



The Use of GIS in Community Development at the Federal Reserve

KC ArcInfo Users Group

Federal Reserve Bank of Kansas City

January 12, 2010

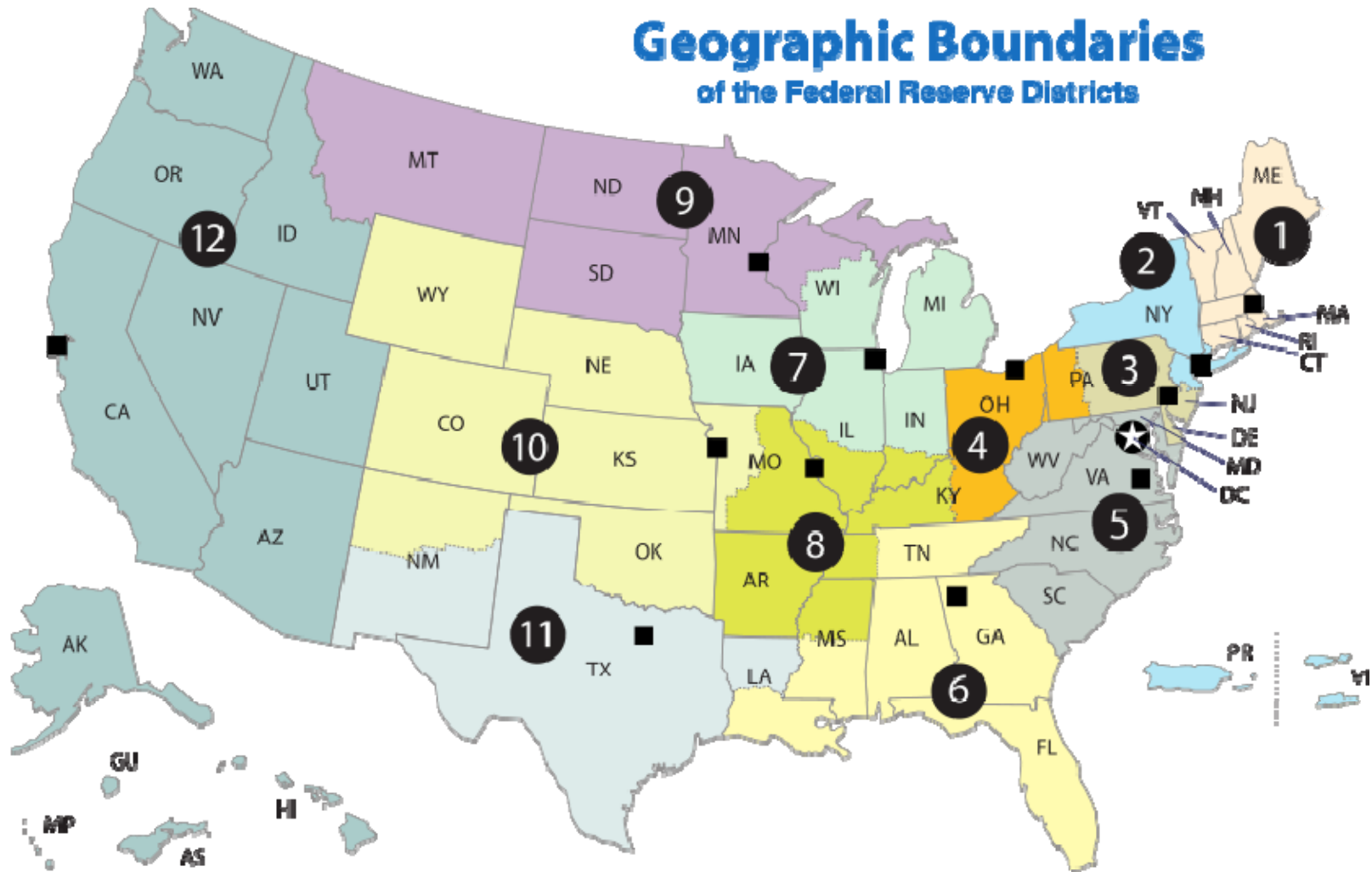
The Use of GIS in Community Development at the Federal Reserve

- The Federal Reserve and Community Development
- Use of GIS/ArcGIS

Objectives of the Fed

- Monetary Policy
- Facilitate the Payments System
 - Cash Operations
 - Check Clearing
 - Electronic Payments
- Ensure the Safety and Soundness of the U.S. Banking System
 - Bank Regulation
 - Examination

Geographic Boundaries of the Federal Reserve Districts

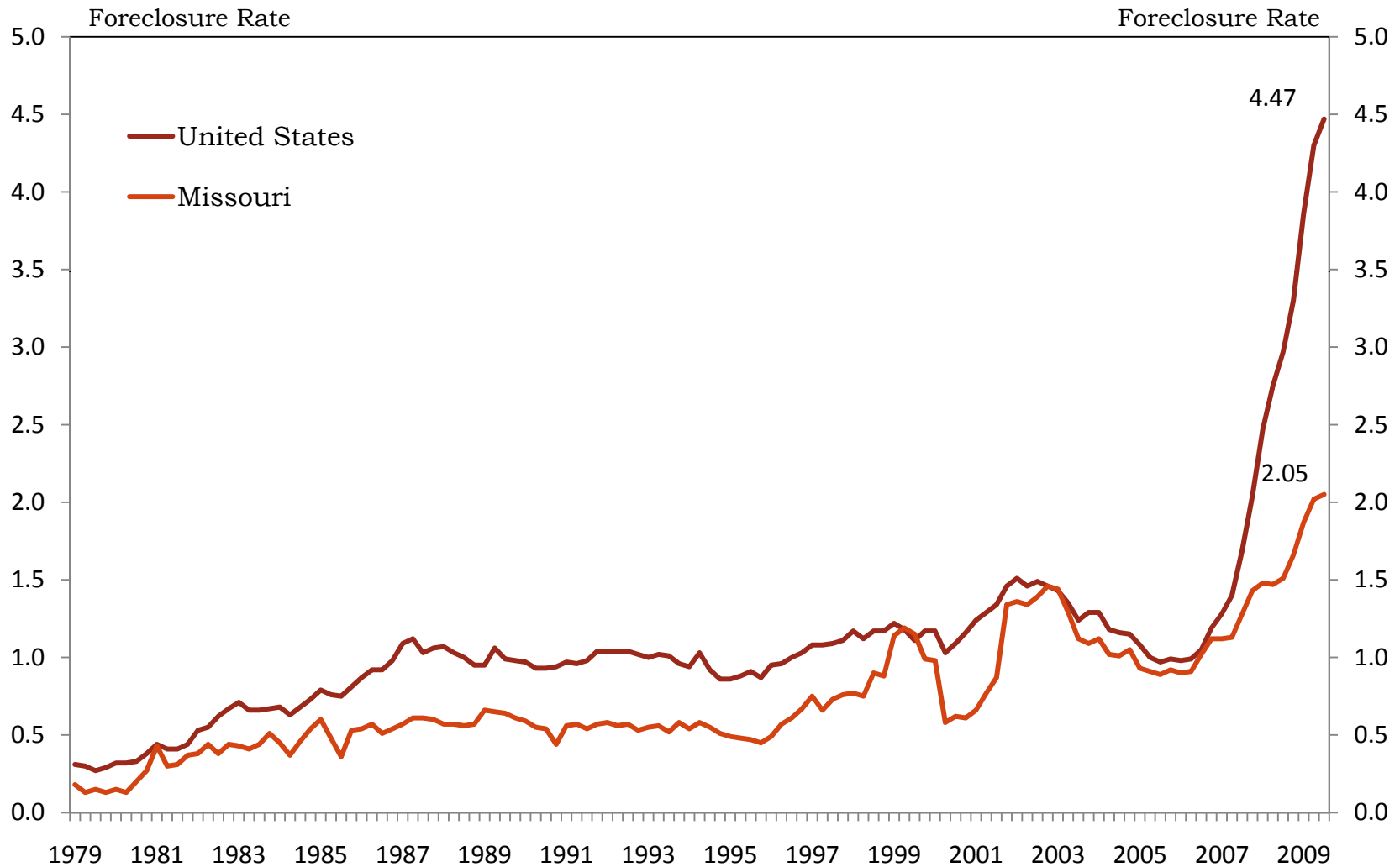


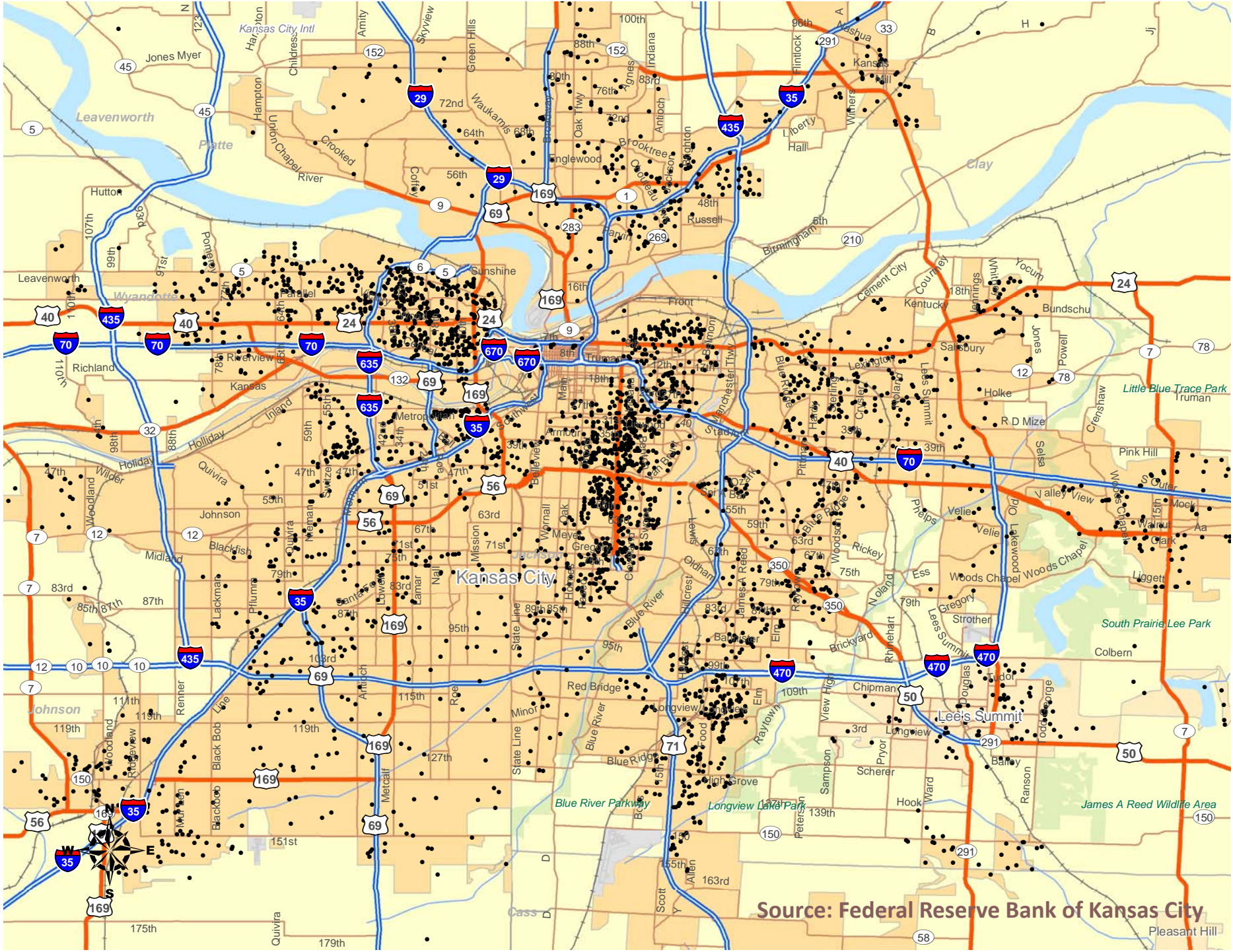
Kansas City Fed Community Development Mission and Objectives

- Mission is to support the Federal Reserve System's economic growth objectives by encouraging community development and access to financial services and products in historically underserved markets
- Constituency is the low-and-moderate income population
- Primary areas of focus are
 - Affordable housing and neighborhood stability
 - Economic development (esp. entrepreneurship and small business development)
 - Consumer financial stability

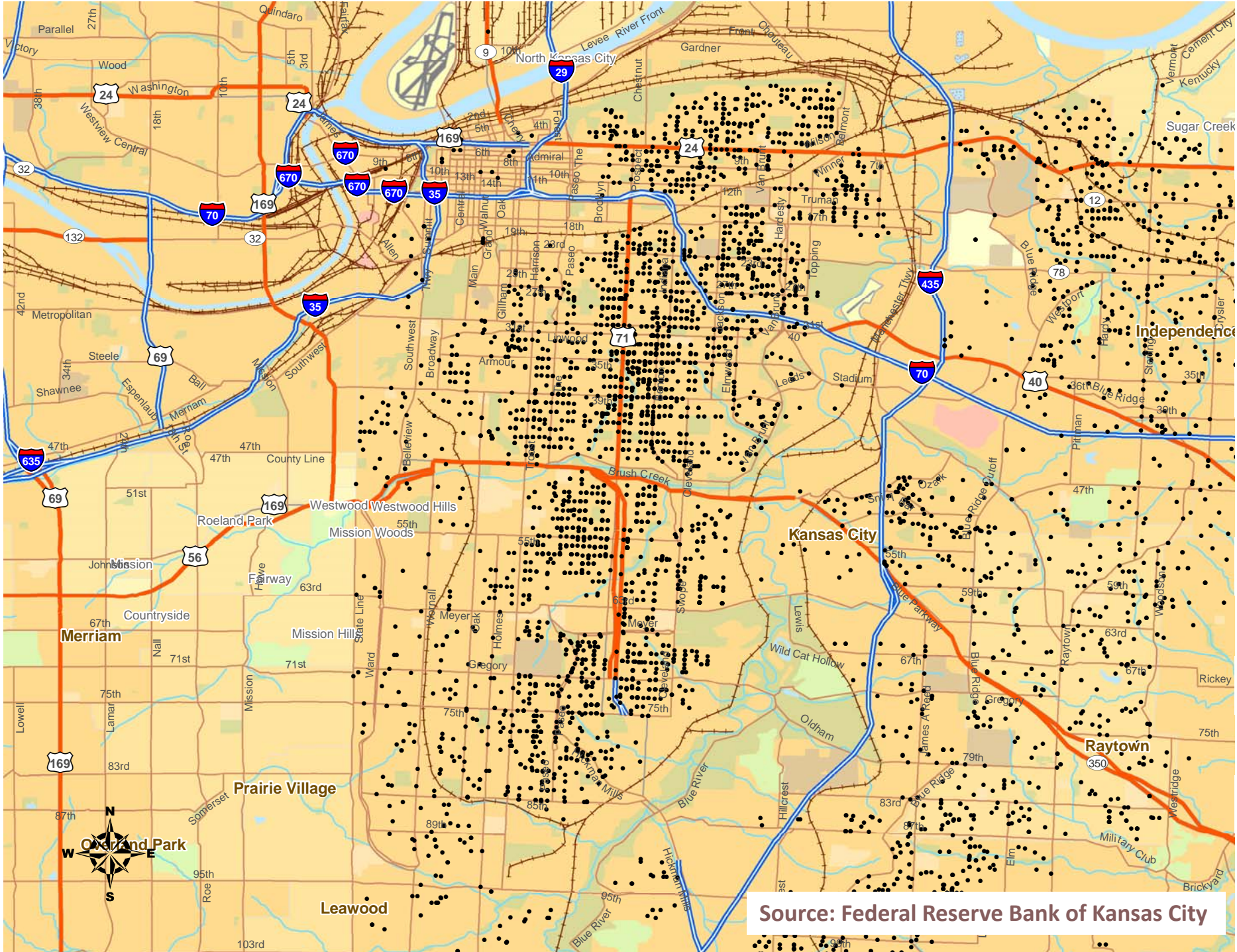
VISUALIZING AND ANALYZING DATA

Missouri and U.S. Foreclosure Rates





Source: Federal Reserve Bank of Kansas City



Source: Federal Reserve Bank of Kansas City

Layers

- KCMOfc2008a
 - KCMOfc2008b selection
 - KCMOfc2008b
 - Major Roads
 - Road Classification
 - Limited Access
 - Highways
 - Secondary Roads
 - Other
 - Highway Ramp
 - kcmnhdsmod4comids
- USA Base Map
 - Cities (Points)
 - Landmarks (Points)
 - Highways
 - Railroads
 - Airports
 - Water
 - Landmarks (Areas)
 - City (Areas)
 - State - County Outlin
 - Background
- KCMO
 - KC_Core_Counties
 - OBJECTID_1
 - 1
 - 2
 - 10
 - 12
 - 13
 - CouncilDistrict
 - KCMSA_2003

Identify

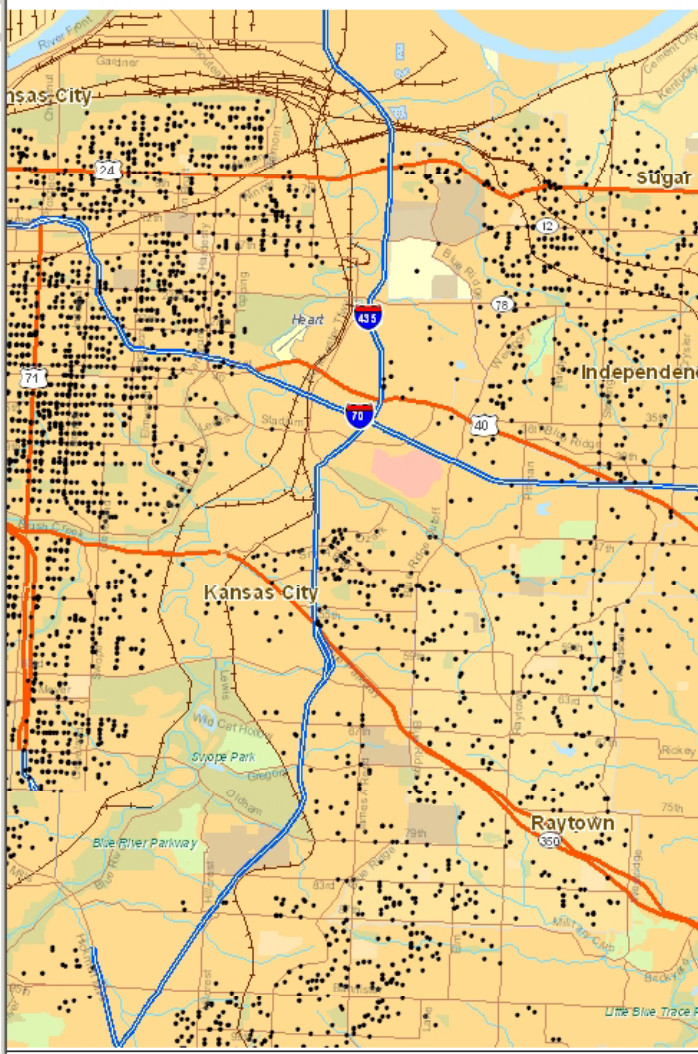
Identify from: <Top-most layer>

KCMOfc2008a

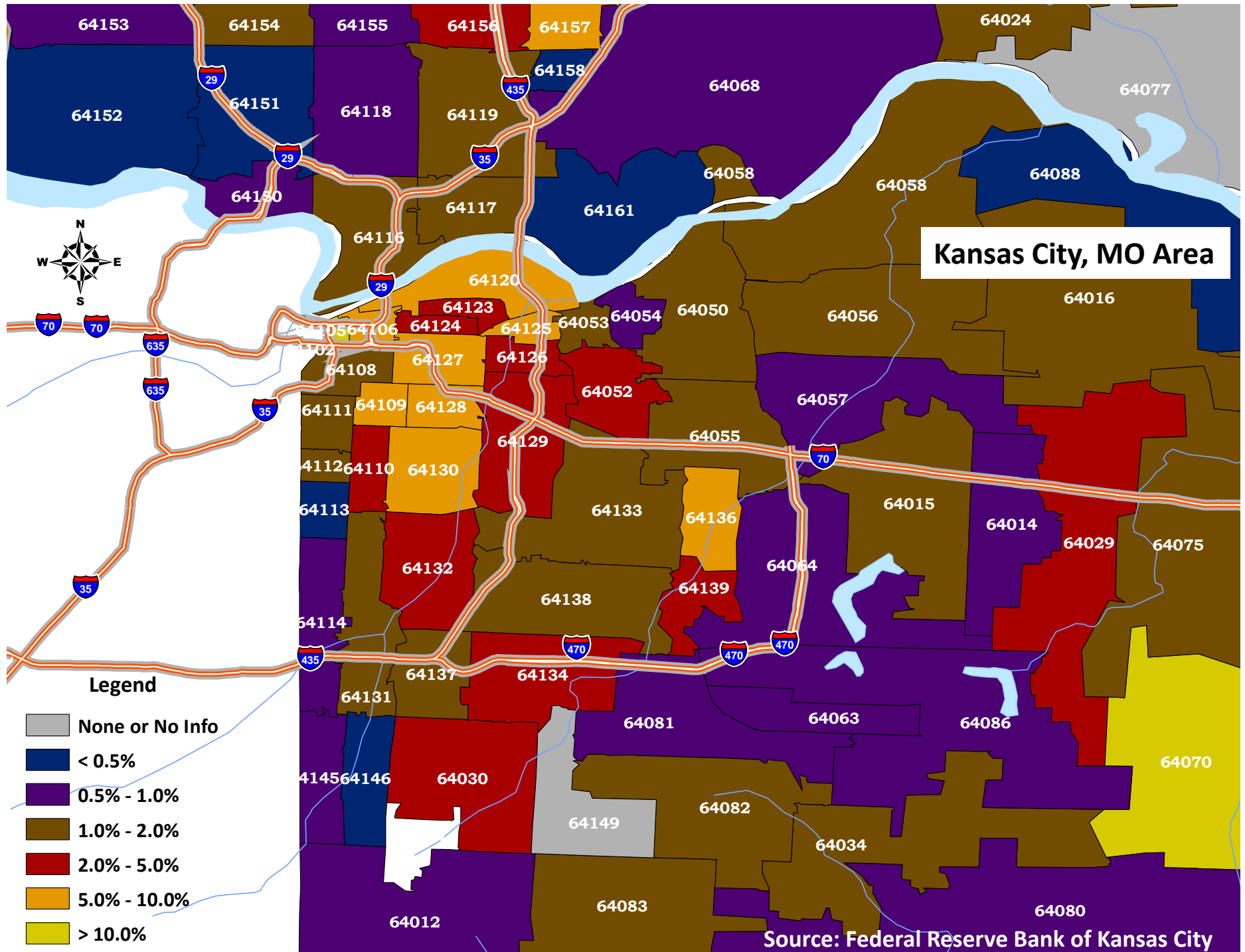
Location: -94.602372 39.015999 Decimal Degrees

Field	Value
FID	6598
Shape	Point
PropID	18807823
FCDt	1520726400
FCMo	1519948800
FCQtr	Q12008
PropType	Single Family Residence
Addr	6140 Ward Pkwy
AptNo	
City	Kansas City
State	MO
StCode	29
Zip	64113
CntyNm	Jackson County
LONGITUDE	-94.6025
LATTITUDE	39.0156
Owner	Federal National Mortgage Assn
LendName	
TrustName	
AVM	393000
Opening_Bi	0
DefaultAmt	0
LoanAmt	412000
LoanDescri	Estimate
LoanRate	0
LastPurchD	0
PurchPrice	0
OrigRecTyp	R
CurrRecTyp	R
LoanDt	1489449600
LoanLender	Advahome LLC
LoanType	Unknown
LoanSubTyp	Unknown
TRACT	29095008400
CTOTPOP	2752
CHOUSEHLD	1019
CMEDHHINC	112698
ETOTHU	1045
EHUOWNER	968
EHUVACANT	30
COWNEROCC	95.4
CMEDHOMVL	295600
HHOwn	972.126
LTV	104.8346
TotApprec	0
YrstoTerm	0
AppPerYear	0

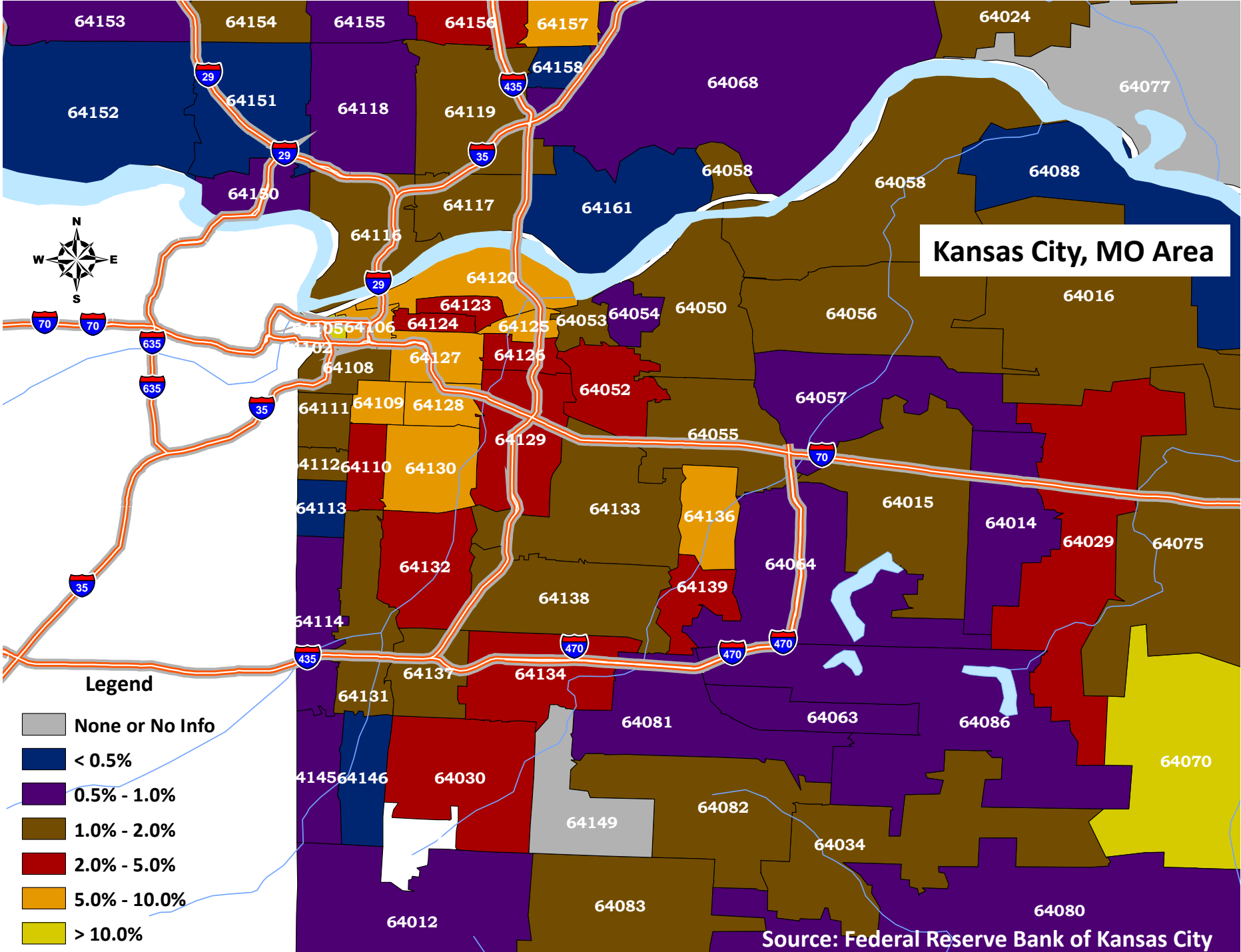
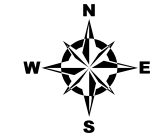
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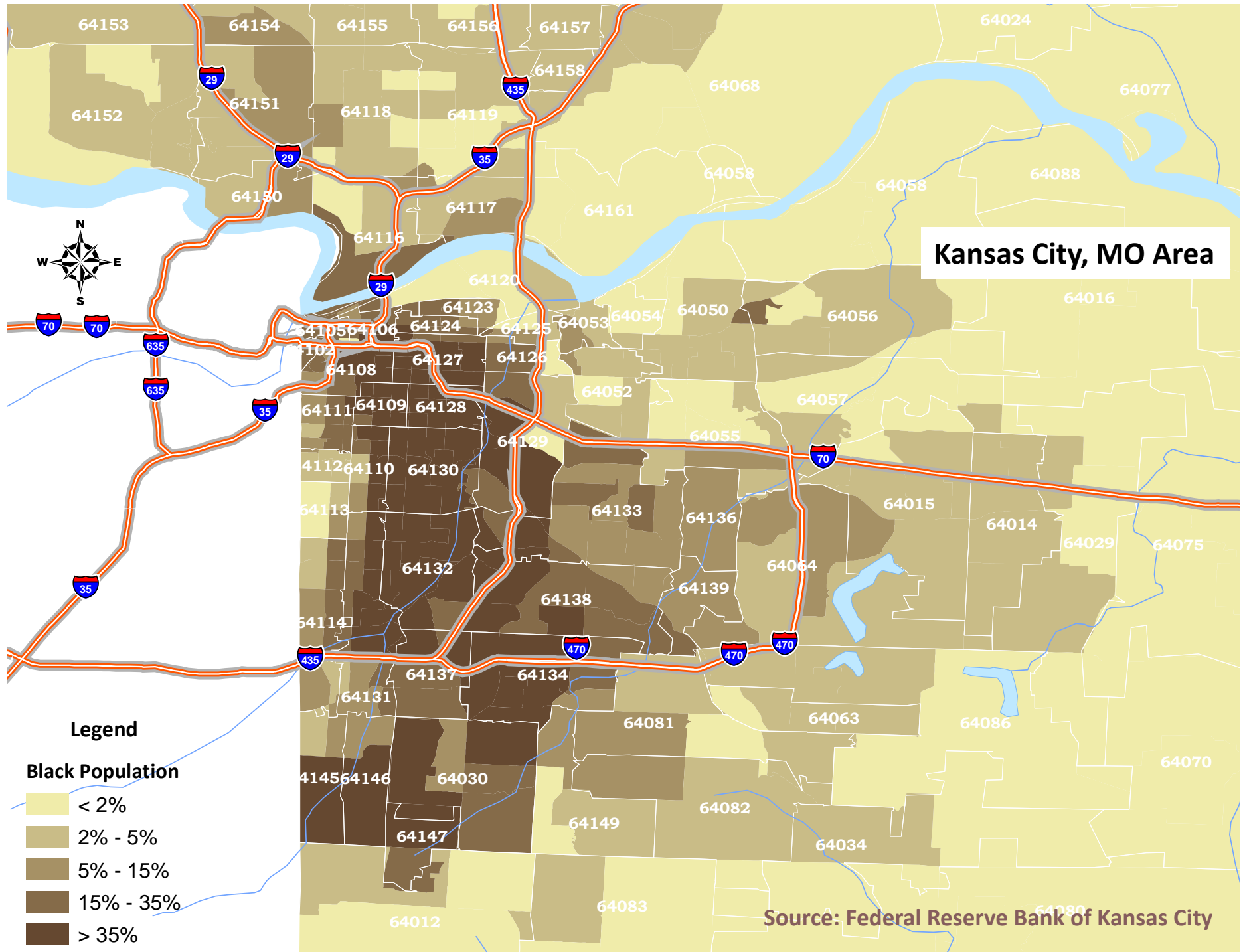


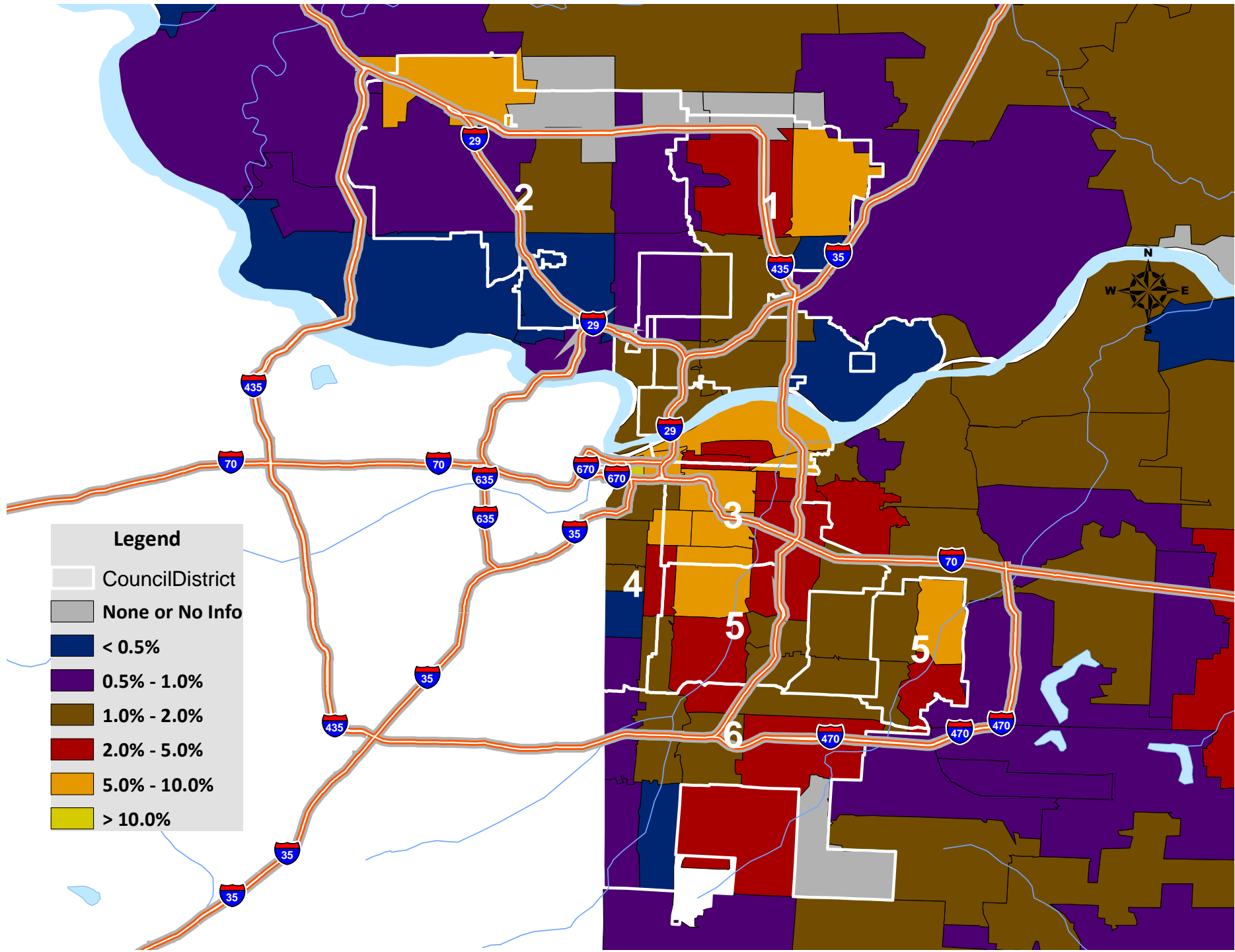




Kansas City, MO Area



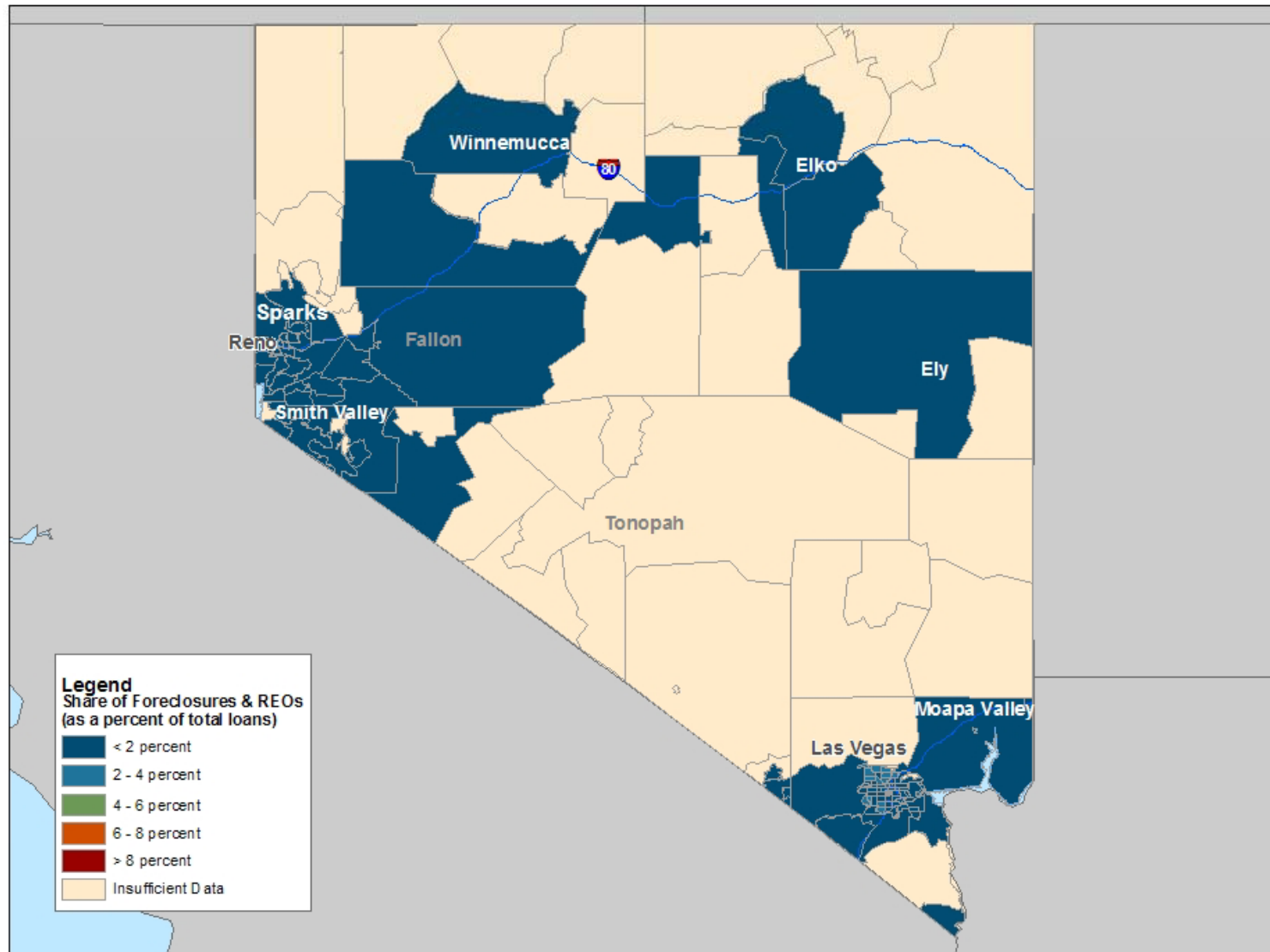




VISUALIZING AND REPORTING TRENDS

Nevada Areas Affected by Concentrated Foreclosures

June 2007

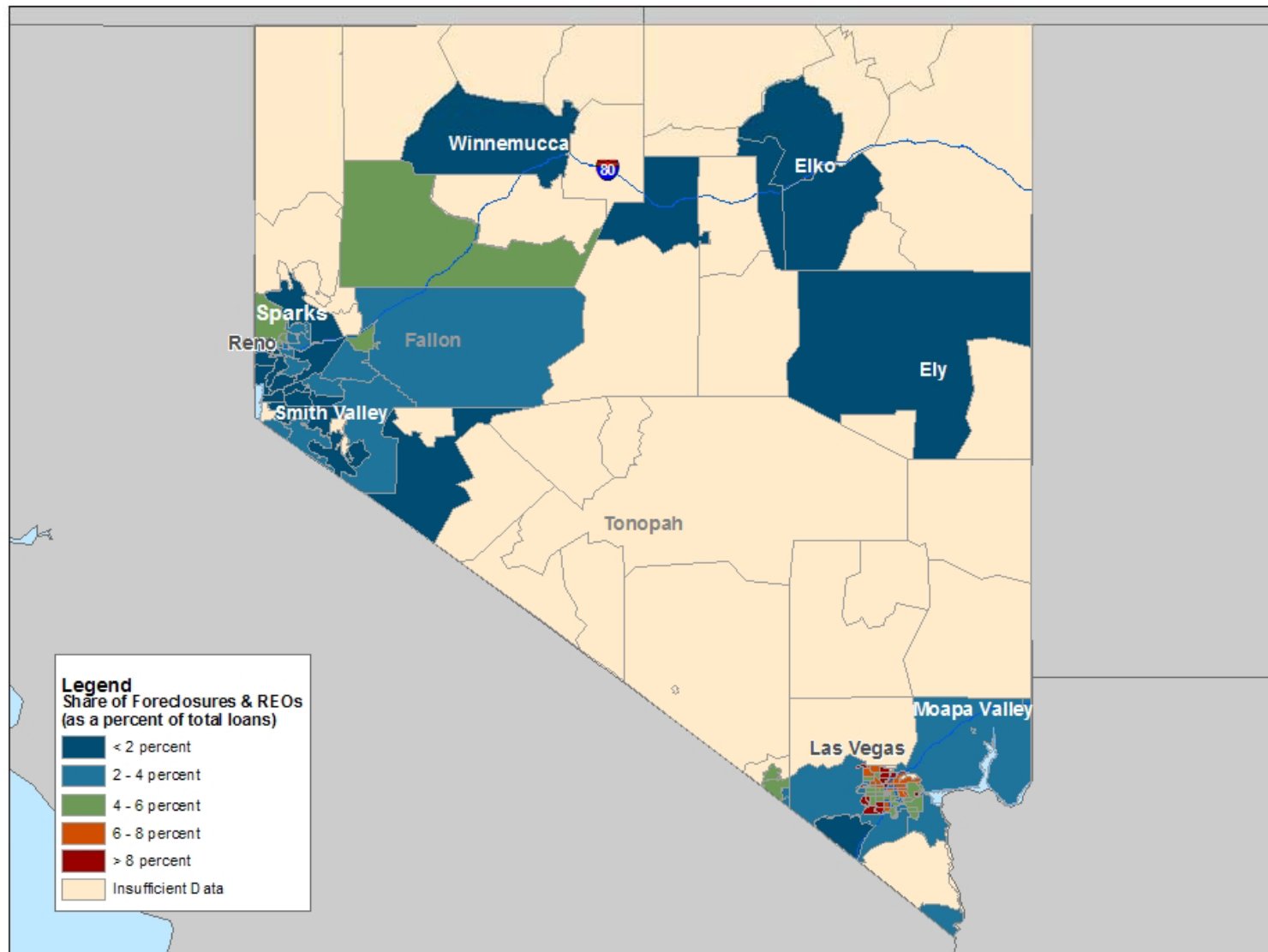


Source: Lender Processing Services Inc. Applied Analytics & FRBSF Calculations

Source: Federal Reserve Bank of San Francisco

Nevada Areas Affected by Concentrated Foreclosures

June 2008

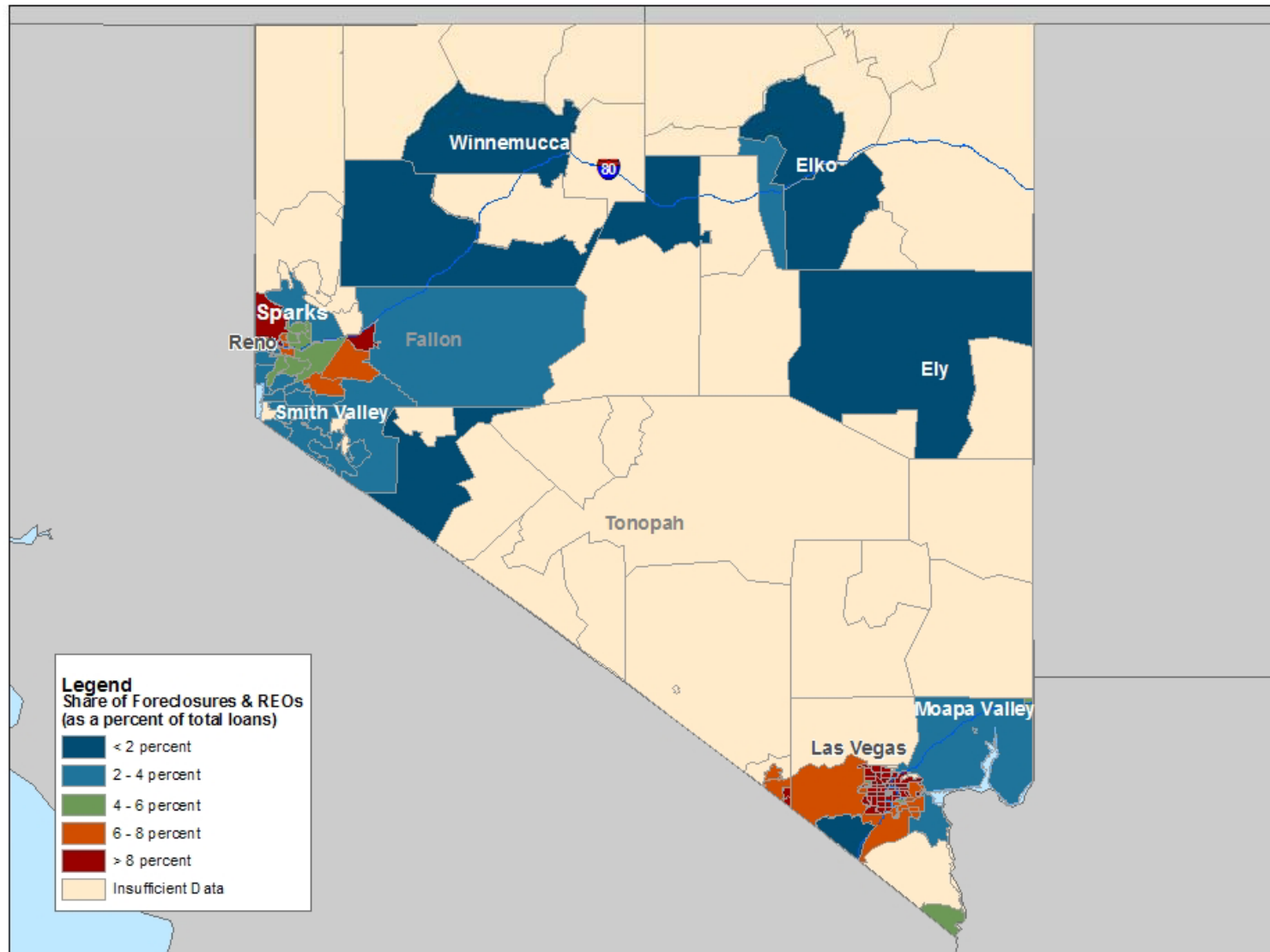


Source: Lender Processing Services Inc. Applied Analytics & FRBSF Calculations

Source: Federal Reserve Bank of San Francisco

Nevada Areas Affected by Concentrated Foreclosures

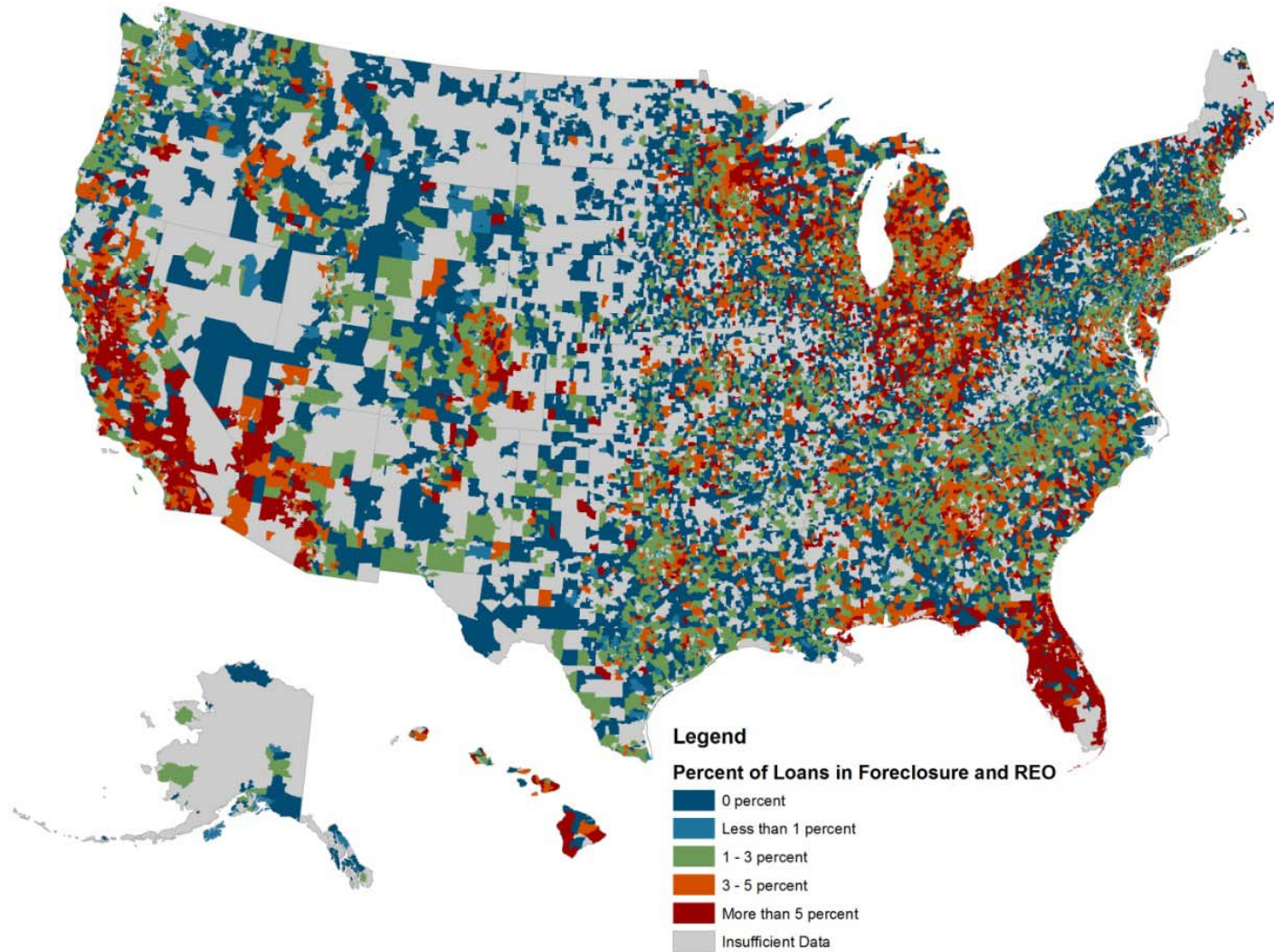
June 2009



Source: Lender Processing Services Inc. Applied Analytics & FRBSF Calculations

Source: Federal Reserve Bank of San Francisco

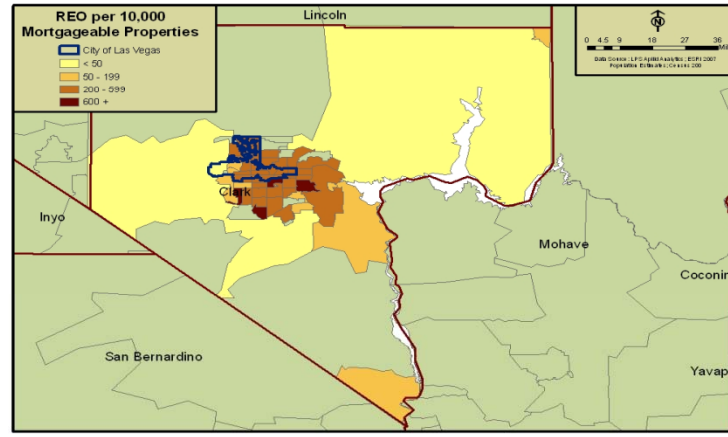
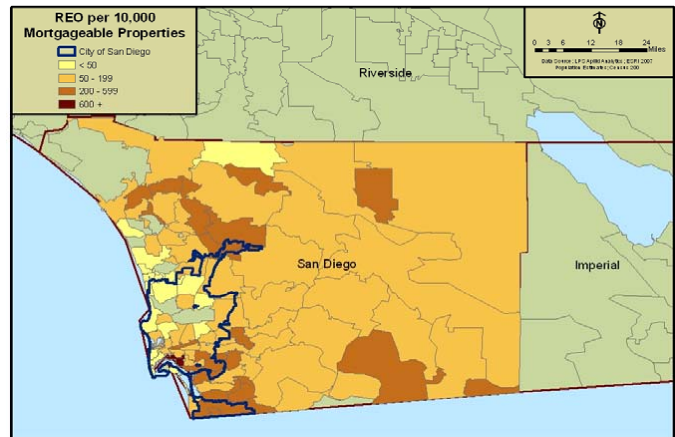
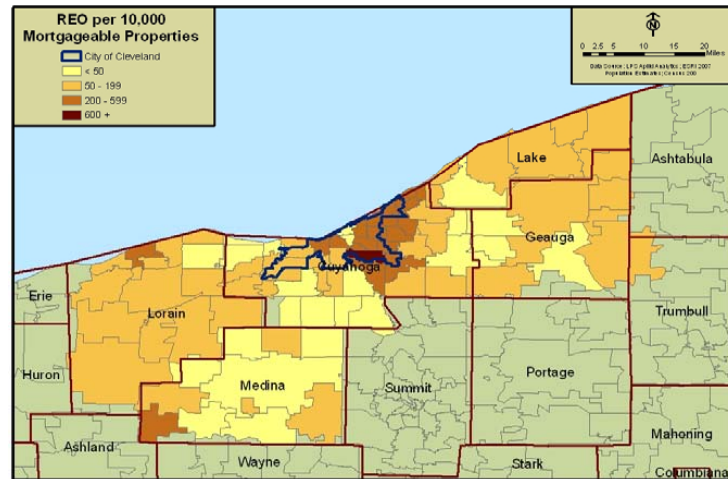
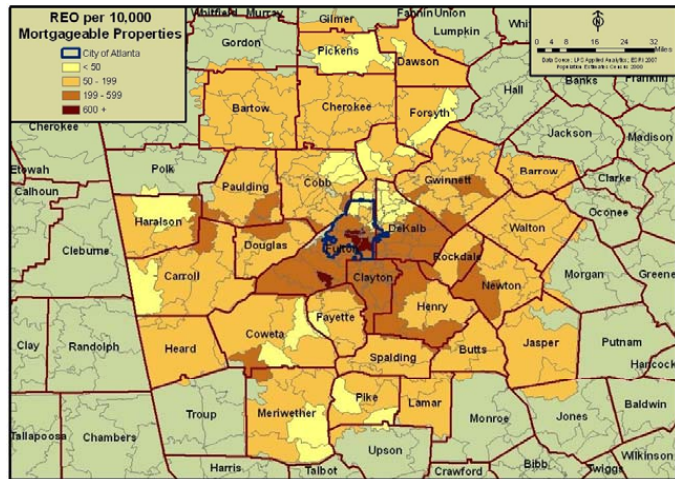
U.S. Foreclosures, June, 2009



Source: Federal Reserve Bank of San Francisco

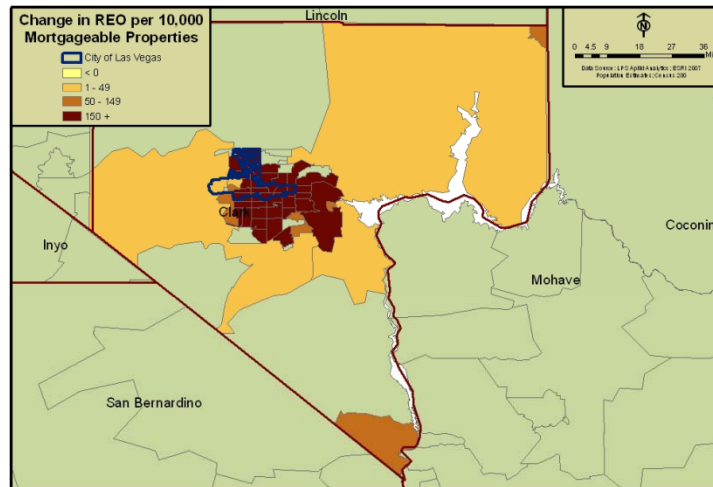
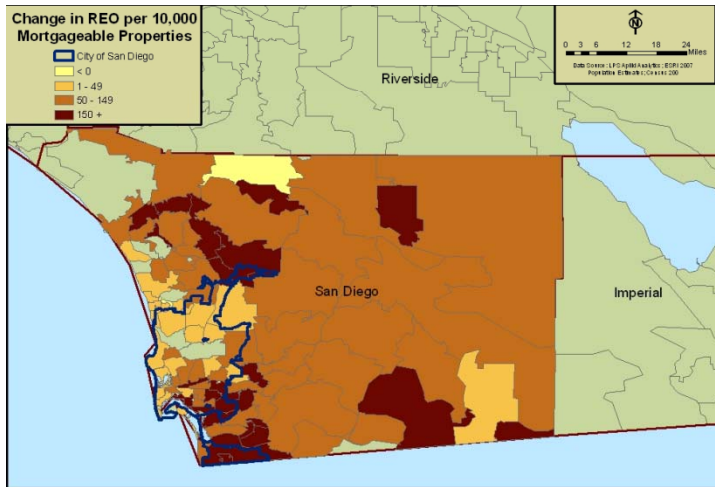
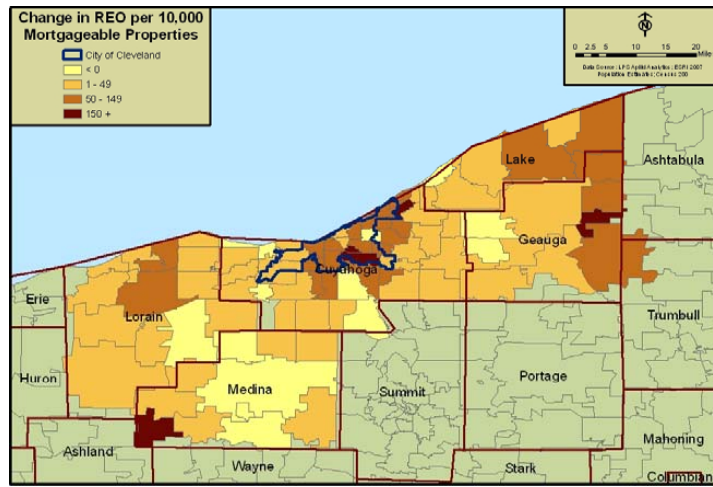
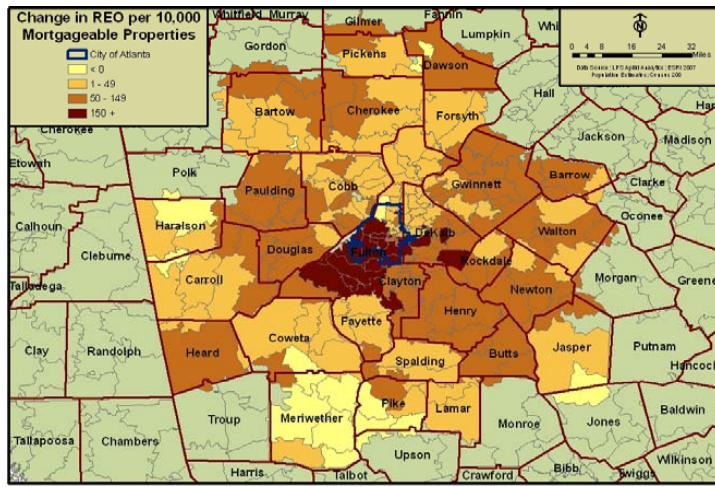
MAKING GEOGRAPHIC COMPARISONS

REO Density (REO per 10,000 mortgageable properties), November 2008



Source: Federal Reserve Bank of Atlanta
Dan Immergluk

Change in REO Density, November 2006 to November 2008



Source: Federal Reserve Bank of Atlanta
Dan Immergluk



FEDERAL RESERVE BANK *of* NEW YORK

New York Fed Credit Conditions Website

VISUALIZING STATISTICS



Philadelphia Fed Community Profiles

Philadelphia Fed statistics in research reports



Boston Fed Constituent Demographics

Attendance at Foreclosure Modification Event

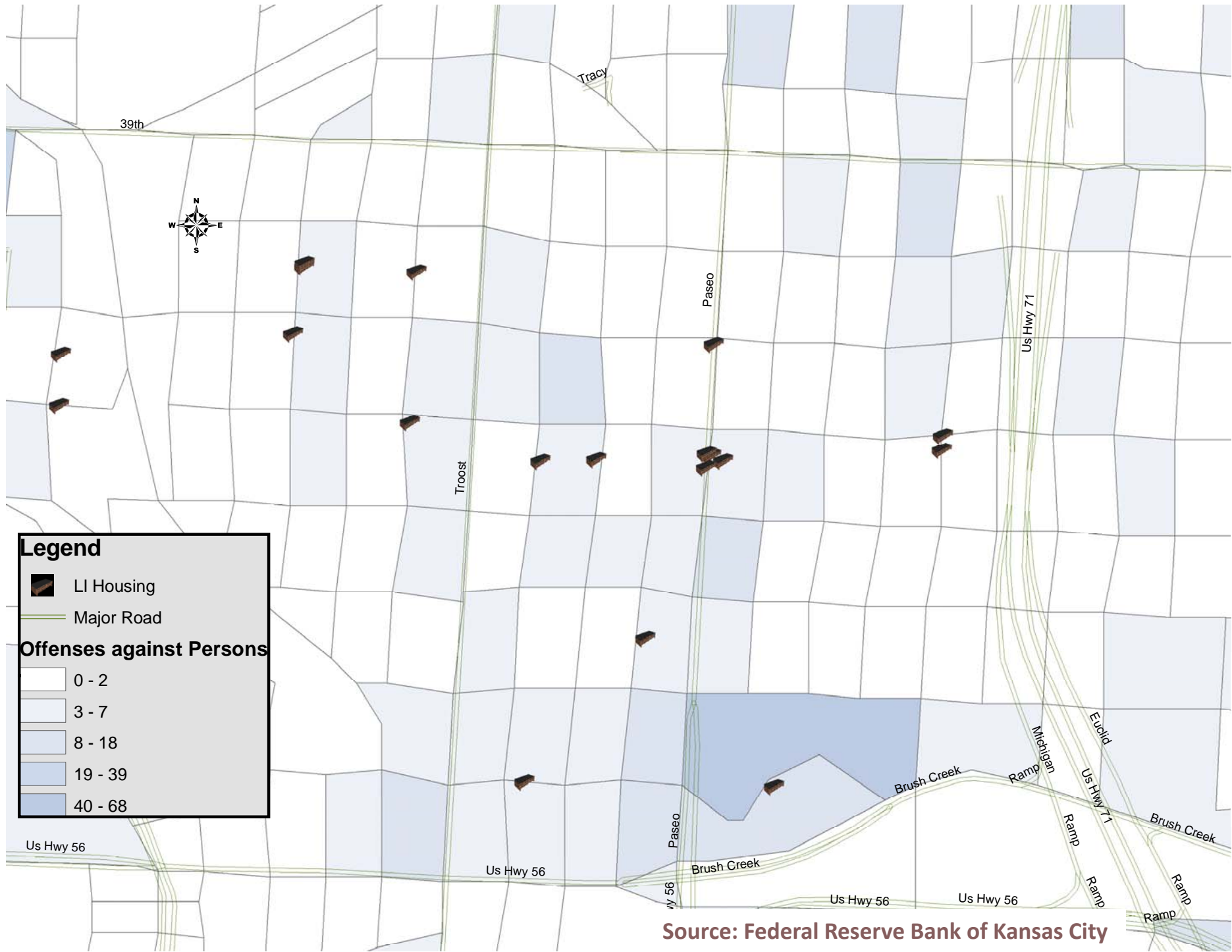
RESEARCH



Source: Federal Reserve Bank of Kansas City

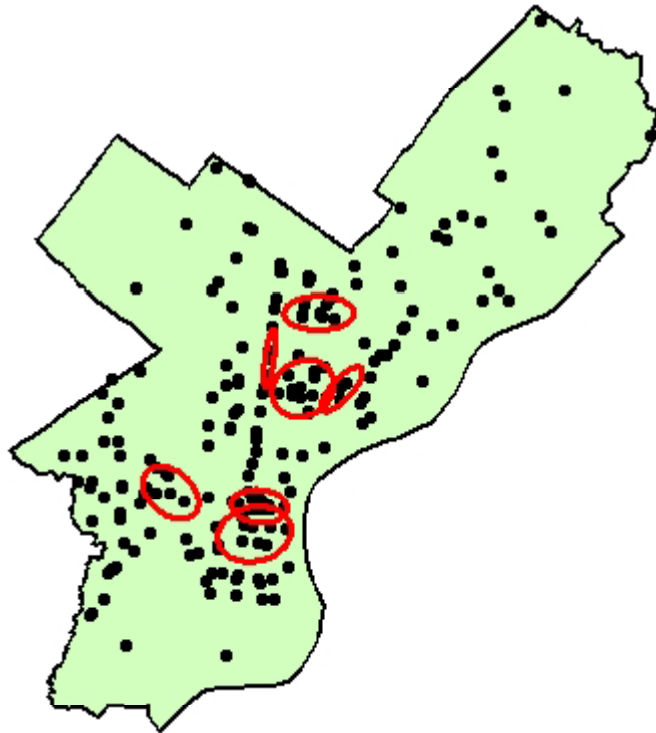


Source: Federal Reserve Bank of Kansas City

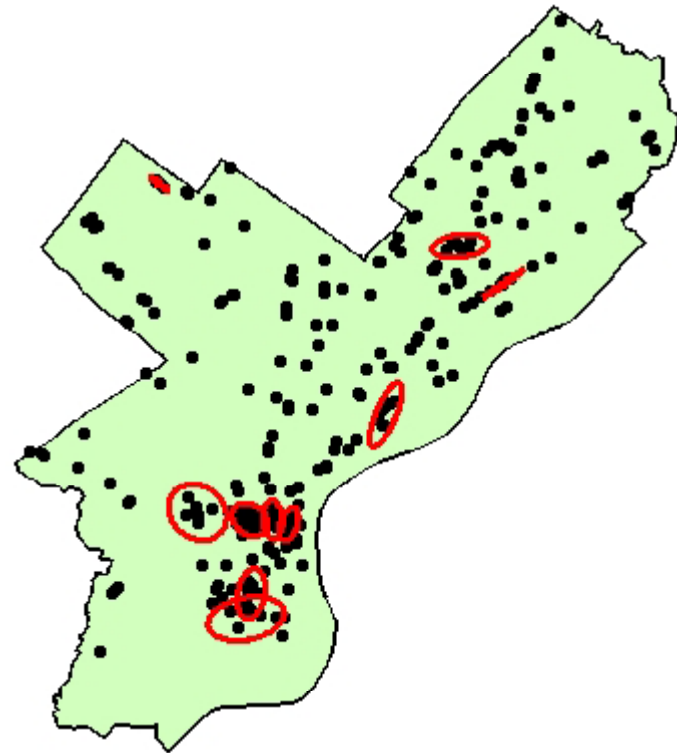


Source: Federal Reserve Bank of Kansas City

Alternative Financial Service Providers

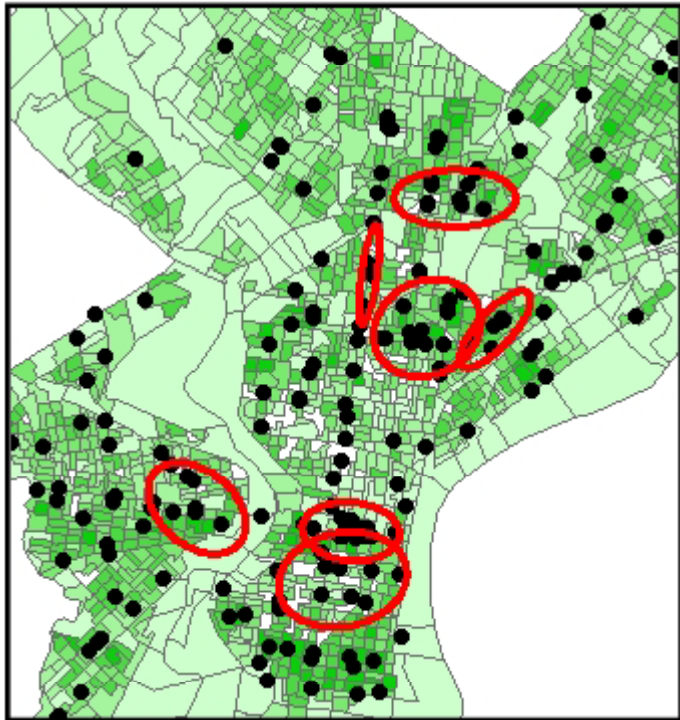


Banks

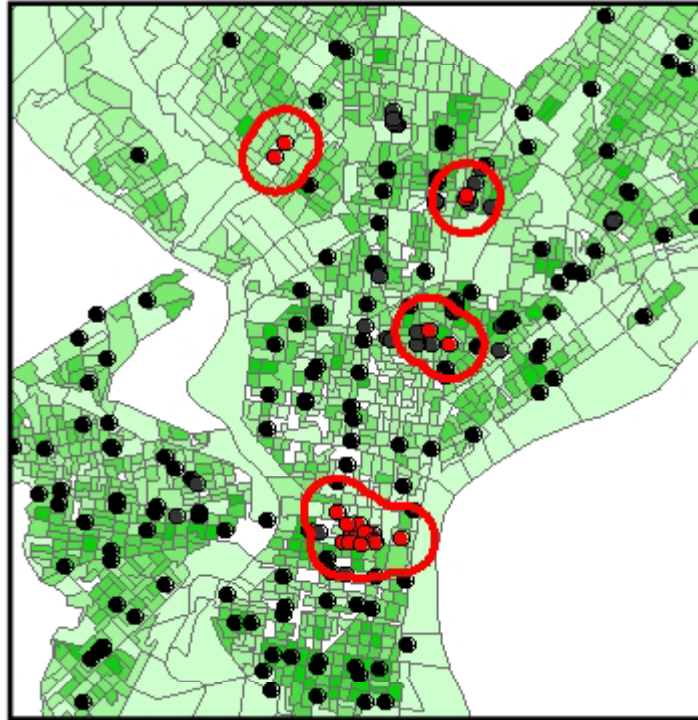


Source: Federal Reserve Bank of Philadelphia

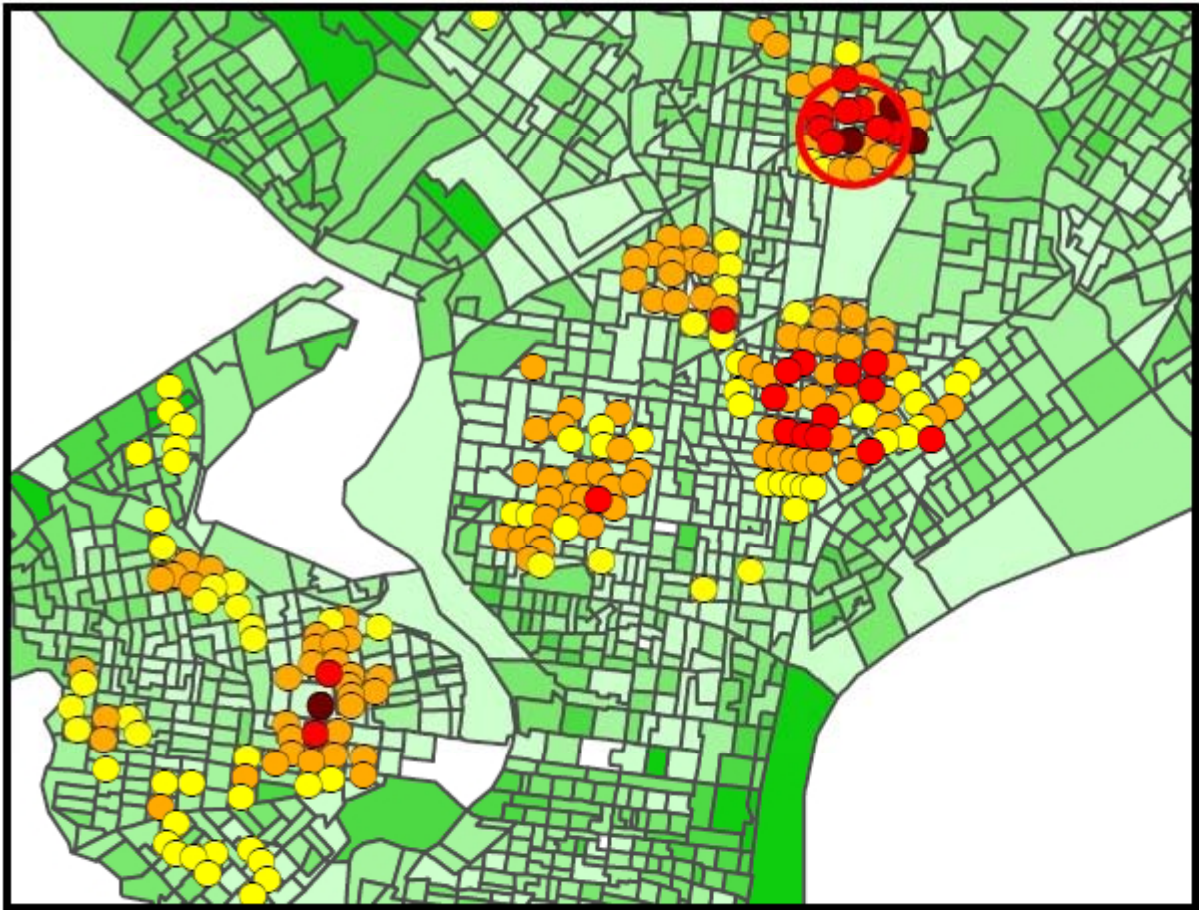
STANDARD APPROACH



NOVEL APPROACH



Source: Federal Reserve Bank of Philadelphia



P-Values

- 0.000 - 0.002
- 0.002 - 0.010
- 0.010 - 0.050
- 0.050 - 0.100



1/2 Mile Radius

Source: Federal Reserve Bank of Philadelphia

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