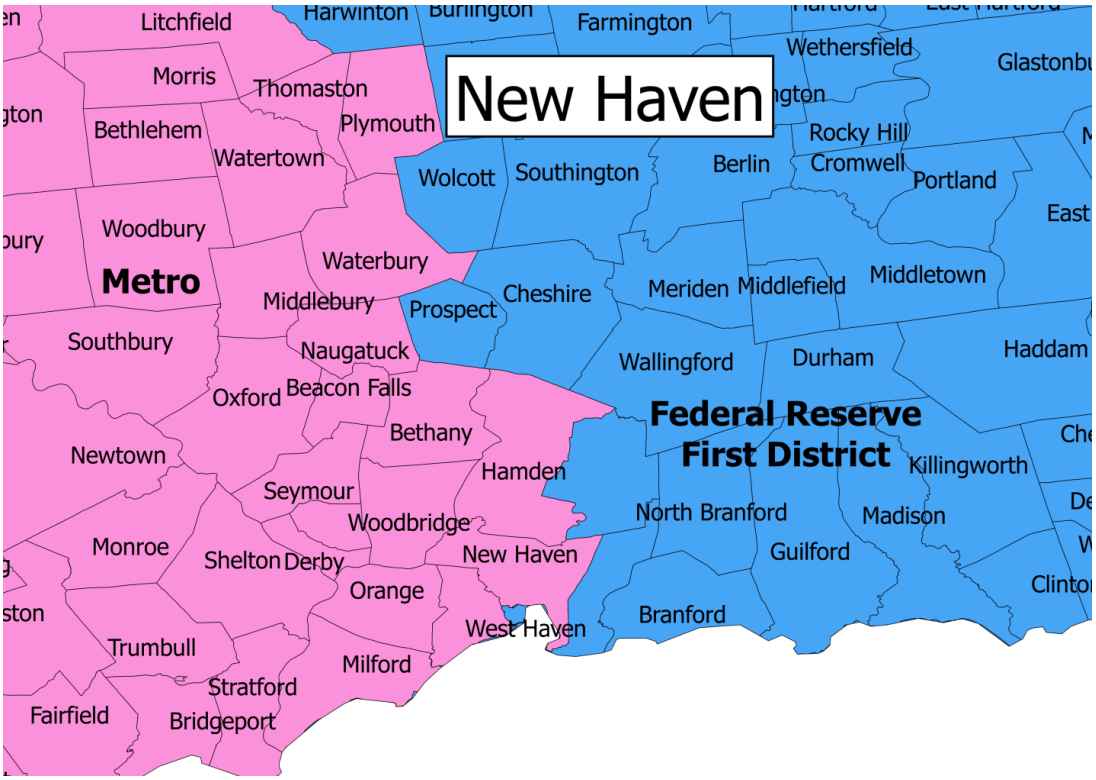
Map 14: 2014 Market Boundaries in Madison County



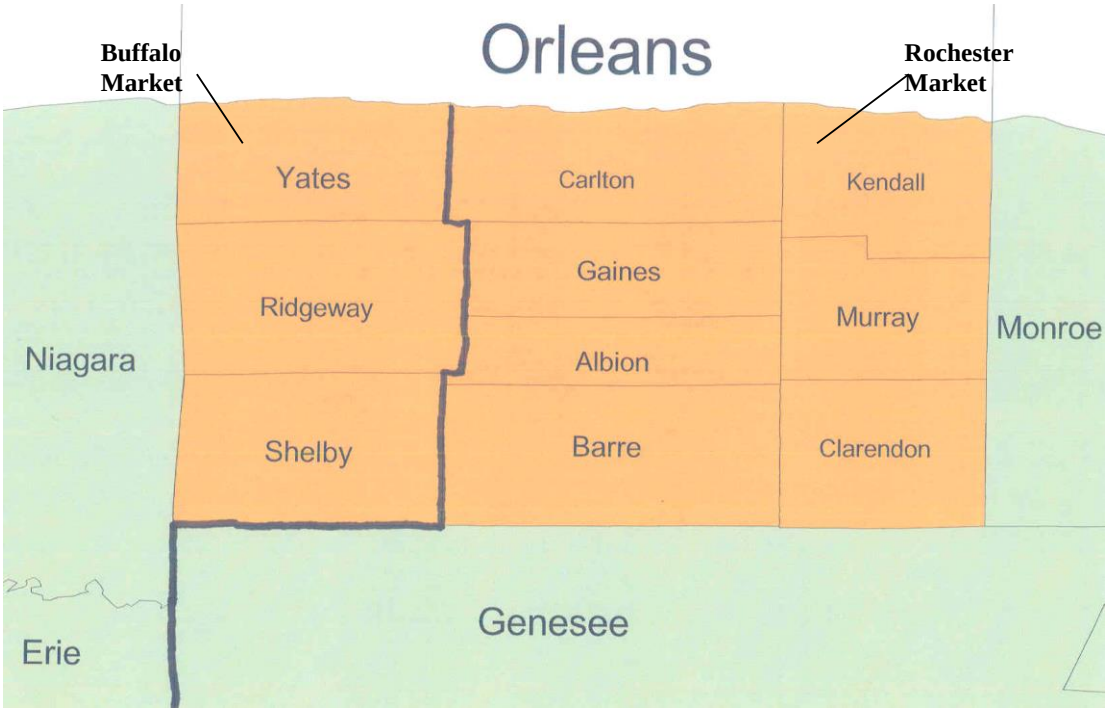
Map 15: 2005 Market Boundaries in New Haven County



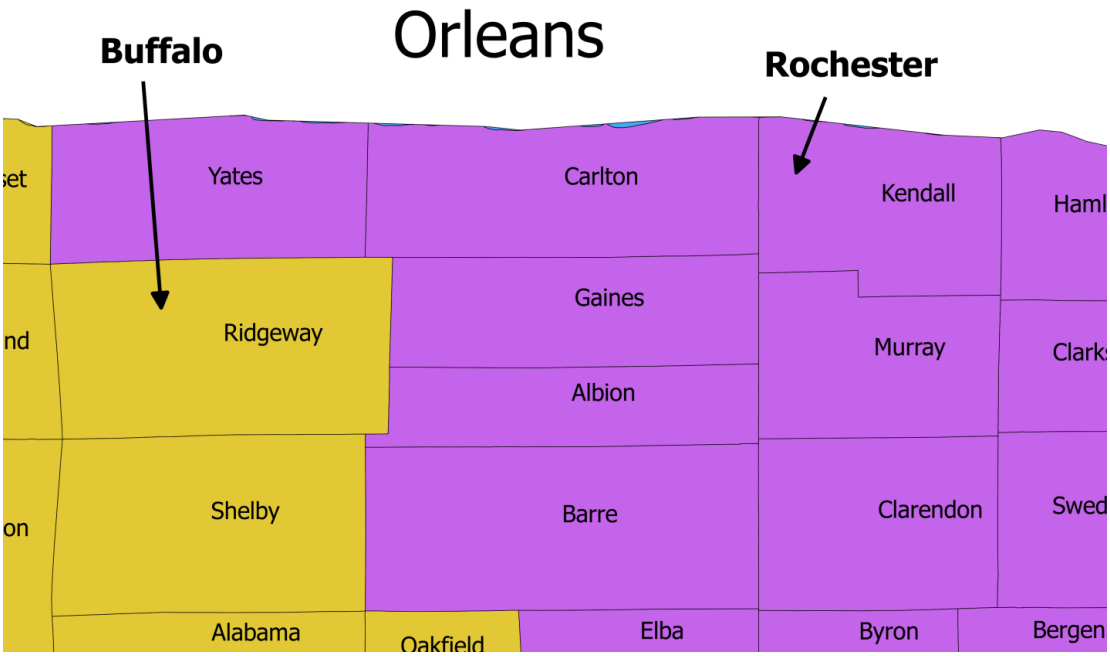
Map 16: 2014 Market Boundaries in New Haven County



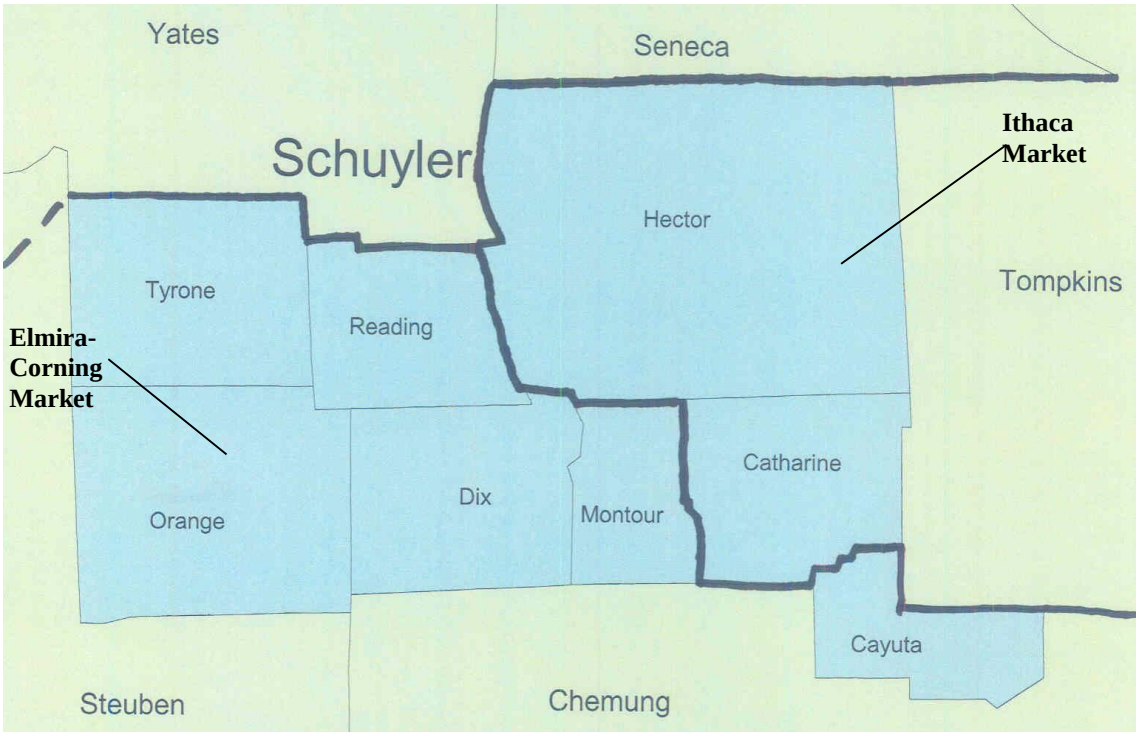
Map 17: 2005 Market Boundaries in Orleans County



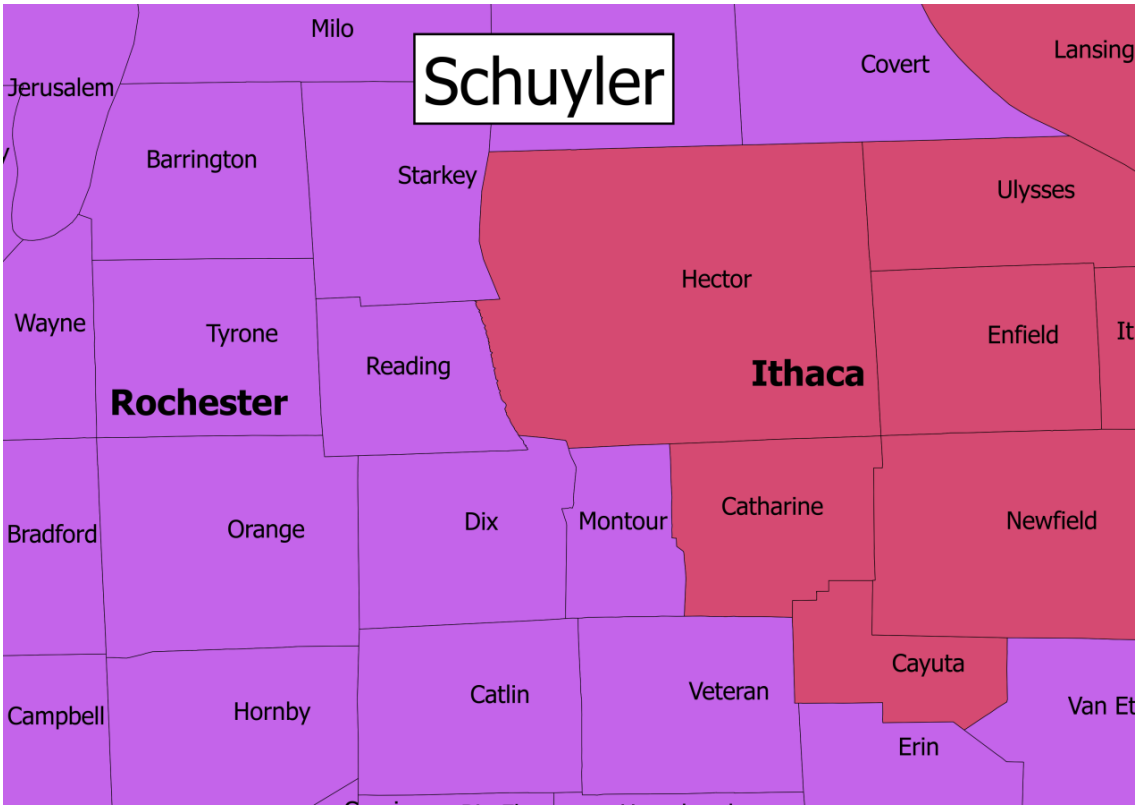
Map 18: 2014 Market Boundaries in Orleans County



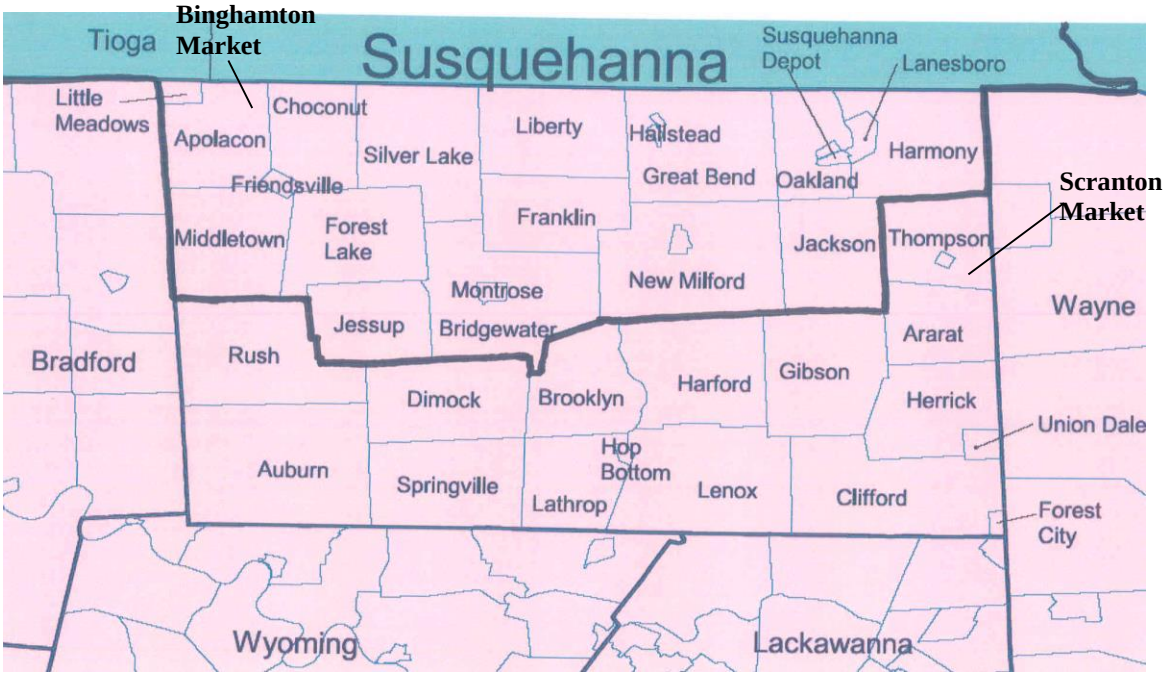
Map 19: 2005 Market Boundaries in Schuyler County



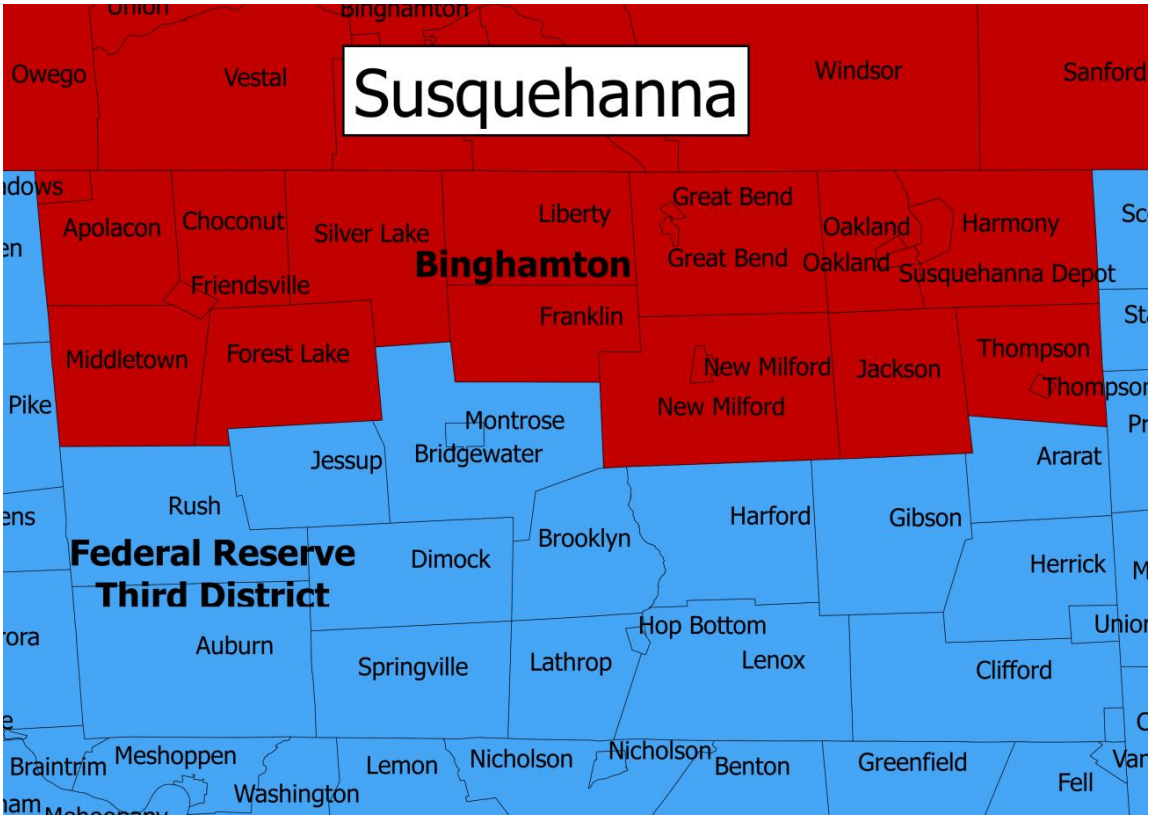
Map 20: 2014 Market Boundaries in Schuyler County



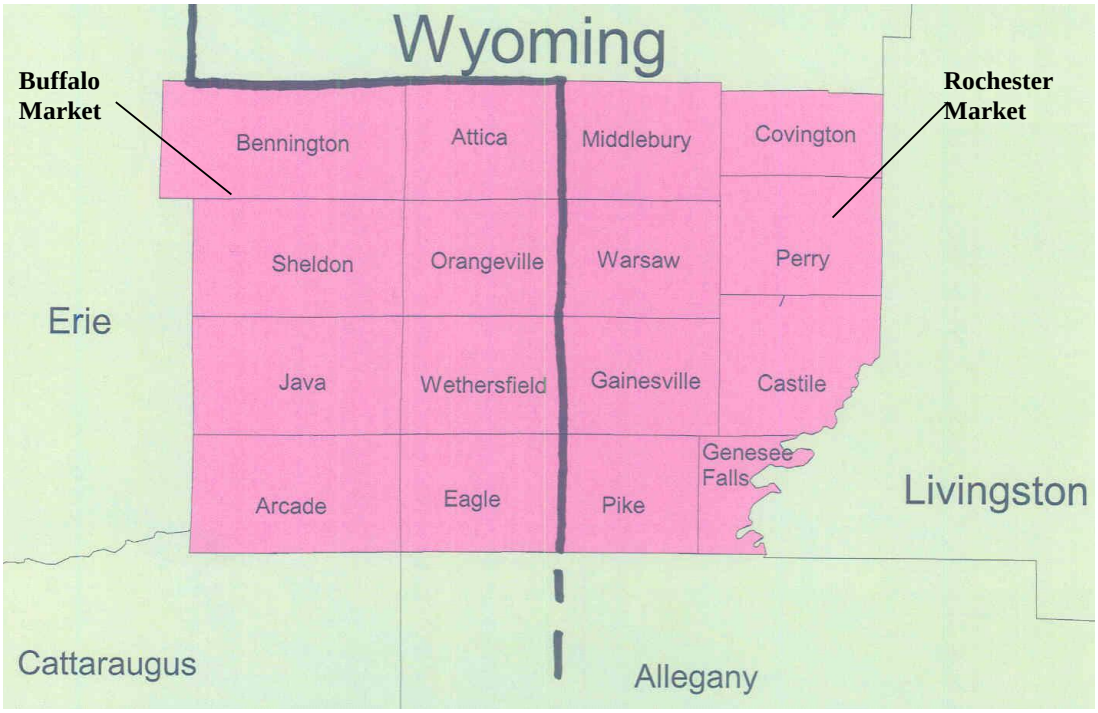
Map 21: 2005 Market Boundaries in Susquehanna County



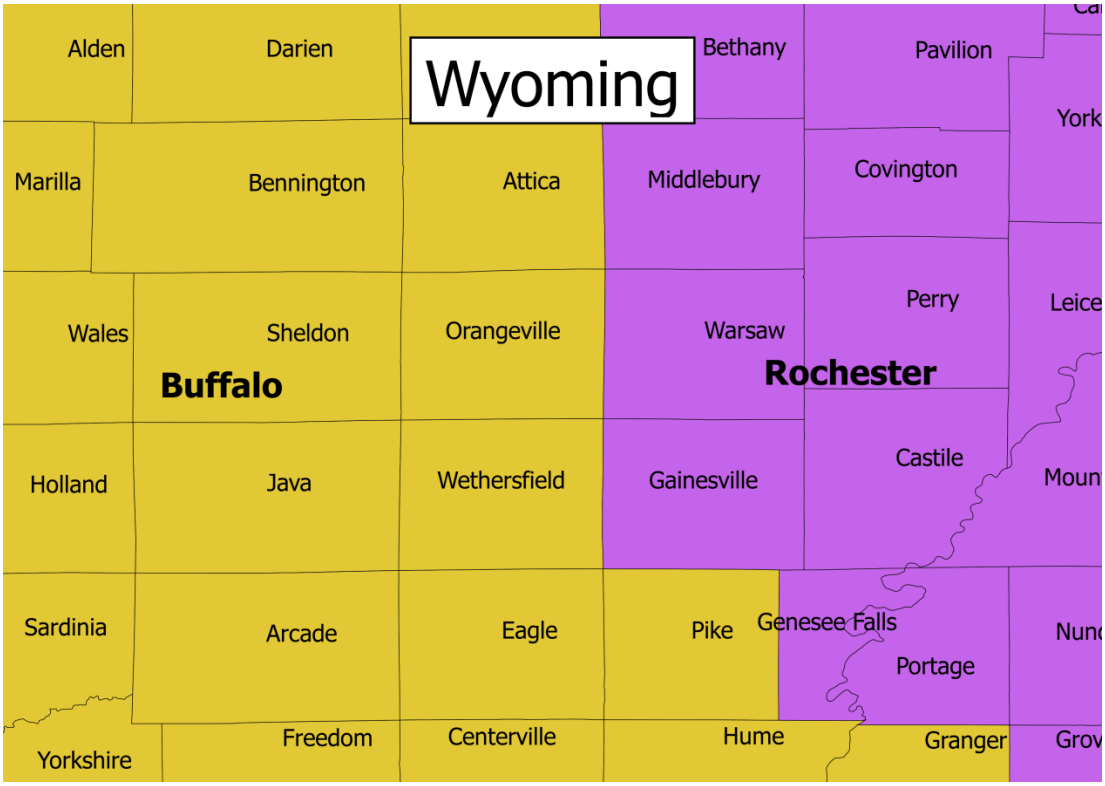
Map 22: 2014 Market Boundaries in Susquehanna County



Map 23: 2005 Market Boundaries in Wyoming County

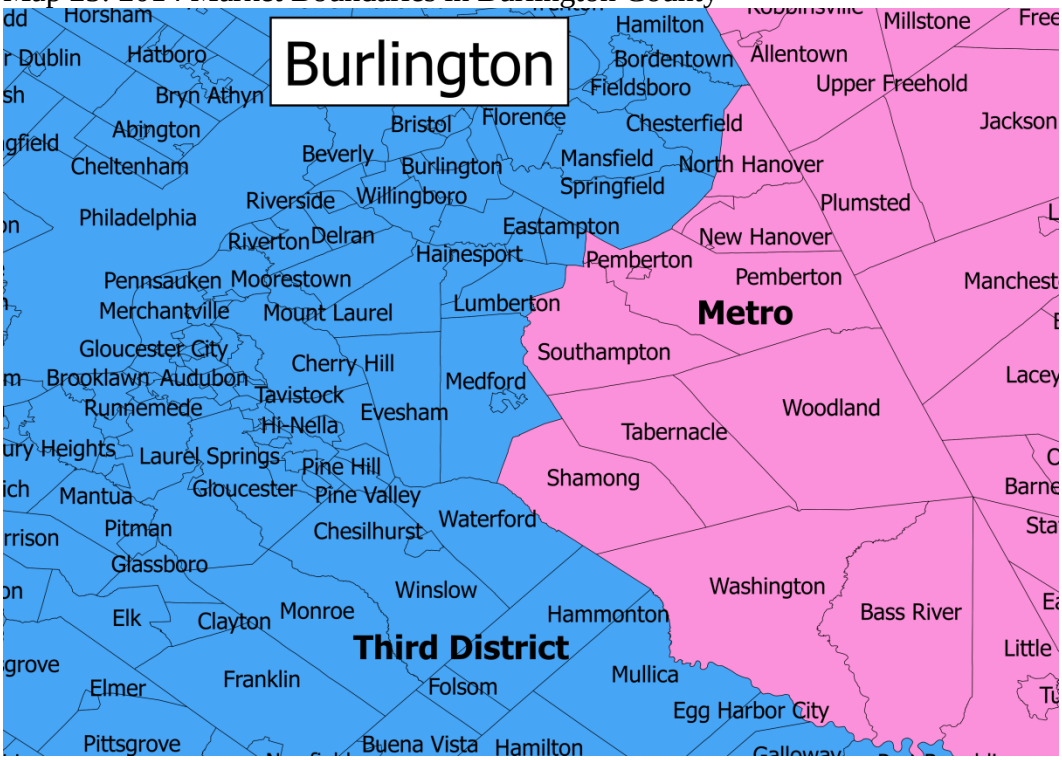


Map 24: 2014 Market Boundaries in Wyoming County

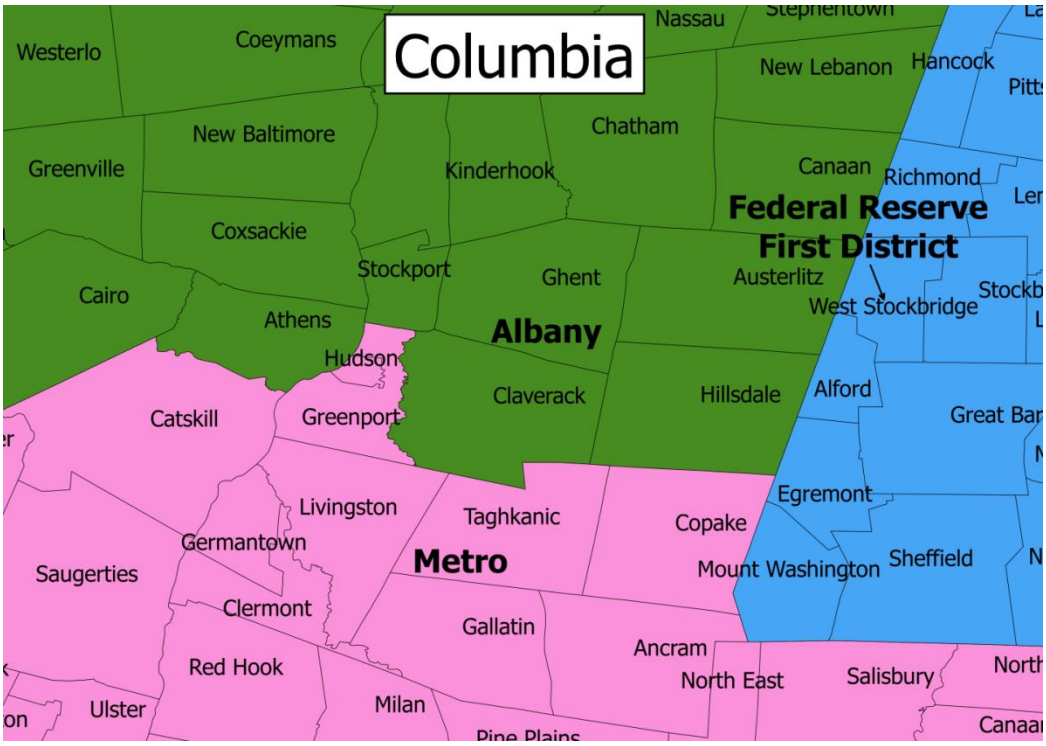


VI. Comparison Maps of Counties Newly Split in 2014

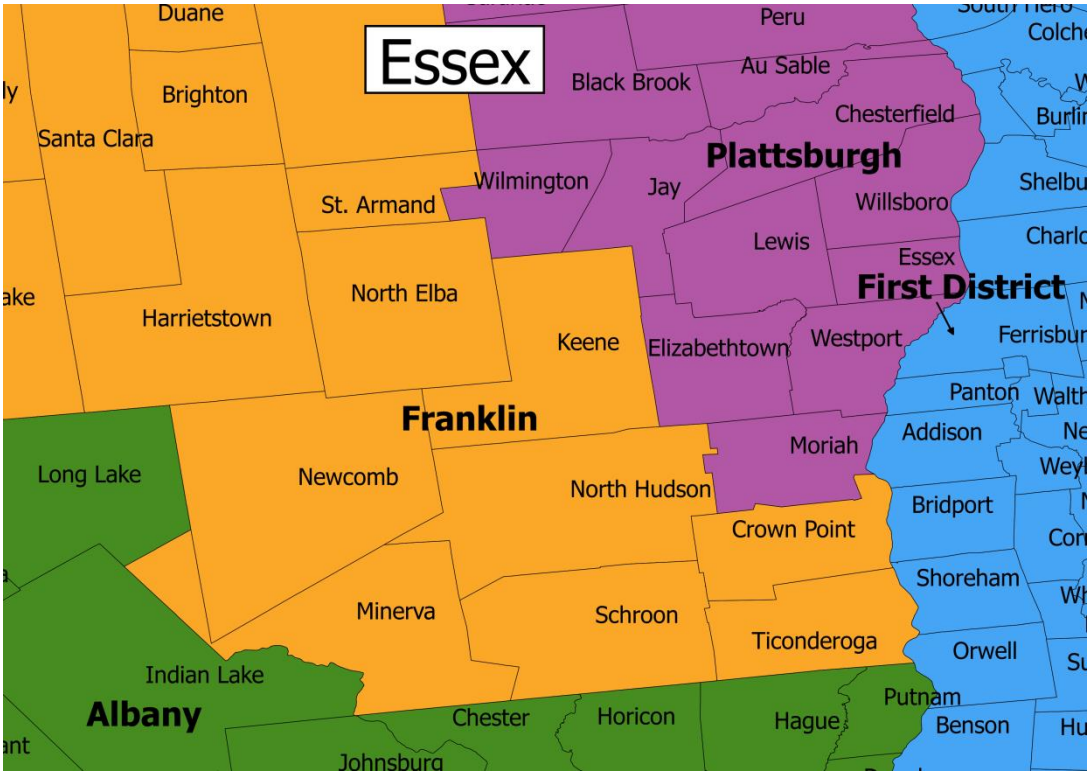
Map 25: 2014 Market Boundaries in Burlington County



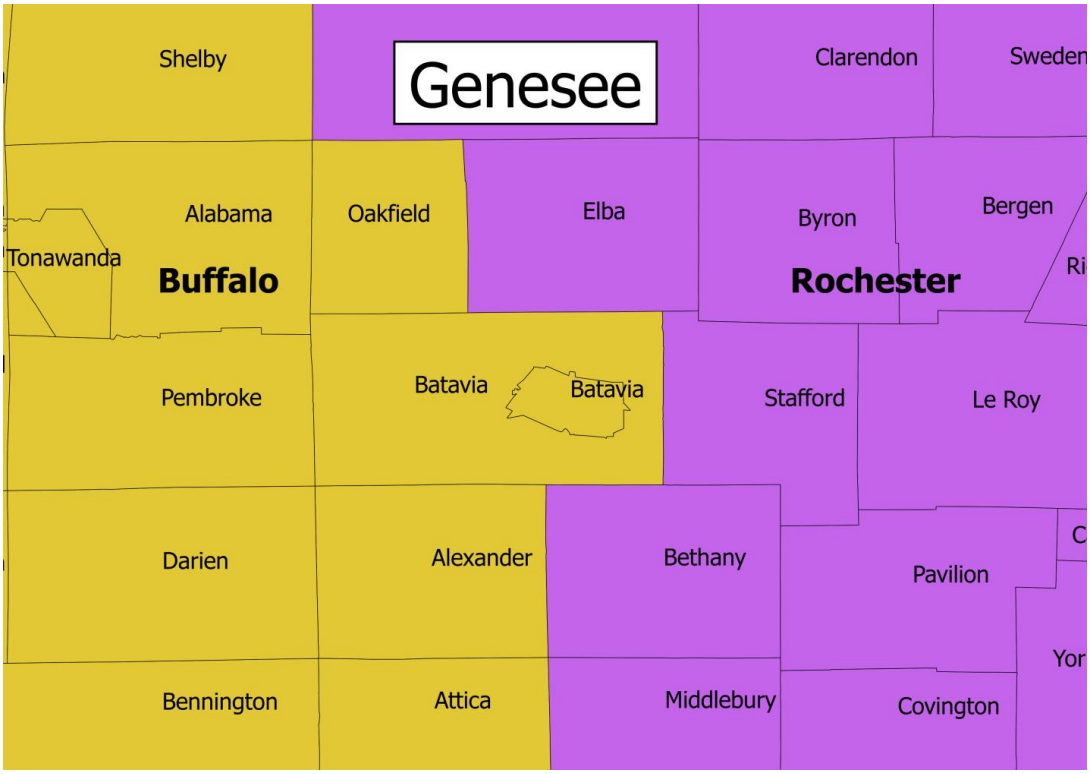
Map 26: 2014 Market Boundaries in Columbia County



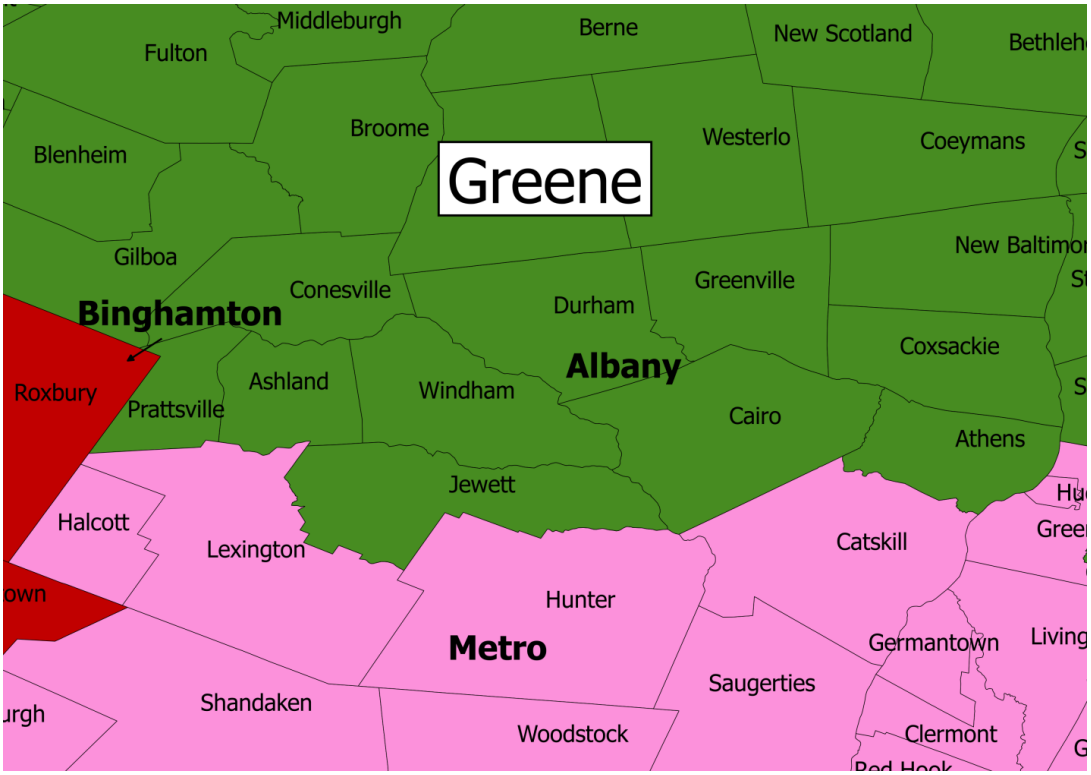
Map 27: 2014 Market Boundaries in Essex County, NY



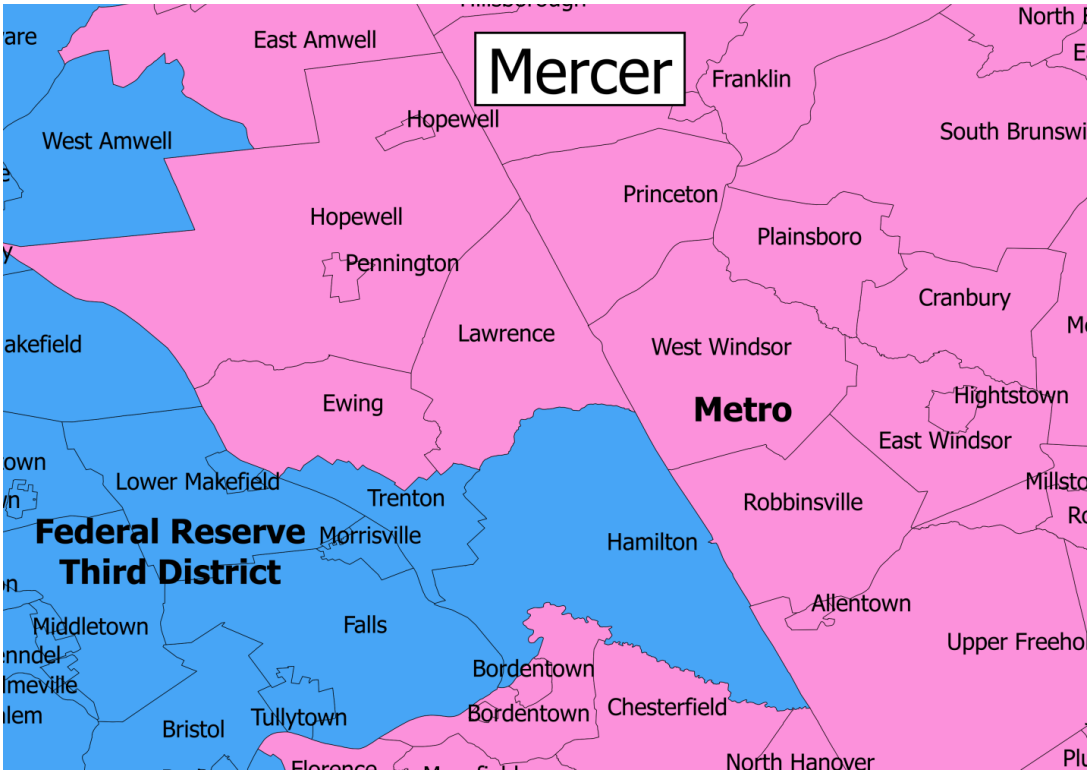
Map 28: 2014 Market Boundaries in Genesee County



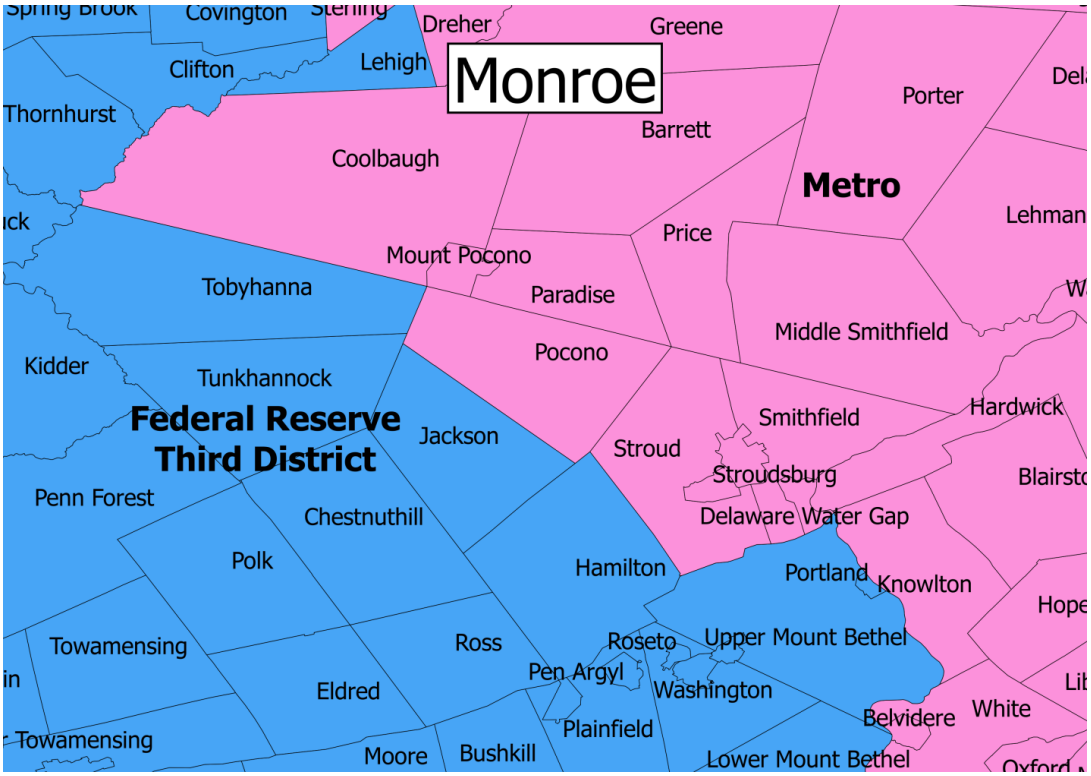
Map 29: 2014 Market Boundaries in Greene County



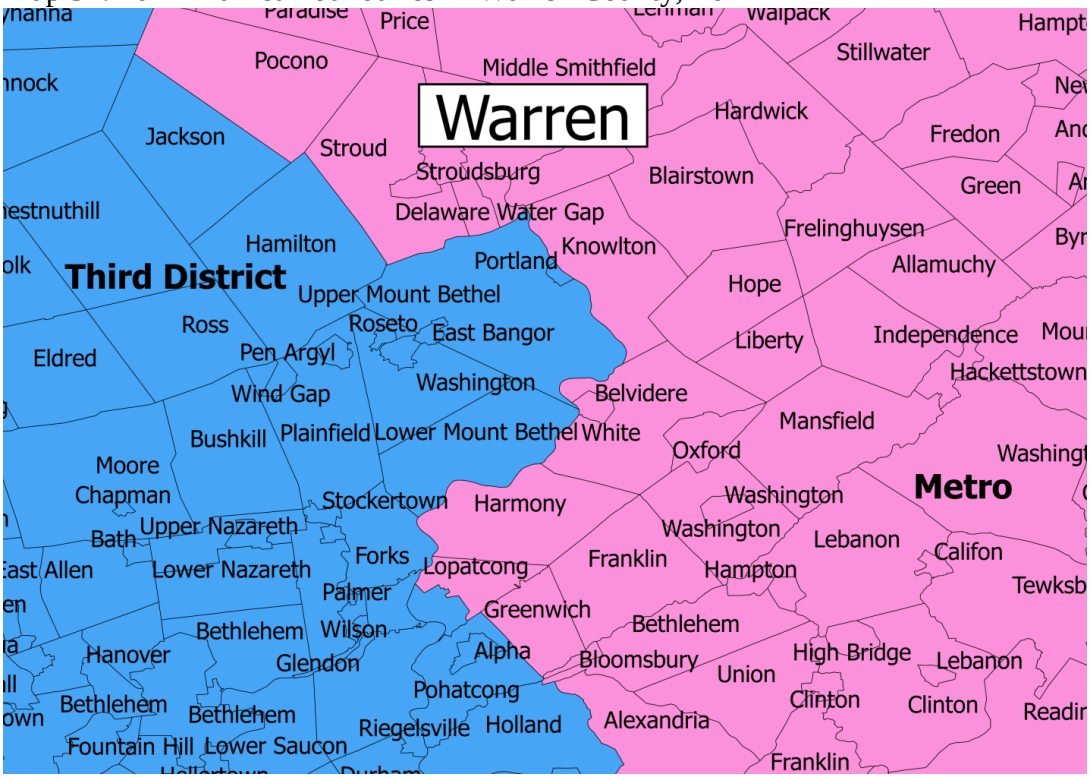
Map 30: 2014 Market Boundaries in Mercer County



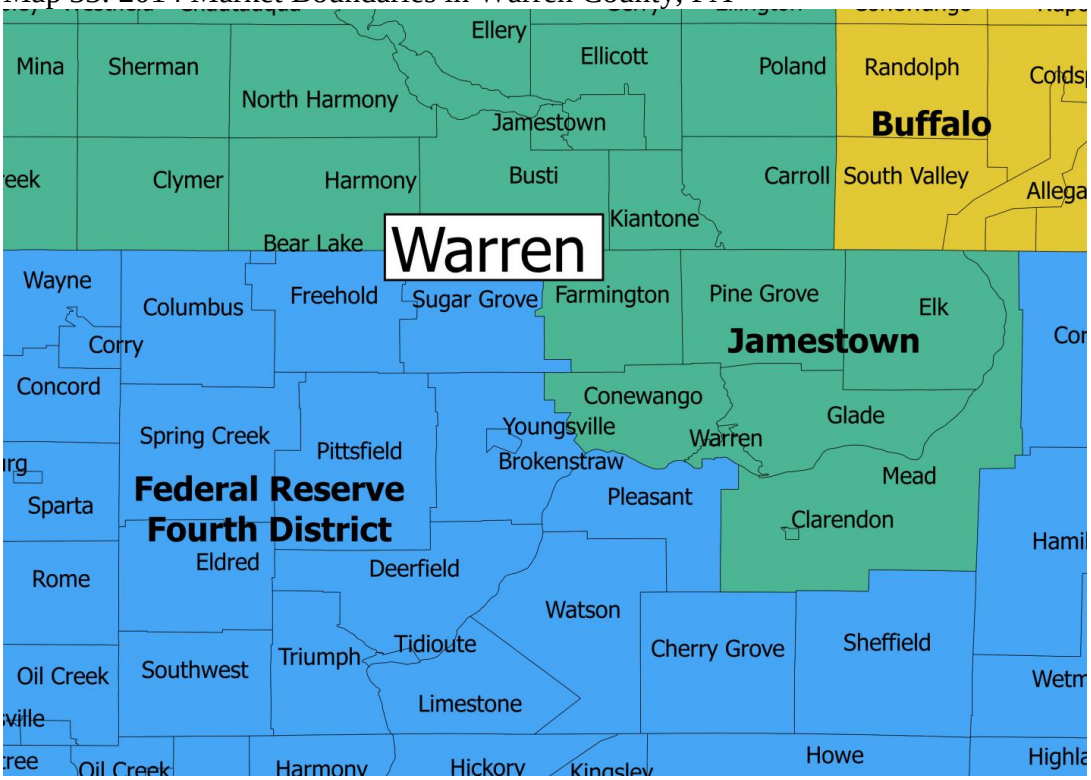
Map 31: 2014 Market Boundaries in Monroe County



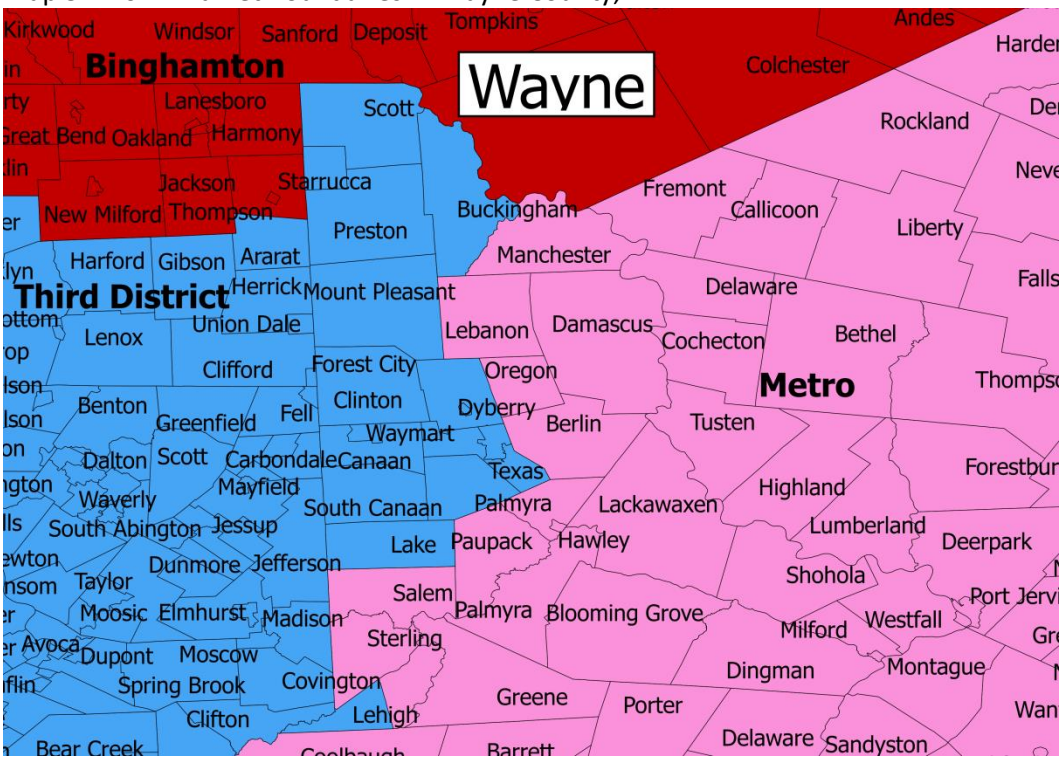
Map 32: 2014 Market Boundaries in Warren County, NJ



Map 33: 2014 Market Boundaries in Warren County, PA



Map 34: 2014 Market Boundaries in Wayne County, PA



Appendix A: Second District Banking Market Commutation Rates

The New York Area Markets

Table 1: The Metro Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	NYC as One Core		1.16	0.92		
Non-Core	Bergen NJ				85.5	
	Dutchess NY				46.6	
	Essex NJ				98.3	
	Fairfield CT				45.6	
	Hudson NJ				95.0	
	Middlesex NJ				81.5	
	Monmouth NJ				62.3	
	Morris NJ				98.7	
	Nassau NY				71.1	
	Ocean NJ				43.2	
	Orange NJ				52.3	
	Passaic NJ				88.8	
	Pike PA				57.9	
	Putnam NY				92.6	
	Rockland NY				62.7	
	Somerset NJ				110.6	
	Suffolk NY				35.0	
	Sullivan NY				36.4	
	Sussex NJ				70.3	
	Ulster NY				40.3	
	Union NJ				96.3	
	Westchester NY				70.2	
	Hunterdon NJ				83.2	
		Burlington NJ			23.7	16.2
		Columbia NY			21.2	41.4
		Greene NY			17.5	27.6
		Litchfield CT			44.0	69.5
		Mercer NJ			51.9	56.8
		Monroe PA			28.6	58.4
		New Haven CT			27.3	61.0
		Warren NJ			70.1	78.5
		Wayne PA			25.0	41.7

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 2: The Albany Market

	County	**Partial County**	**E/W**	**B/W**	**Interchange with Rest of Market (%)**	**If Partial, Allocation to Market (%)**
Core	Albany NY		1.49	0.82		
Non-Core	Fulton NY				52.6	
	Hamilton NY				35.2	
	Montgomery NY				68.7	
	Rensselaer NY				75.2	
	Saratoga NY				64.8	
	Schenectady NY				80.7	
	Schoharie NY				40.1	
	Warren NY				68.5	
	Washington NY				63.9	
		Columbia			29.9	58.6
		Greene			45.9	72.4

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 3: The Binghamton Market

	County	**Partial County**	**E/W**	**B/W**	**Interchange with Rest of Market (%)**	**If Partial, Allocation to Market (%)**
Core	Broome NY		1.09	0.90		
Non-Core	Chenango NY				34.5	
	Delaware NY				40.0	
	Otsego NY				24.4	
	Tioga NY				44.8	
		Susquehanna PA			22.6	42.5

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 4: The Buffalo Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Erie NY		1.07	0.94		
Non-Core	Cattaraugus NY				33.8	
	Niagara NY				49.3	
		Allegany NY			20.3	56.0
		Genesee NY			27.4	44.8
		Orleans NY			16.8	25.1
		Wyoming NY			43.5	58.3

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 5: The Franklin Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Franklin NY		1.02	0.82		
Non-Core		Essex NY			16.6	55.3

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 6: The Ithaca Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Tompkins NY		1.21	0.91		
Non-Core		Cortland NY			21.5	53.2
		Schuyler NY			24.8	33.3

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 7: The Jamestown Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Chautauqua NY		1.01	0.90		
Non-Core		Warren PA			11.9	51.2

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 8: The Plattsburgh Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Clinton NY		0.99	0.93		
Non-Core		Essex NY			13.4	44.7

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 9: The Rochester Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Monroe NY		1.11	0.95		
Non-Core	Chemung NY				24.8	
	Livingston NY				58.3	
	Ontario NY				69.9	
	Seneca NY				48.0	
	Steuben NY				30.3	
	Wayne NY				61.2	
	Yates NY				51.3	
		Allegany NY			16.0	44.0
		Genesee NY			33.7	55.2
		Orleans NY			50.0	74.9
		Schuyler NY			49.7	66.7
		Wyoming NY			31.1	41.7

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 10: The St. Lawrence Market

	County	**Partial County**	**E/W**	**B/W**	**Interchange with Rest of Market (%)**	**If Partial, Allocation to Market (%)**
Core	St. Lawrence		0.95	0.89		

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 11: The Syracuse Market

	County	**Partial County**	**E/W**	**B/W**	**Interchange with Rest of Market (%)**	**If Partial, Allocation to Market (%)**
Core	Onondaga NY		1.16	0.94		
Non-Core	Cayuga NY				31.5	
	Oswego NY				43.9	
		Cortland NY			18.9	46.8
		Madison NY			37.1	59.4

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 12: The Utica-Rome Market

	County	**Partial County**	**E/W**	**B/W**	**Interchange with Rest of Market (%)**	**If Partial, Allocation to Market (%)**
Core	Oneida NY		1.08	0.89		
Non-Core	Herkimer NY				42.1	
		Madison NY			25.4	40.6

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 13: The Watertown Market

	County	Partial County	E/W	B/W	Interchange with Rest of Market (%)	If Partial, Allocation to Market (%)
Core	Jefferson NY		1.07	0.95		
Non-Core	Lewis NY				24.8	

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Appendix B: Puerto Rico Markets Commutation Rates

Table 14: The Aguadilla-Mayaguez Market

	County	**E/W**	**B/W**	**Interchange with Rest of Market (%)**
Core	Hormigueros, Mayaguez	1.47	0.83	
Non-Core	Aguada			65.7
	Aguadilla			91.6
	Anasco			77.3
	Cabo Rojo			60.1
	Isabela			51.8
	Lajas			51.3
	Las Marias			49.7
	Maricao			61.1
	Moca			72.1
	Rincon			68.9
	Sabana Grande			54.5
	San German			79.7
	San Sebastian			39.5

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 15: The Culebra Market

	County	**E/W**	**B/W**
Core	Culebra	1.11	0.98

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.

Table 16: The Guayama Market

	County	**E/W**	**B/W**
Core	Arroyo, Guayama, Patillas	1.05	0.80

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.

Table 17: The Ponce Market

	County	**E/W**	**B/W**	**Interchange with Rest of Market (%)**
Core	Guanica, Guayanilla, Juana Diaz, Penuelas, Ponce, Villalba, Yauco	1.00	0.88	
Non-Core	Adjuntas			36.8
	Coamo			40.8
	Jayuya			13.3
	Salinas			39.8
	Santa Isabel			85.5

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange with Rest of Market" column; if above 50%, it was considered

Table 18: The San Juan Market

	County	**E/W**	**B/W**	**Interchange with Rest of Market (%)**
Core	Aguas Buenas, Aibonito, Barceloneta, Barranquitas, Bayamon, Caguas, Canovanas, Carolina, Catano, Cayey, Ceiba, Ciales, Cidra, Comerio, Corozal, Dorado, Fajardo, Florida, Guaynabo, Gurabo, Humacao, Juncos, Las Piedras, Loiza, Luquillo, Manati, Maunabo, Morovis, Naguabo, Naranjito, Orocovis, Rio Grande, San Juan, San Lorenzo, Toa Alta, Toa Baja, Trujillo Alto, Vega Alta, Vega Baja, Yabucoa	1.02	0.99	
Non-Core	Arecibo			84.6
	Camuy			71.8
	Hatillo			103.3
	Lares			71.1
	Quebradillas			49.9
	Utuado			33.5

Notes: E/W = total employment in county / resident workers in county.
B/W = resident workers employed in county / resident workers in county.
Interchange with A = (commutation from county to A + commutation from A to county) / (resident workers in county).
If partial allocation is below 50%, commutation to this county was not considered in the "Interchange

with Rest of Market" column; if above 50%, it was considered

Table 19: The Vieques Market

	County	**E/W**	**B/W**
Core	Vieques	1.06	1.00
Notes: E/W = total employment in county / resident workers in county. B/W = resident workers employed in county / resident workers in county.			

Appendix C: Second District Banking Market Definitions

New York Area Markets

Metropolitan NY-NJ-PA-CT Market

Full Counties:	Bergen NJ, Bronx NY, Dutchess NY, Essex NJ, Fairfield CT, Hudson NJ, Kings NY, Middlesex NJ, Monmouth NJ, Morris NJ, Nassau NY, New York NY, Ocean NJ, Orange NJ, Passaic NJ, Pike PA, Putnam NY, Queens NY, Richmond NY, Rockland NY, Somerset NJ, Suffolk NY, Sullivan NY, Sussex NJ, Ulster NY, Union NJ, Westchester NY, Hunterdon NJ
Split Counties:	Burlington NJ: Boroughs: Pemberton, Wrightstown Townships: Bass River, New Hanover, North Hanover, Pemberton, Shamong, Southampton, Tabernacle, Washington, Woodland Columbia NY: Cities: Hudson Towns: Ancram, Clermont, Copake, Gallatin, Germantown, Greenport, Livingston, Taghkanic Greene NY: Towns: Catskill, Halcott, Hunter, Lexington Litchfield CT: Towns: Bethlehem, Bridgewater, Canaan, Cornwall, Goshen, Kent, Litchfield, Morris, New Milford, North Canaan, Plymouth, Roxbury, Salisbury, Sharon, Thomaston, Warren, Washington, Watertown, Woodbury Mercer NJ: Boroughs: Hightstown, Hopewell, Pennington, Princeton Townships: East Windsor, Ewing, Hopewell, Lawrence, Princeton, Robbinsville, West Windsor Monroe PA: Boroughs: Delaware Water Gap, East Stroudsburg, Mount Pocono, Stroudsburg

	Townships: Barrett, Coolbaugh, Middle Smithfield, Paradise, Pocono, Price, Smithfield, Stroud New Haven CT: Towns: Ansonia, Beacon Falls, Bethany, Derby, Hamden, Middlebury, Milford, Naugatuck, New Haven, Orange, Oxford, Seymour, Southbury, Waterbury, West Haven, Woodbridge Warren NJ: Boroughs: Washington Towns: Belvidere, Hackettstown Townships: Allamuchy, Blairstown, Franklin, Frelinghuysen, Greenwich, Hardwick, Harmony, Hope, Independence, Knowlton, Liberty, Lopatcong, Mansfield, Oxford, Washington, White Wayne PA: Boroughs: Hawley Townships: Berlin, Damascus, Dreher, Lebanon, Manchester, Oregon, Palmyra, Paupack, Salem, Sterling

Albany

Full Counties:	Albany NY, Fulton NY, Hamilton NY, Montgomery NY, Rensselaer NY, Saratoga NY, Schenectady NY, Schoharie NY, Warren NY,Washington NY
Split Counties:	Columbia NY: Towns: Austerlitz, Canaan, Chatham, Claverack, Ghent, Hillsdale, Kinderhook, New Lebanon, Stockport, Stuyvesant Greene NY: Towns: Ashland, Athens, Cairo, Coxsackie, Durham, Greenville, Jewett, New Baltimore, Prattsville, Windham

Binghamton

Full Counties:	Broome NY, Chenango NY, Delaware NY, Otsego NY,

	Tioga NY
Split Counties:	Susquehanna PA: Boroughs: Friendsville, Great Bend, Hallstead, Lanesboro, Little Meadows, New Milford, Oakland, Susquehanna Depot, Thompson Townships: Apolacon, Choconut, Forest Lake, Franklin, Great Bend, Harmony, Liberty, Middletown, New Milford, Oakland, Silver Lake, Thompson

Buffalo

Full Counties:	Erie NY, Cattaraugus NY, Niagara NY
Split Counties:	Allegany NY: Towns: Allen, Alma, Amity, Angelica, Belfast, Bolivar, Caneadea, Centerville, Clarksville, Cuba, Friendship, Genesee, Granger, Hume, New Hudson, Rushford, Scio, Wirt Reservations: Oil Springs Genesee NY: Cities: Batavia Towns: Alabama, Alexander, Batavia, Darien, Oakfield, Pembroke Reservations: Tonawanda Orleans NY: Towns: Ridgeway, Shelby Wyoming NY: Towns: Arcade, Attica, Bennington, Eagle, Java, Orangeville, Pike, Sheldon, Wethersfield

Franklin

Full Counties:	Franklin NY
Split Counties:	Essex NY: Towns: Crown Point, Keene, Minerva, Newcomb, North Elba, North Hudson, St. Armand, Schroon, Ticonderoga

Ithaca

Full Counties:	Tompkins NY
Split Counties:	Cortland NY: Cities: Cortland Towns: Cortlandville, Harford, Lapeer, Virgil Schuyler NY: Towns: Catharine, Cayuta, Hector

Jamestown

Full Counties:	Chautauqua NY
Split Counties:	Warren PA: Boroughs: Clarendon Cities: Warren Townships: Conewango, Elk, Farmington, Glade, Mead, Pine Grove

Plattsburgh

Full Counties:	Clinton NY
Split Counties:	Essex NY: Towns: Chesterfield, Elizabethtown, Essex, Jay, Lewis, Moriah, Westport, Willsboro, Wilmington

Rochester

Full Counties:	Chemung NY, Livingston NY, Monroe NY, Ontario NY, Seneca NY, Steuben NY, Wayne NY, Yates NY
Split Counties:	Allegany NY: Towns: Alfred, Almond, Andover, Birdsall, Burns, Grove, Independence, Ward, Wellsville, West Almond, Willing Genesee NY: Towns: Bergen, Bethany, Byron, Elba, Le Roy, Pavilion, Stafford Schuyler NY: Towns:

	Dix, Montour, Orange, Reading, Tyrone Orleans NY: Towns: Albion, Barre, Carlton, Clarendon, Gaines, Kendall, Murray, Yates Wyoming NY: Towns: Castile, Covington, Gainesville, Genesee Falls, Middlebury, Perry, Warsaw

St. Lawrence

Full County:	St. Lawrence

Syracuse

Full Counties:	Cayuga NY, Onondaga NY, Oswego NY
Split Counties:	Cortland NY: Towns: Cincinnatus, Cuyler, Freetown, Homer, Marathon, Preble, Scott, Solon, Taylor, Truxton, Willet Madison NY: Towns: Cazenovia, DeRuyter, Fenner, Georgetown, Lenox, Lincoln, Nelson, Smithfield, Sullivan

Utica-Rome

Full Counties:	Herkimer NY, Oneida NY
Split Counties:	Madison NY: Cities: Oneida Towns: Brookfield, Eaton, Hamilton, Lebanon, Madison, Stockbridge

Watertown

Full Counties:	Lewis NY, Jefferson NY

Puerto Rico Markets

Aguadilla-Mayaguez

Municipios included in the Mayaguez MSA:	Hormigueros, Mayaguez
Other municipios:	Aguada, Aguadilla, Anasco, Cabo Rojo, Isabela, Lajas, Las Marias, Maricao, Moca, Rincon, Sabana Grande, San

	German, San Sebastian

Culebra

Municipios:	Culebra

Guayama

Municipios included in the Guayama MSA:	Arroyo, Guayama, Patillas

Ponce

Municipios included in the Ponce MSA:	Guanica, Guayanilla, Juana Diaz, Penuelas, Ponce, Villalba, Yauco
Other municipios:	Adjuntas, Coamo, Jayuya, Salinas, Santa Isabel

San Juan

Municipios included in the San Juan-Carolina-Caguas MSA:	Aguas Buenas, Aibonito, Barceloneta, Barranquitas, Bayamon, Caguas, Canovanas, Carolina, Catano, Cayey, Ceiba, Ciales, Cidra, Comerio, Corozal, Dorado, Fajardo, Florida, Guaynabo, Gurabo, Humacao, Juncos, Las Piedras, Loiza, Luquillo, Manati, Maunabo, Morovis, Naguabo, Naranjito, Orocovis, Rio Grande, San Juan, San Lorenzo, Toa Alta, Toa Baja, Trujillo Alto, Vega Alta, Vega Baja, Yabucoa
Other municipios:	Arecibo, Camuy, Hatillo, Lares, Quebradillas, Utuado

Vieques

Municipios:	Vieques

U.S. Virgin Island Banking Markets

St. Croix

Full County:	St. Croix

St. John and St. Thomas

Full Counties:	St. John, St. Thomas