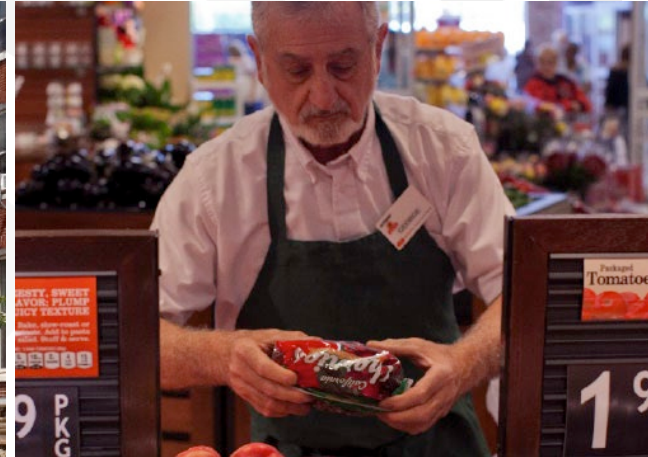REINVESTMENT FUND

Appendix: Bethlehem Market Value Analysis & Displacement Risk Ratio

2023

The Market Value Analysis

The **Market Value Analysis** (MVA) is a tool to help residents and policymakers identify and understand the elements of their local real estate markets. It is an objective, data-driven tool built on local administrative data and validated with local experts.

With an MVA, public officials and private actors can more precisely target intervention strategies in weak markets and support sustainable growth in stronger markets.
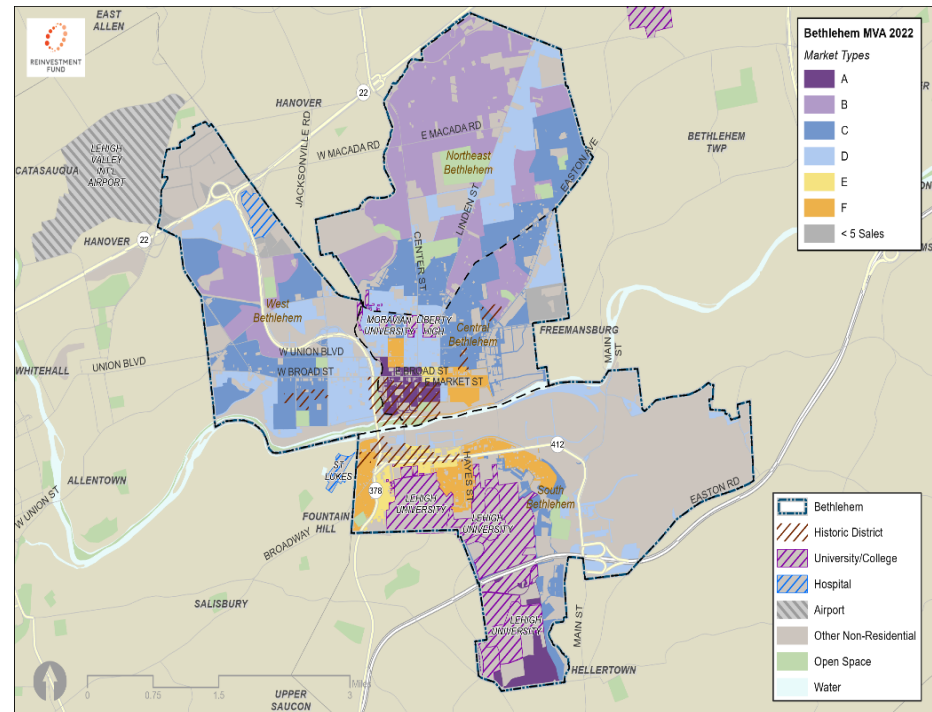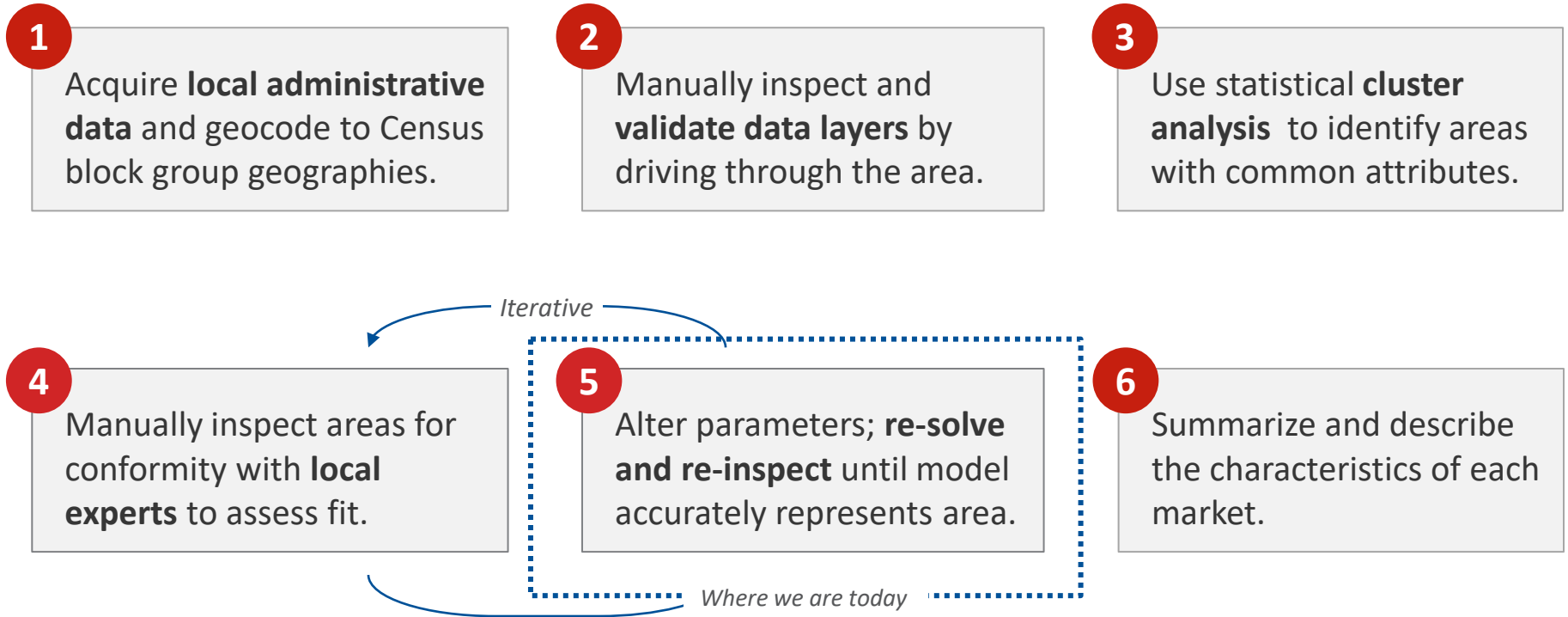
Normative Assumptions Guiding the MVA Process

When analyzing markets we begin with these principles:

- Public **subsidy is scarce**; acting alone, subsidies cannot create a market

- Public policy and subsidy must **leverage private investment** or create conditions for investment to occur

- In distressed markets, **build from strength** by investing near strong assets

- All **residents are customers** with an expectation of quality public services and amenities

- The best decisions are based on the sound and **objective analysis** of quantitative and qualitative data

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The MVA Process

1 Acquire **local administrative data** and geocode to Census block group geographies.

2 Manually inspect and **validate data layers** by driving through the area.

3 Use statistical **cluster analysis** to identify areas with common attributes.

Iterative

4 Manually inspect areas for conformity with **local experts** to assess fit.

5 Alter parameters; **re-solve and re-inspect** until model accurately represents area.

Where we are today

6 Summarize and describe the characteristics of each market.

Lessons from 15+ years of experience

Validating Data is Critical.

Researchers must systematically visit and observe neighborhoods in the city to understand the data and final model.

Geographic Scale Matters.

MSA and Census tract geographies are too large to accurately reflect the nuances of local real estate markets.

One Size Does Not Fit All.

MVA components and models share some similarities across cities but must be customized to the unique traits of each city.
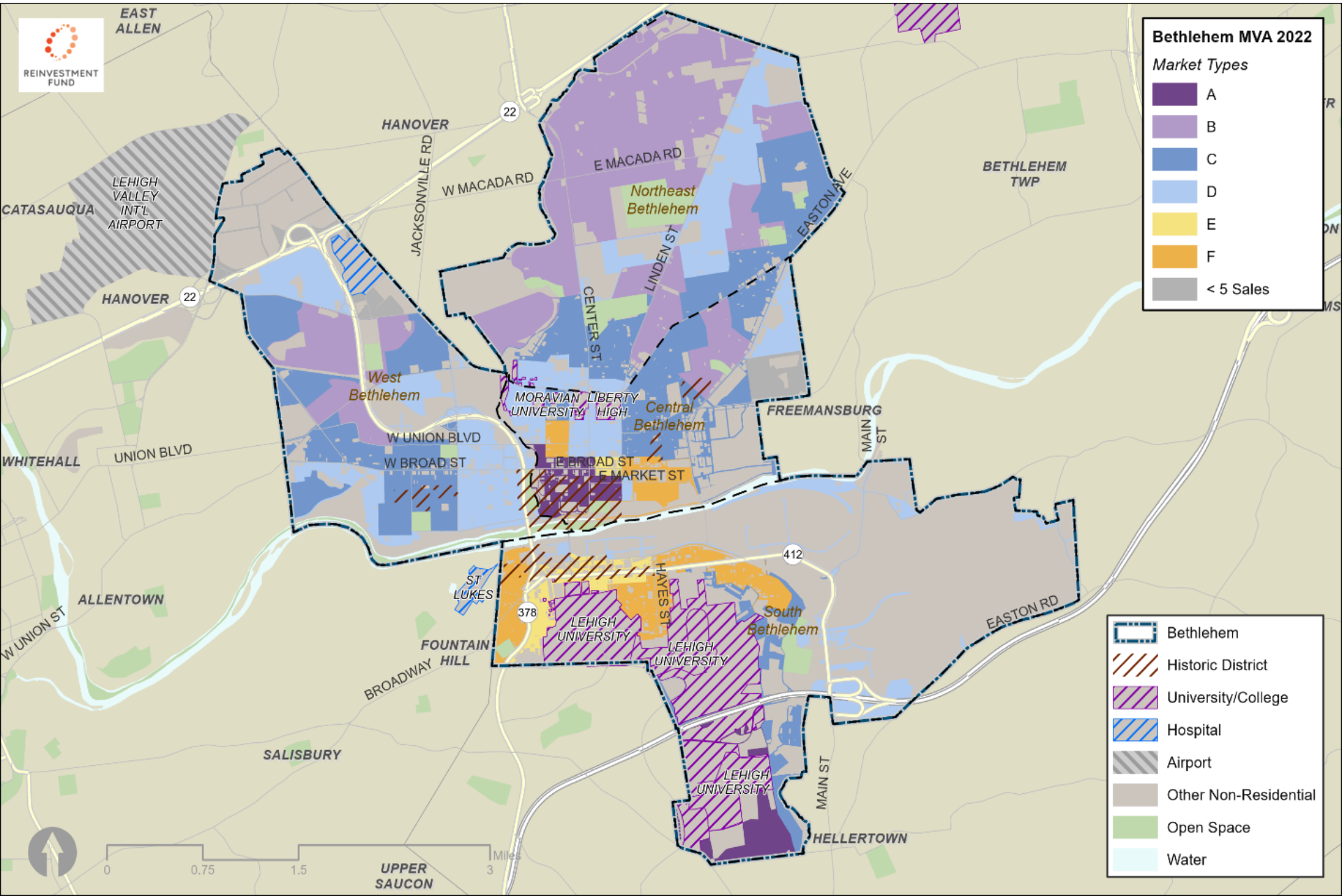
Integrate Local Knowledge.

All models are tested with local experts to incorporate qualitative feedback from each geography.

Data Variables in Bethlehem MVA Model

	Variable	Definition	Sources
Property Values and Investment	Median Home Sales, 2020 – 2022	Median price of arms-length residential property transactions between 2020 and 2022 (August)	Lehigh and Northampton County Parcel Files
	Variance of Sales Prices, 2020 – 2022	Dispersion of prices within census block groups over the target time period	Lehigh and Northampton County Parcel Files
	Housing Permits, 2020 – 2022	Share of residential parcels with multiple permits (2 or more)	City of Bethlehem
	Investor Purchases, 2020 – 2022	Share of residential sales where purchaser was an investor or institutional owner	Lehigh and Northampton County Parcel Files
Market Distress	Housing Vacancy, 2020	Share of all housing units that are vacant	2020 Decennial Census
	Code Violation, 2020 - 2022	Share of residential properties that received code enforcement or housing inspection violations between 2020 and 2022 (August)	City of Bethlehem
Area Characteristics	Single Family Rentals	Share of renter households that live in single-family (i.e., 1 unit structure and not condos) homes.	City of Bethlehem, Lehigh County and Northampton County Parcel Files
	Housing Tenure	Share of owner-occupied households	ACS, 2016-2020
	Housing Subsidy	Share of rent subsidized housing units, excluding units in senior developments	HUD POSH, 2021; Bethlehem Housing Agency
	Housing Density	Number of residential units per residential acre	City of Bethlehem, Lehigh County and Northampton County Parcel Files

MVA Model

MVA Market Characteristics

Market	# BG	Property Values and Investment				Market Distress		Area Characteristics			
		Median Sales Price	Variance of Price	Housing Permits (inc. new)	Investor Purchases	Vacancy	Code Violations	Owner Occupancy	Single Fam Rentals	Subsidy	Housing Density
A	4	$413,850	0.65	13%	27%	7.9%	4.7%	26%	8%	25%	14.4
B	12	$293,838	0.30	7%	4%	3.4%	3.2%	91%	78%	1%	4.1
C	24	$214,577	0.35	6%	14%	3.9%	6.3%	69%	41%	13%	7.9
D	21	$200,660	0.34	5%	17%	5.2%	8.6%	39%	18%	3%	12.4
E	6	$176,880	0.48	12%	60%	16.7%	18.2%	13%	29%	15%	27.1
F	9	$145,758	0.67	6%	39%	8.9%	21.7%	30%	35%	16%	18.4
City Avg	79	$222,609	0.40	7%	20%	5.9%	9.3%	51%	36%	12%	11.7

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Market Change Over Time: 2017 to 2022

MVA	Median Sales Price			Home Ownership		Code Violations		Investor Purchases		Permit Activity	
	2017	2022	% Change	2017	2022	2017	2022	2017	2022	2017	2022
A	$375,000	$413,850	+10%	26%	26%	9%	5%	24%	27%	10%	13%
B	$184,481	$293,838	+59%	90%	91%	12%	3%	8%	4%	6%	7%
C	$166,000	$214,577	+29%	64%	69%	0%	6%	4%	14%	21%	6%
D	$143,933	$200,660	+39%	51%	39%	17%	9%	16%	17%	4%	5%
E	$125,386	$176,880	+41%	47%	13%	21%	18%	31%	60%	5%	12%
F	$110,178	$145,758	+32%	11%	30%	4%	22%	54%	39%	6%	6%
G	$69,047			36%		28%		46%		4%	
City Average	$155,385	$222,609	+43%	57%	51%	16%	9%	22%	20%	6%	7%

Substantial Market Change: 2017 to 2022
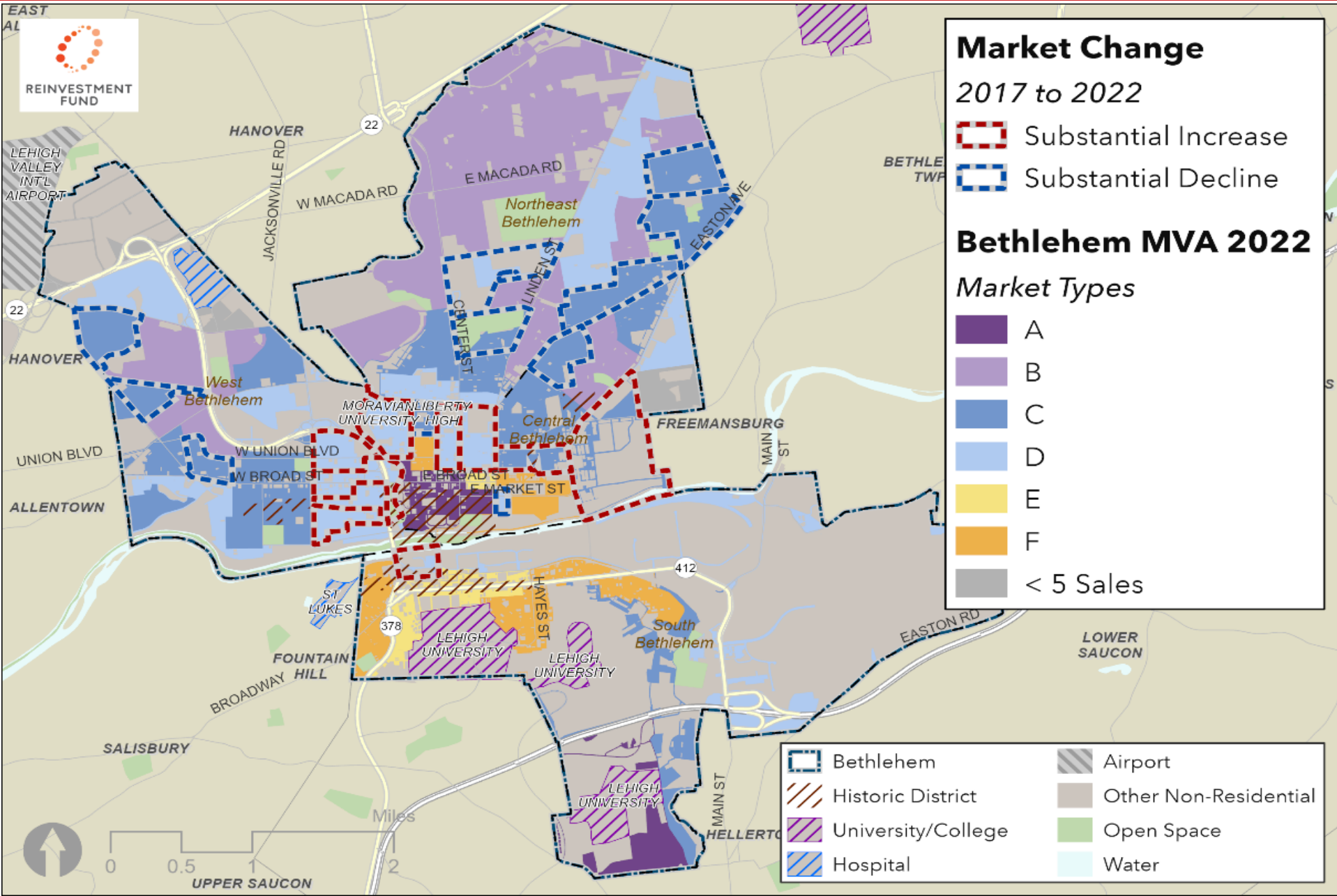
Model Components and Market Indicators

Median Sales Price
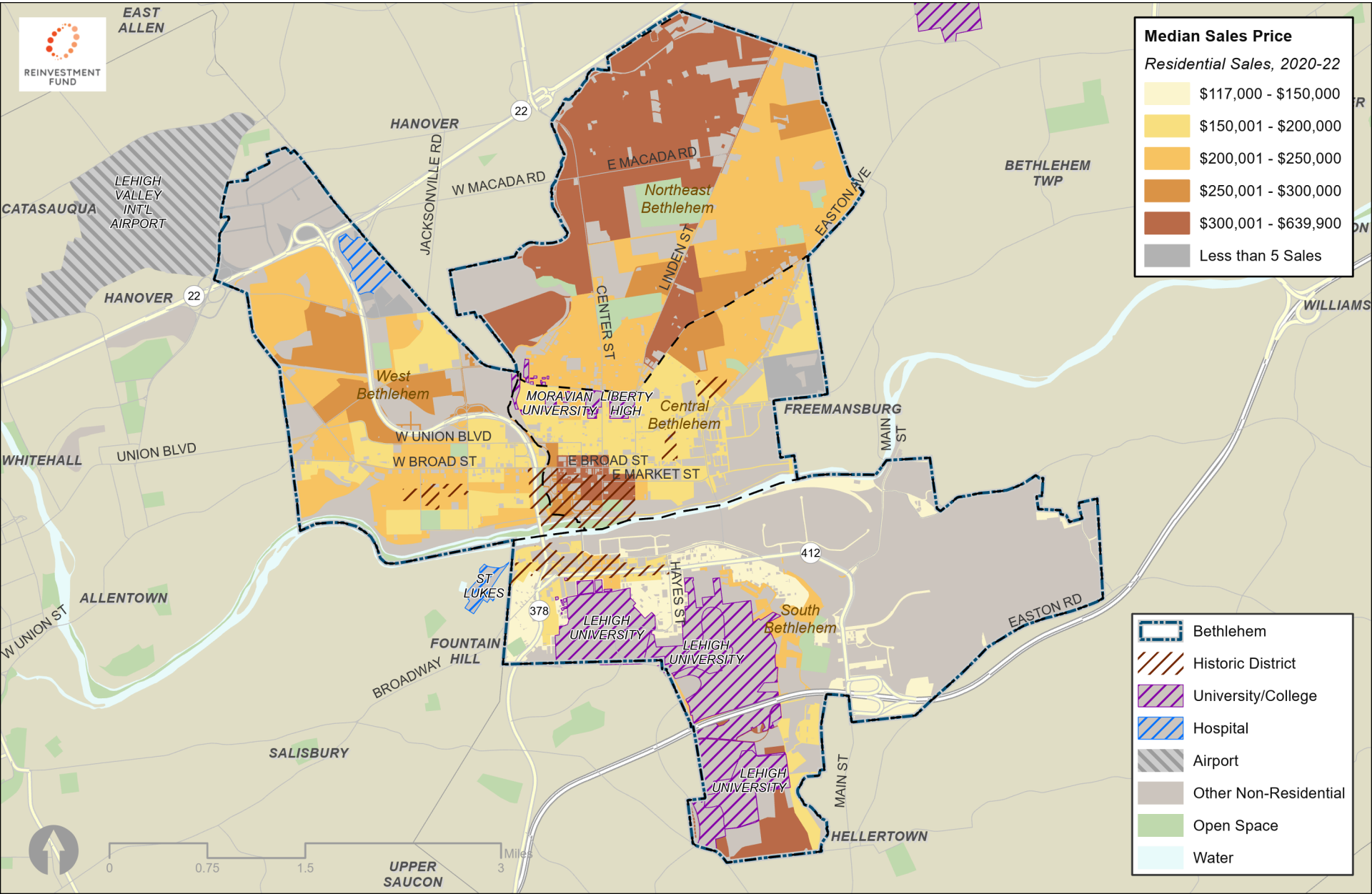
Variance of Sales Price

Variance of Sales Price
Residential Sales, 2020-22

- 0.13 - 0.20
- 0.21 - 0.30
- 0.31 - 0.40
- 0.41 - 0.50
- 0.51 - 1.02
- Less than 5 Sales

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water
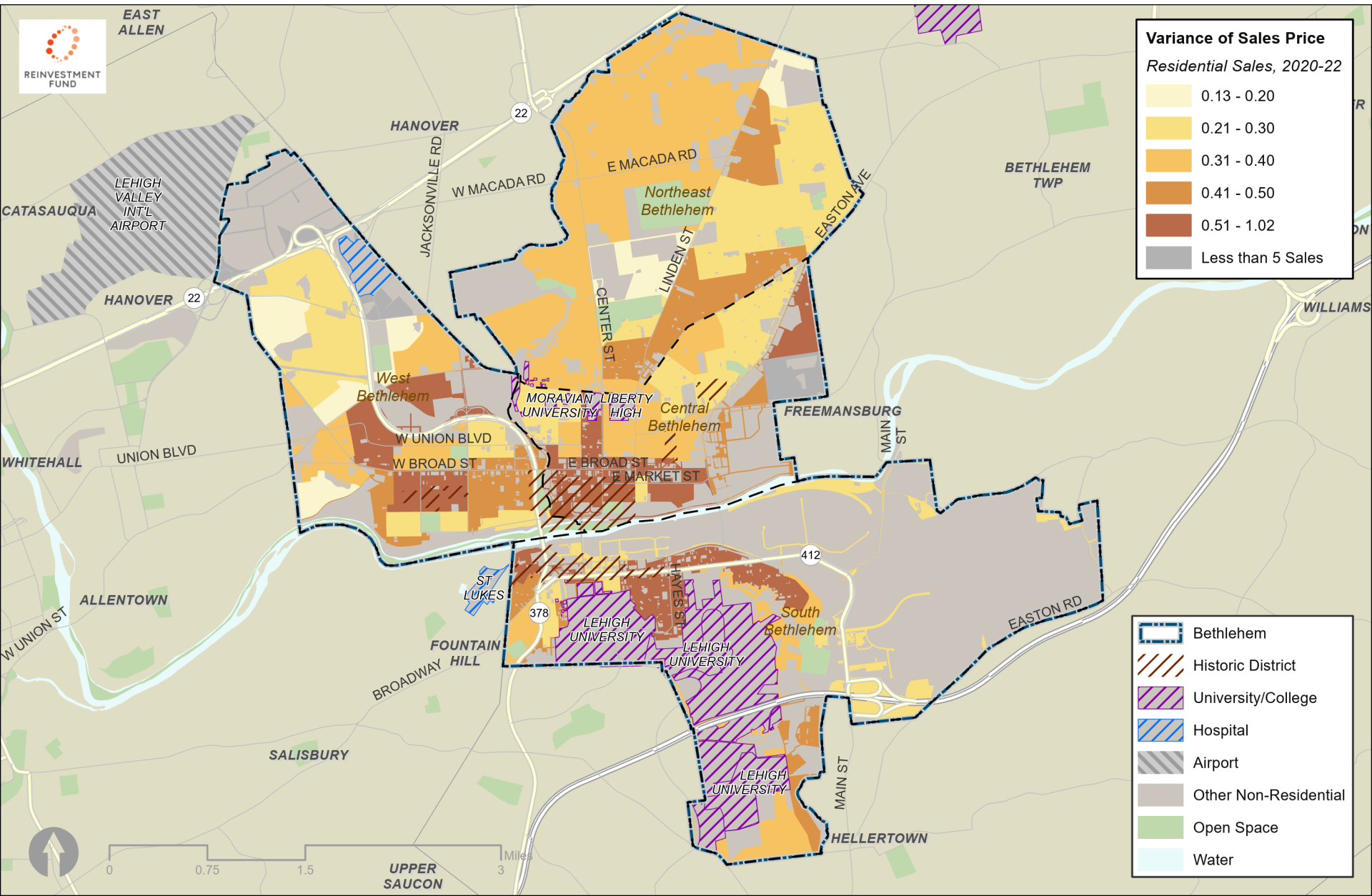
Multiple Housing Permits

Properties with Multiple Permits
Share of Residential Parcels, 2022

- 1.2% - 5%
- 5.1% - 7.5%
- 7.6% - 10%
- 10.1% - 12.5%
- 12.6% - 28.6%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water
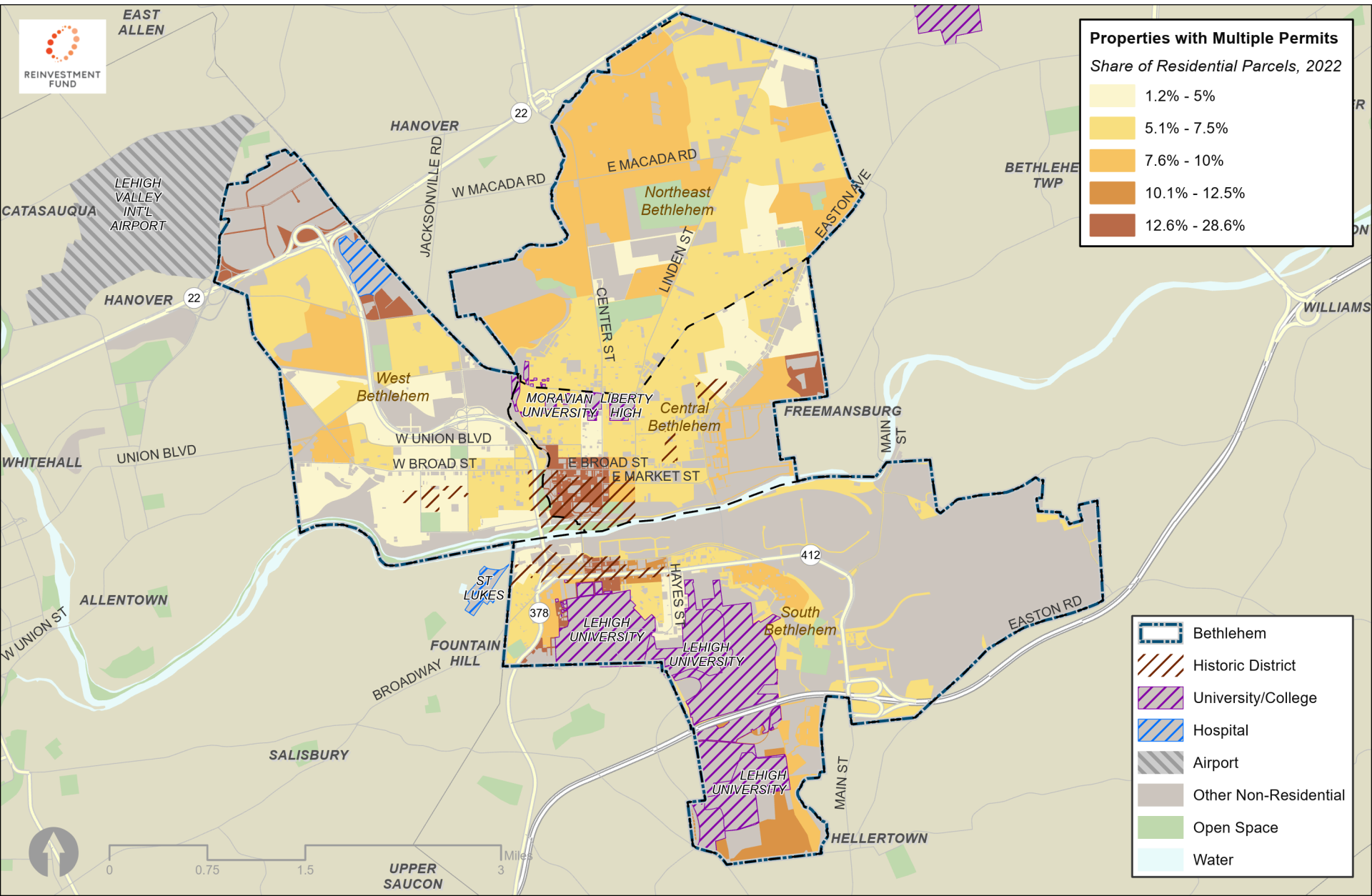
Investor Purchases of Single-Family Properties

Investor Purchases

Share of Residential Sales, 2020-22

- 0% - 10%
- 10.1% - 20%
- 20.1% - 30%
- 30.1% - 40%
- 40.1% - 95.5%
- Insufficient Data

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Housing Vacancy

Residential Vacancy map of Bethlehem showing Share of Housing Units, 2020.

Residential Vacancy
Share of Housing Units, 2020
- 0% - 2.5%
- 2.6% - 5%
- 5.1% - 10%
- 10.1% - 15%
- 15.1% - 22.5%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Code Violations – Properties with Multiple Violations

Code Violations

Share of Residential Parcels, 2022

- 0% - 2.5%
- 2.6% - 5%
- 5.1% - 10%
- 10.1% - 15%
- 15.1% - 25.6%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Single Family Rentals

Single Family Rentals
Share of Rental Households

- 0% - 10%
- 10.1% - 20%
- 20.1% - 40%
- 40.1% - 60%
- 60.1% - 100%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Owner Occupancy

Owner Occupancy
Share of Residential Parcels, 2022

- 0.5% - 18.1%
- 18.2% - 39.3%
- 39.4% - 60.2%
- 60.3% - 78.8%
- 78.9% - 97%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Rental Subsidy

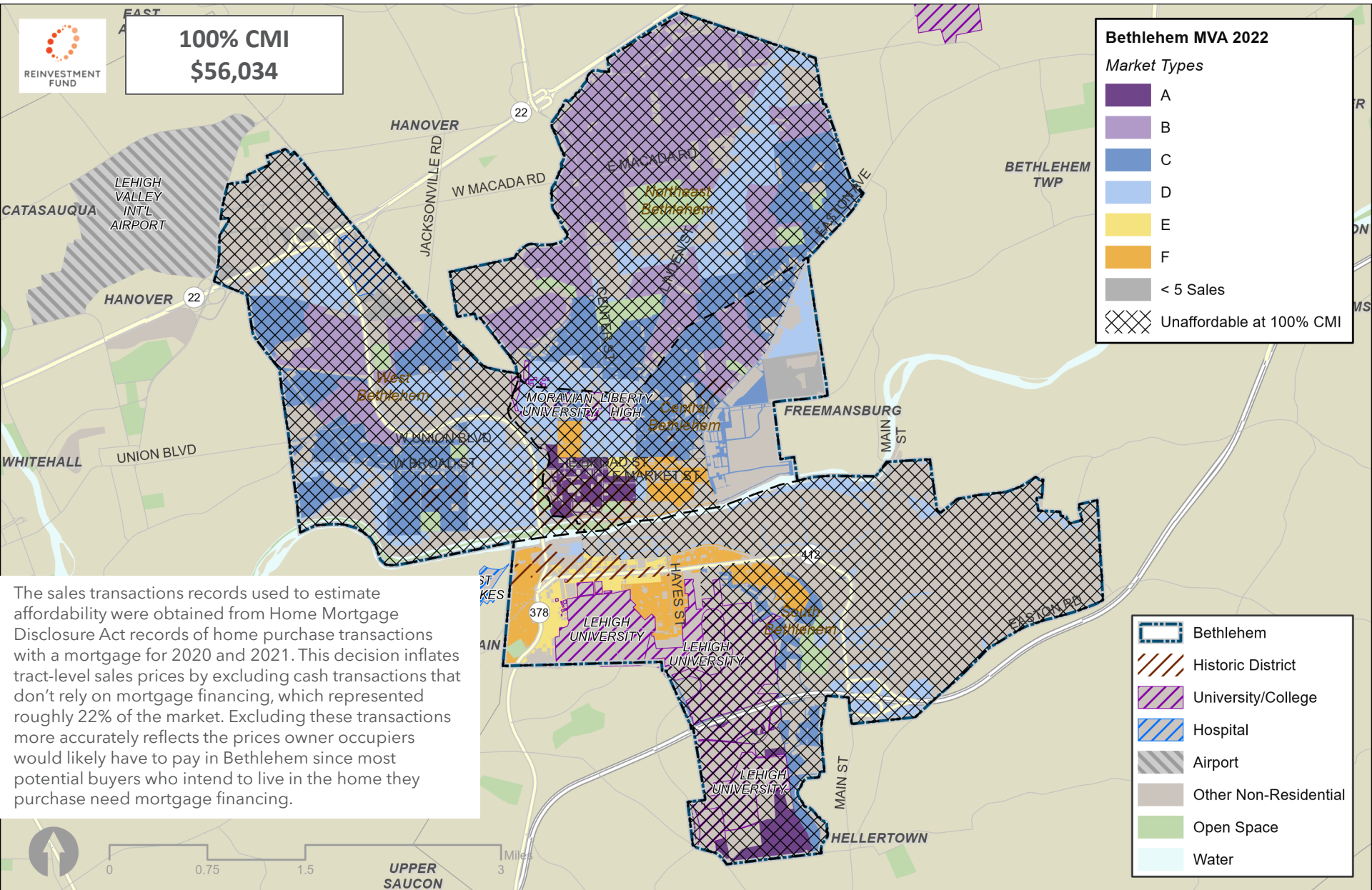**Rental Subsidy**

Share of Rental Households, 2021-22

- 0% - 5%
- 5.1% - 10%
- 10.1% - 25%
- 25.1% - 50%
- 50.1% - 100%

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Housing Density

Housing Density

Residential Units per Residential Acre

- 1.1 - 2.0
- 2.1 - 5.0
- 5.1 - 10.0
- 10.1 - 20.0
- 20.1 - 53.8

Legend:
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Analysis and Overlays

- **Affordability** - identifying places that are accessible to residents with varying levels of City of Bethlehem Median Household Income:
80%; 100%; 120%; 150% -

- **Displacement Risk** - identifying places in the city where residents may be experiencing displacement pressure associated with rising home prices

Unaffordable Block Groups for Residents with Incomes at 80% CMI

**80% CMI
$44,827**

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Bethlehem MVA 2022
Market Types

- A
- B
- C
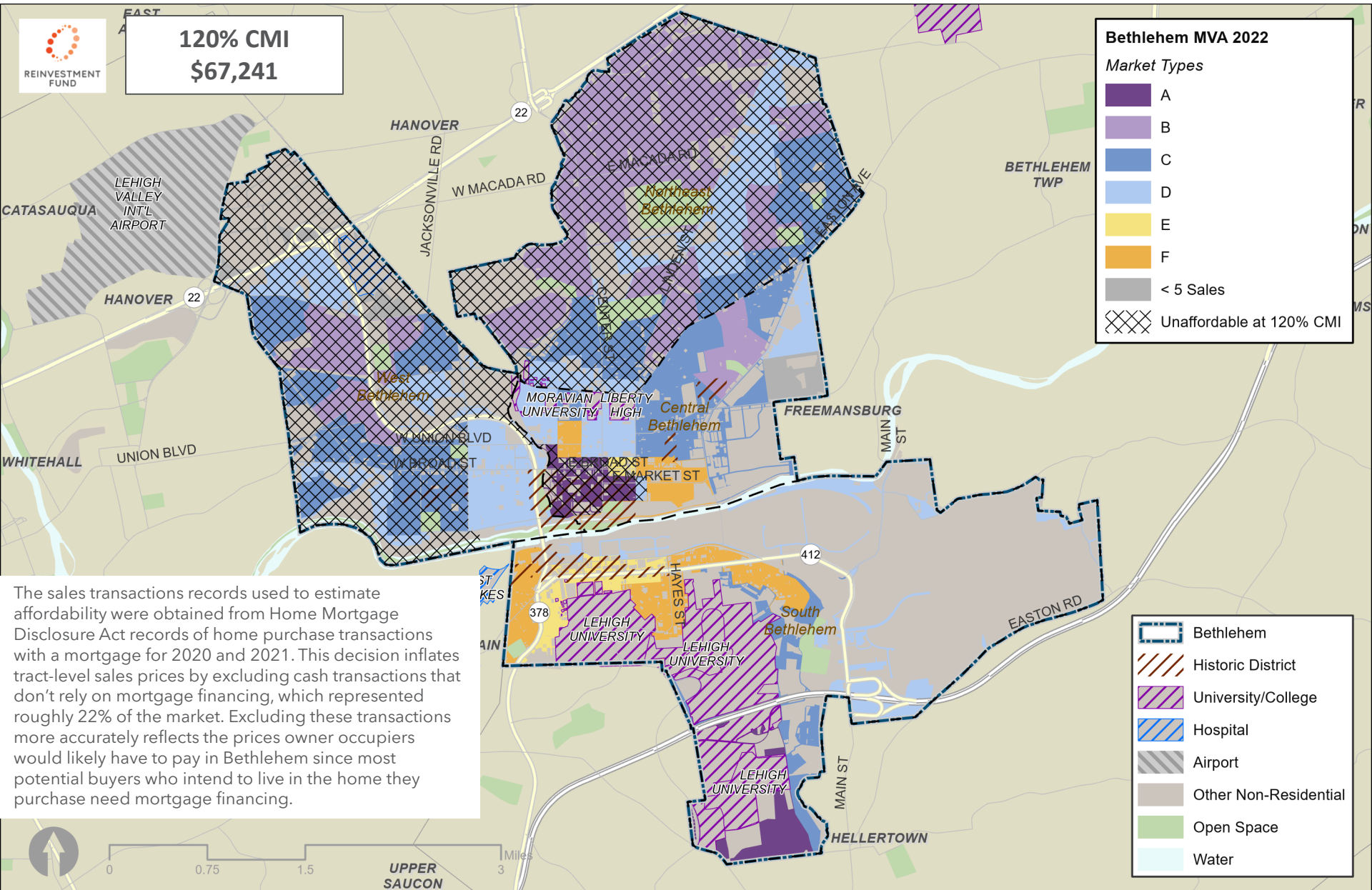- D
- E
- F
- < 5 Sales
- Unaffordable at 80% CMI

The sales transactions records used to estimate affordability were obtained from Home Mortgage Disclosure Act records of home purchase transactions with a mortgage for 2020 and 2021. This decision inflates tract-level sales prices by excluding cash transactions that don't rely on mortgage financing, which represented roughly 22% of the market. Excluding these transactions more accurately reflects the prices owner occupiers would likely have to pay in Bethlehem since most potential buyers who intend to live in the home they purchase need mortgage financing.

- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Unaffordable Block Groups for Residents with Incomes at 100% of CMI

100% CMI
$56,034

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Bethlehem MVA 2022
Market Types

- A
- B
- C
- D
- E
- F
- < 5 Sales
- Unaffordable at 100% CMI

The sales transactions records used to estimate affordability were obtained from Home Mortgage Disclosure Act records of home purchase transactions with a mortgage for 2020 and 2021. This decision inflates tract-level sales prices by excluding cash transactions that don't rely on mortgage financing, which represented roughly 22% of the market. Excluding these transactions more accurately reflects the prices owner occupiers would likely have to pay in Bethlehem since most potential buyers who intend to live in the home they purchase need mortgage financing.
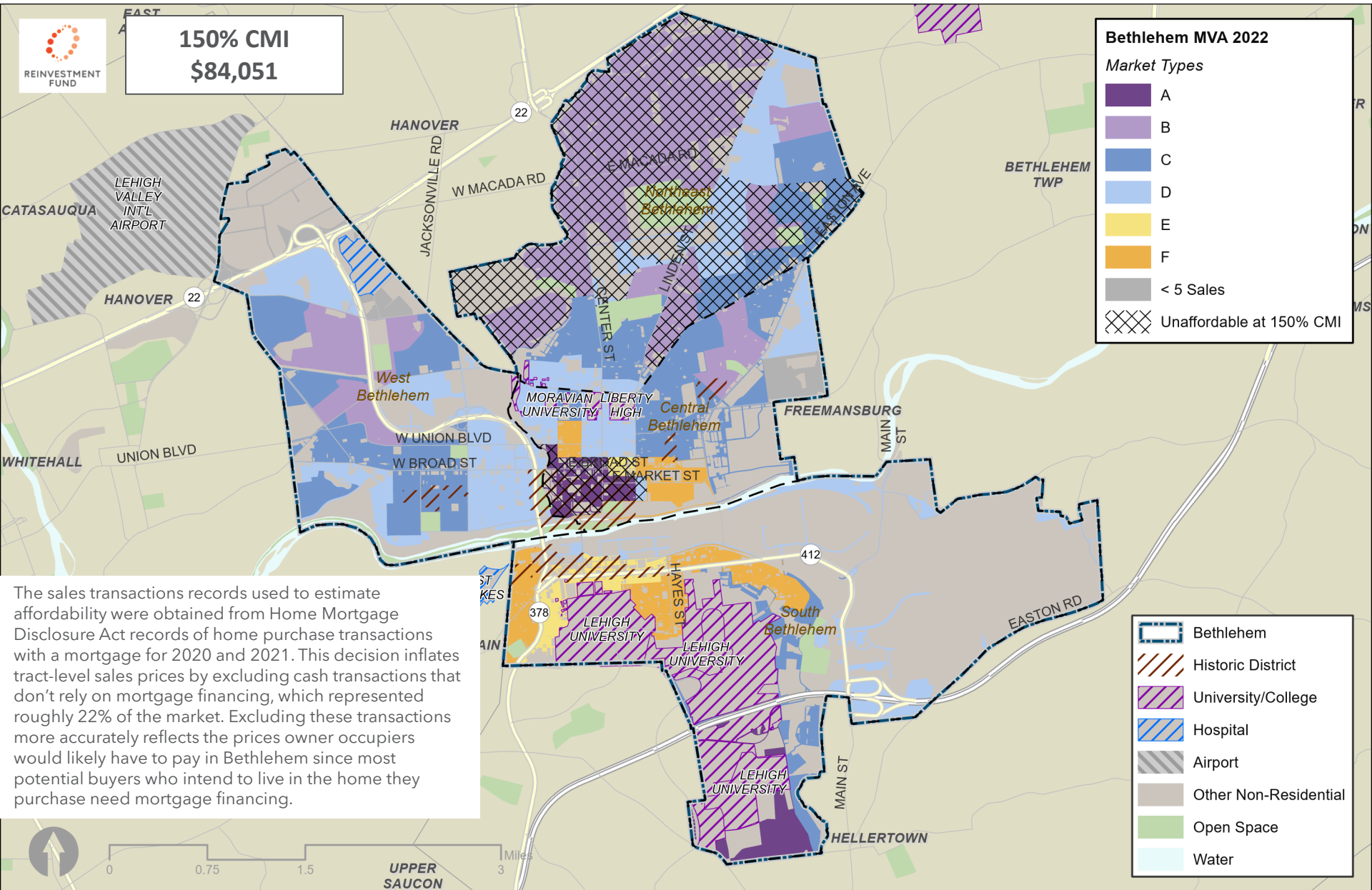
- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Unaffordable Block Groups for Residents with Incomes at 120% of CMI

120% CMI
$67,241

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Bethlehem MVA 2022

Market Types

- A
- B
- C
- D
- E
- F
- < 5 Sales
- Unaffordable at 120% CMI

The sales transactions records used to estimate affordability were obtained from Home Mortgage Disclosure Act records of home purchase transactions with a mortgage for 2020 and 2021. This decision inflates tract-level sales prices by excluding cash transactions that don't rely on mortgage financing, which represented roughly 22% of the market. Excluding these transactions more accurately reflects the prices owner occupiers would likely have to pay in Bethlehem since most potential buyers who intend to live in the home they purchase need mortgage financing.

- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

EAST
HANOVER
W MACADA RD
JACKSONVILLE RD
E MACADA RD
Northeast Bethlehem
BETHLEHEM TWP

LEHIGH VALLEY INT'L AIRPORT
CATASAUQUA
HANOVER 22
West Bethlehem
WHITEHALL
UNION BLVD
W UNION BLVD
W BROAD ST
MORAVIAN UNIVERSITY
LIBERTY HIGH
Central Bethlehem
FREEMANSBURG
MAIN ST
MARKET ST

EASTON RD
HAYES ST
South Bethlehem
412
LEHIGH UNIVERSITY
378
MAIN ST
LEHIGH UNIVERSITY
LEHIGH UNIVERSITY
HELLERTOWN

UPPER SAUCON

0   0.75   1.5   Miles   3

Unaffordable Block Groups for Residents with Incomes at 150% of CMI

150% CMI $84,051

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Bethlehem MVA 2022
Market Types

- A
- B
- C
- D
- E
- F
- < 5 Sales
- Unaffordable at 150% CMI

The sales transactions records used to estimate affordability were obtained from Home Mortgage Disclosure Act records of home purchase transactions with a mortgage for 2020 and 2021. This decision inflates tract-level sales prices by excluding cash transactions that don't rely on mortgage financing, which represented roughly 22% of the market. Excluding these transactions more accurately reflects the prices owner occupiers would likely have to pay in Bethlehem since most potential buyers who intend to live in the home they purchase need mortgage financing.

- Bethlehem
- Historic District
- University/College
- Hospital
- Airport
- Other Non-Residential
- Open Space
- Water

Measuring Resident Displacement Risk

Our Approach to Measuring Housing Market Pressure and Resident Displacement Risk

The concern driving this approach is to measure the *involuntary* aspect of displacement.

→ Households forced to leave their neighborhoods due to circumstances beyond their control (e.g., rising taxes, rent increase, condo conversion, neighborhood decline).

The analysis identifies areas where current housing prices may be unaffordable to long-term residents.

→ Assumes housing should be close to 3x family income (following HUD guidelines).

Examines changes in the ratio of a long-term residents' income to housing prices to spotlight areas of concern.

→ Healthy neighborhoods should be stable or follow regional trends. Areas with rapid increases (or decreases) in this ratio signal potential concern.

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The Displacement Risk Ratio

Calculating the Displacement Risk Ratio

1   Fix incomes of "long-term residents" who lived in homes during beginning time period (2015-16)

2   Use inflation rate to increase income of long-term residents between beginning time period and today (2021-22)

3   Calculate ratio of long-term resident income and actual home prices over time

4   Remove city average from individual block group ratios to account for regional trends

Interpreting Displacement Risk Ratio Values

Higher DRR values reflect a more challenging environment for long-term residents and the potential existence of displacement pressure...

Possible concerns about market of demand

Homes no longer attainable for long-term residents

-2.5   -1.5   -0.5   0.0   +0.5   +1.5   +2.5   3.5+

Prices reflect standard thresholds for affordability
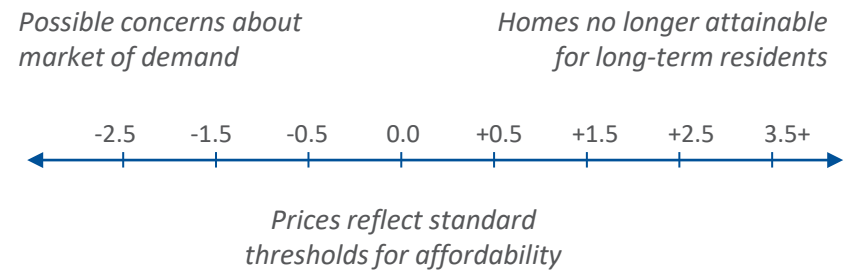
... Lower values may reflect a lack of market value and concerns with excess housing supply or vacancy/abandonment.
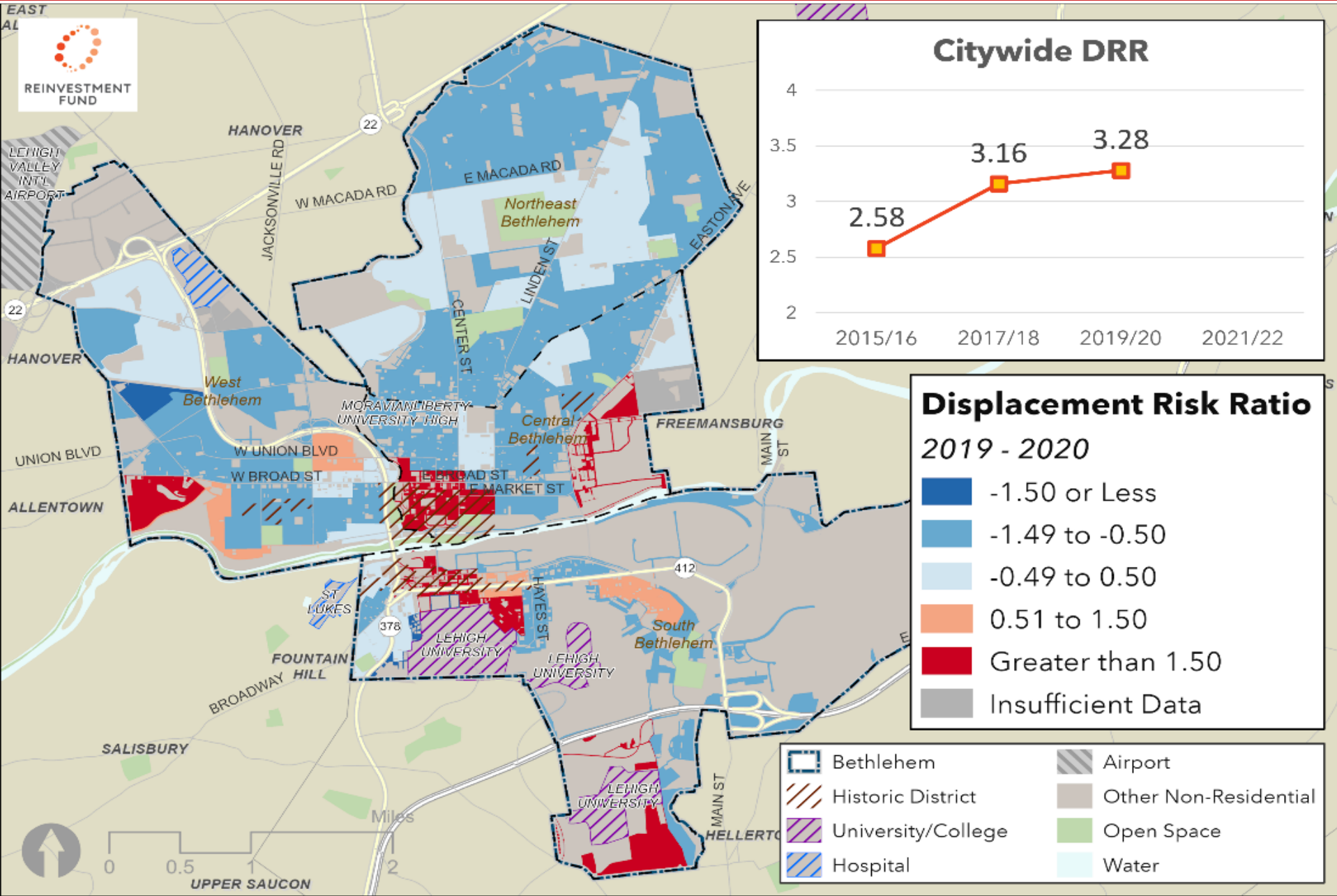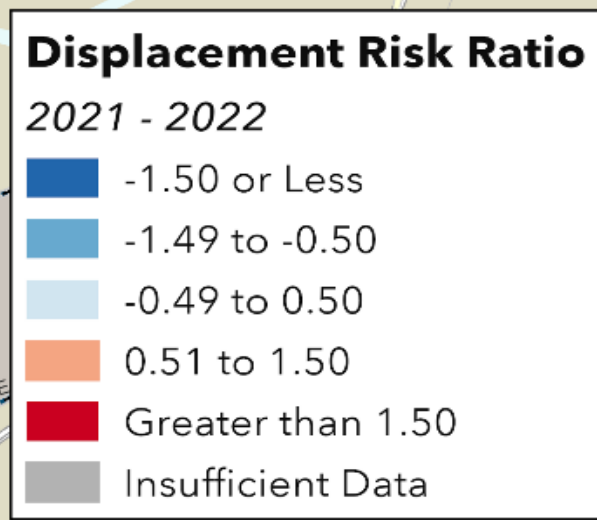
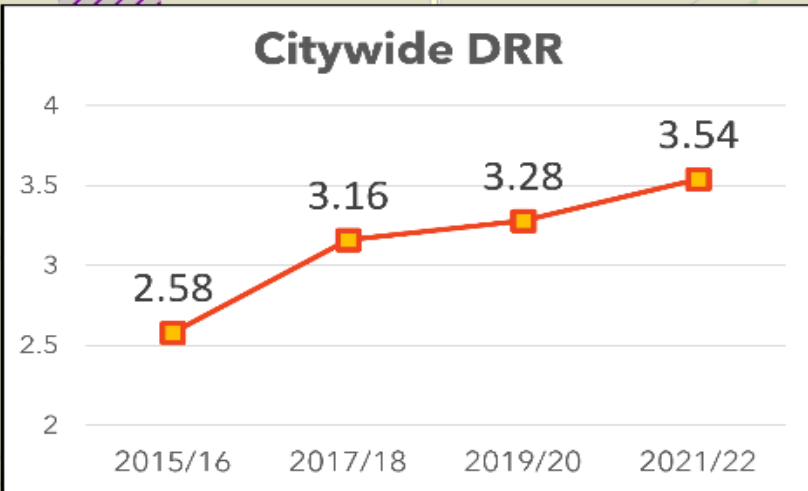REINVESTMENT FUND

Displacement Risk Ratio, 2015 - 2016
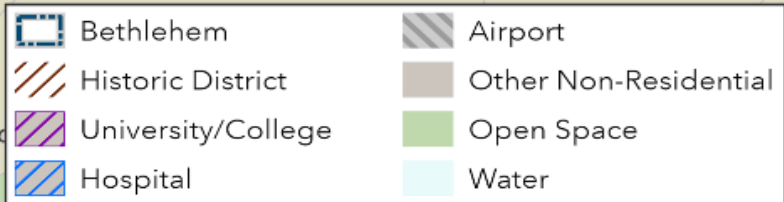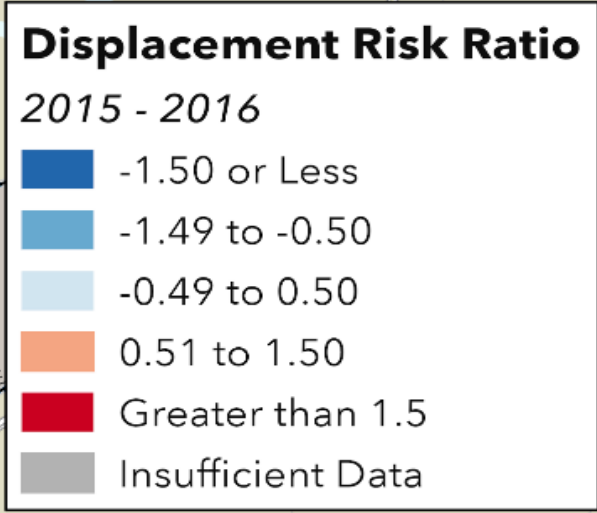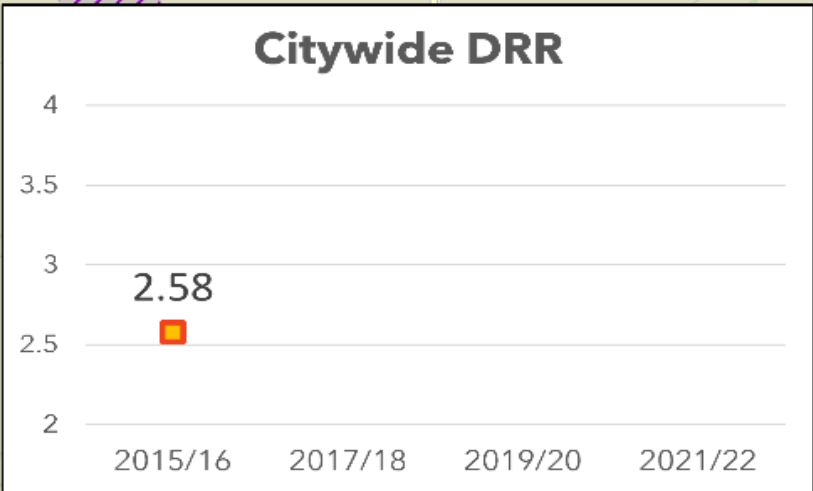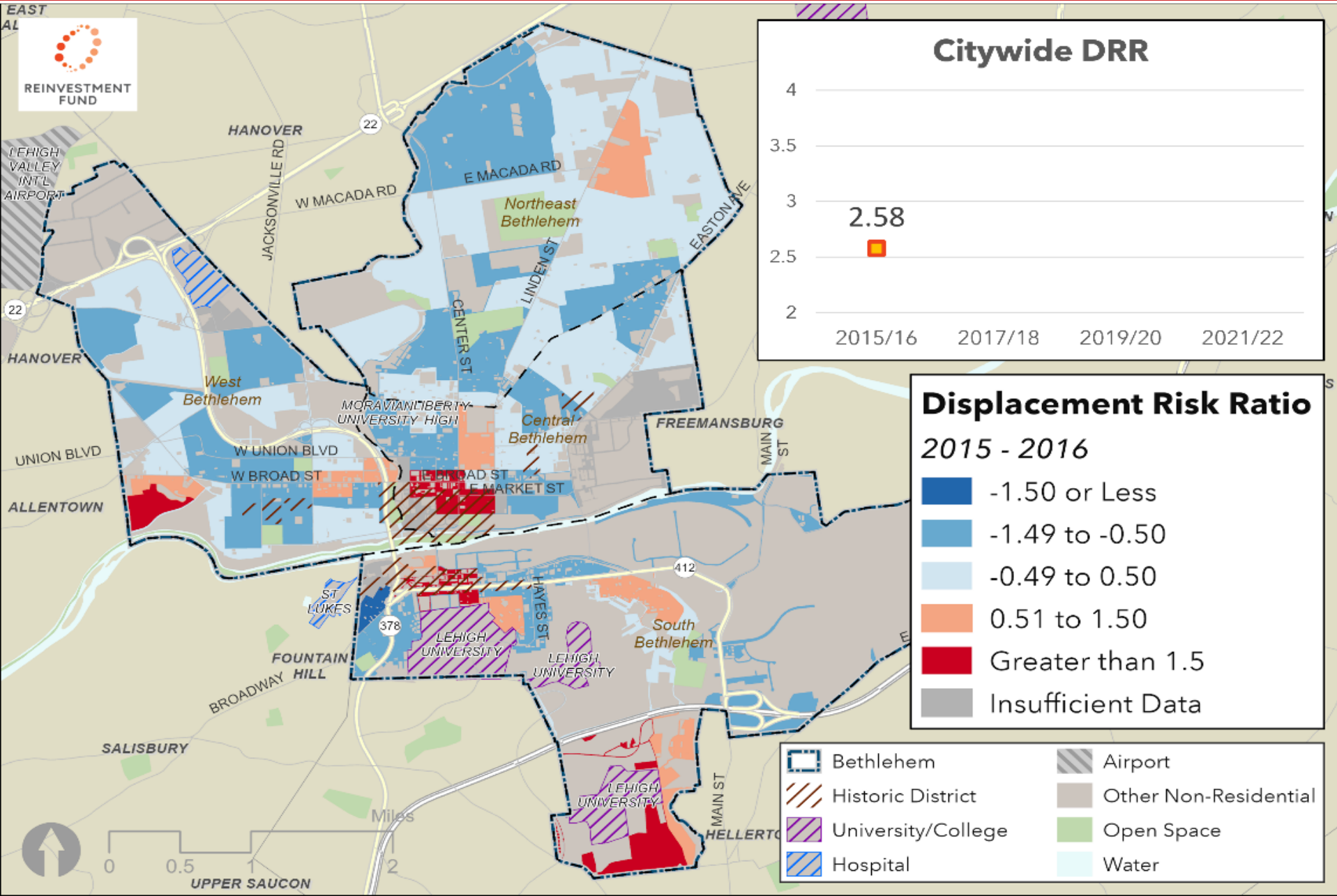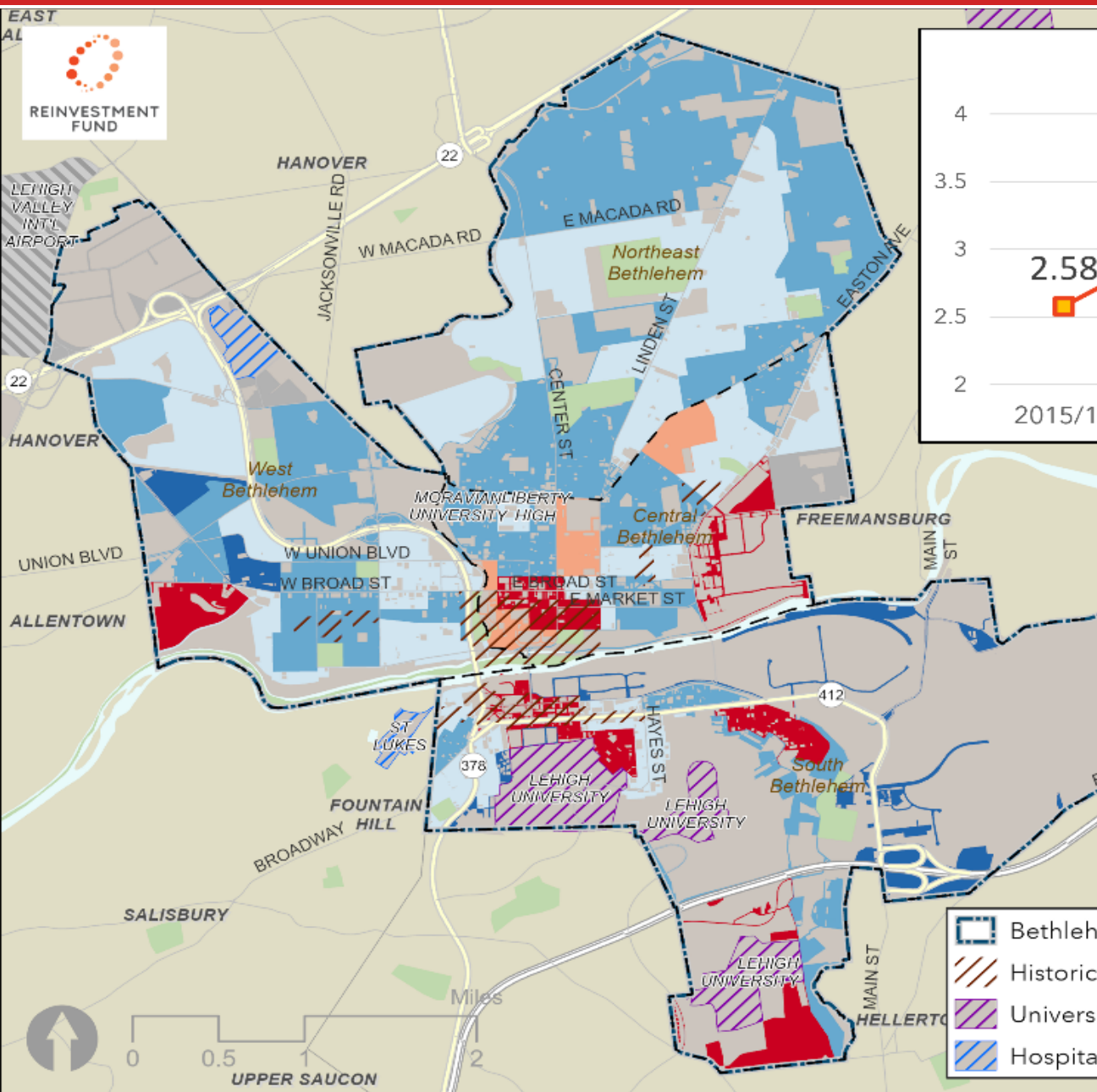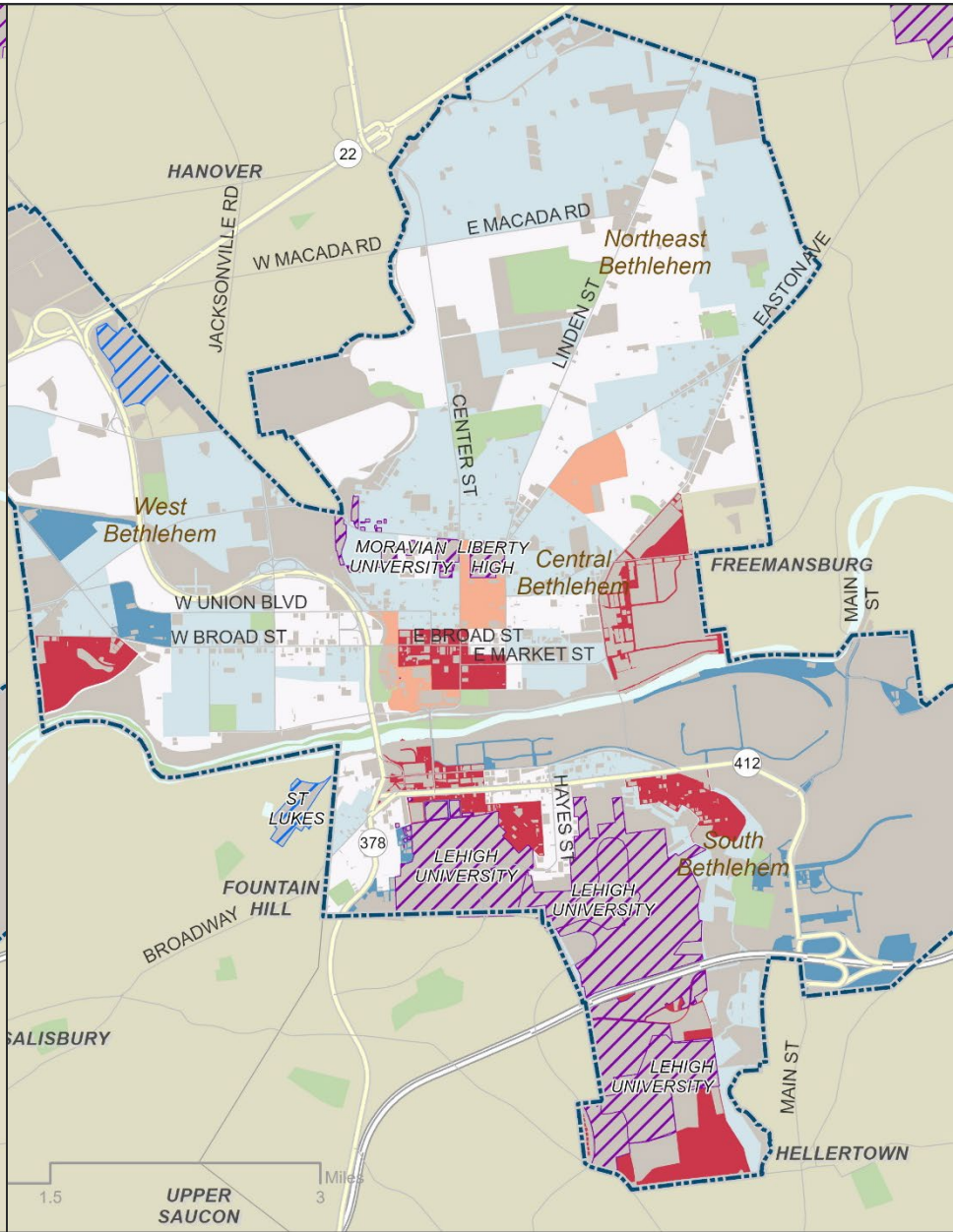
Displacement Risk Ratio, 2017 - 2018
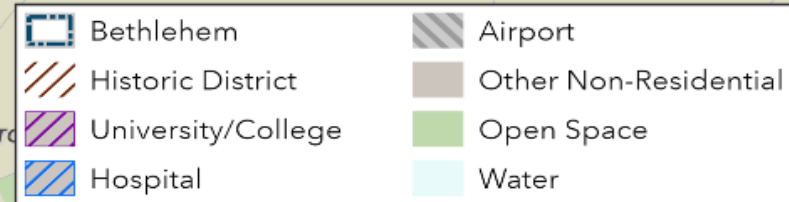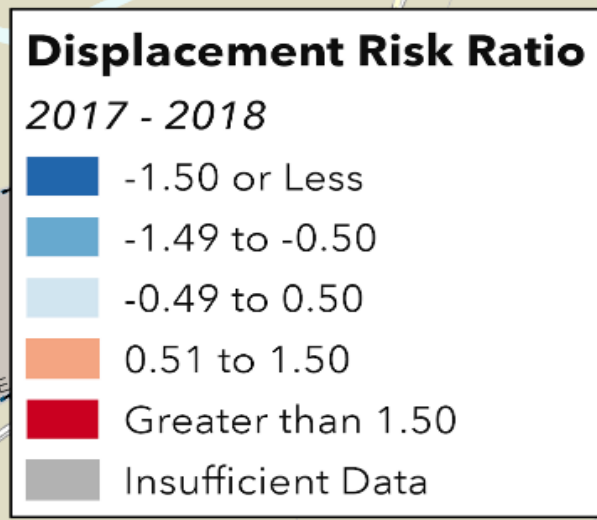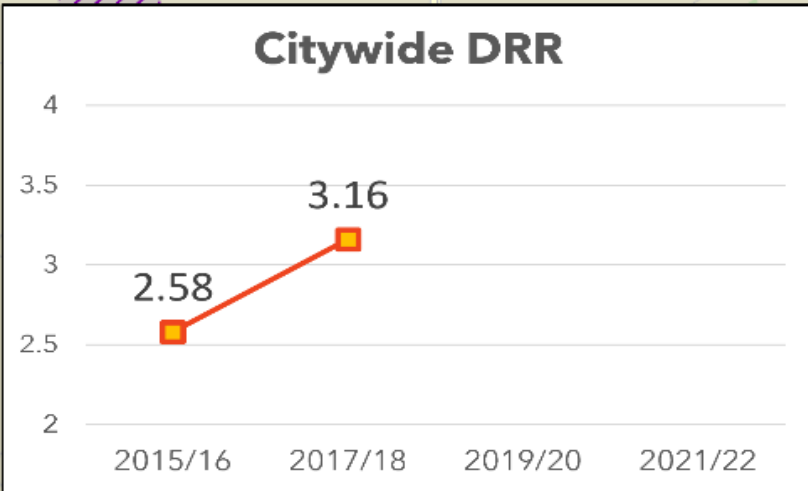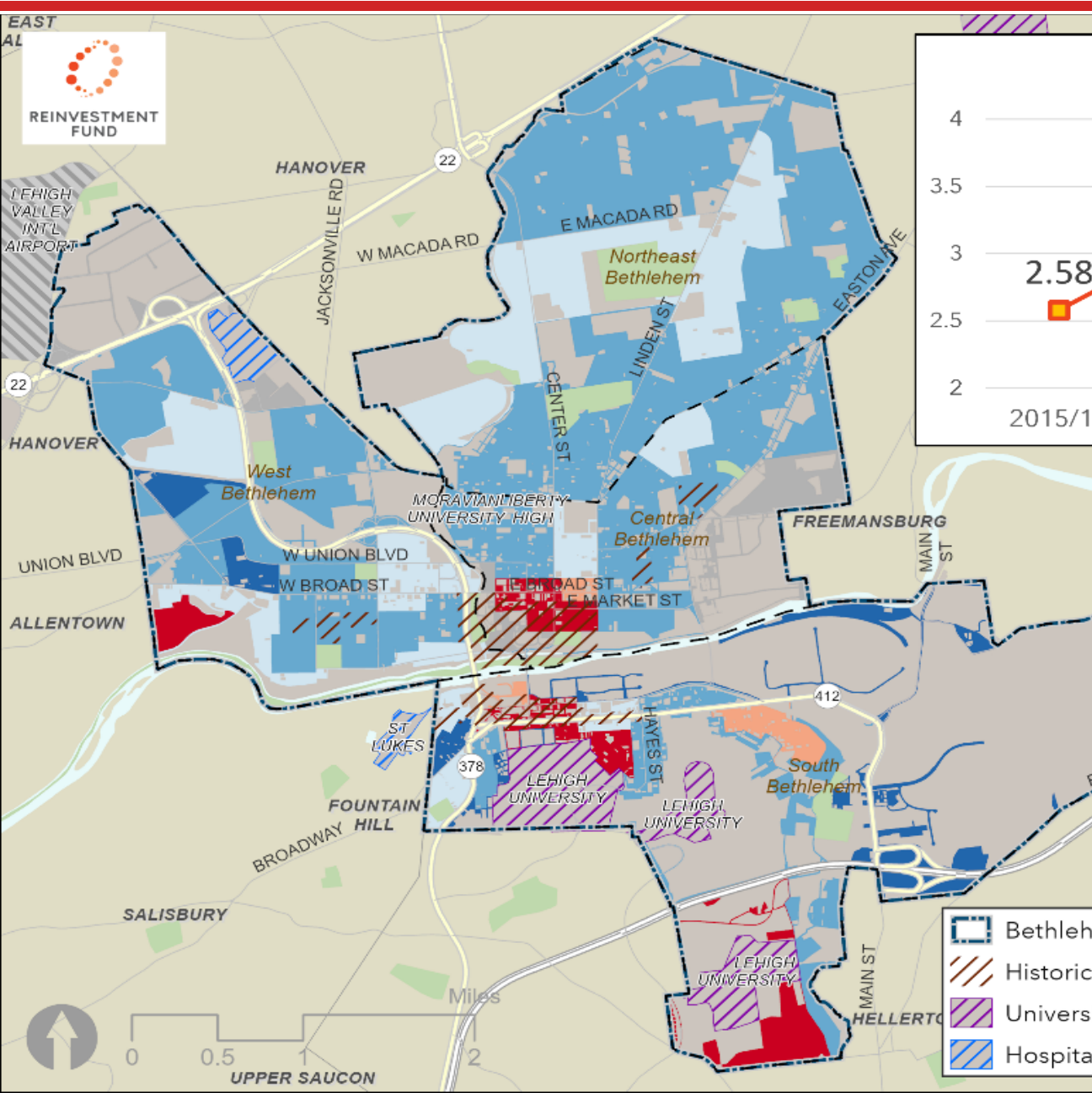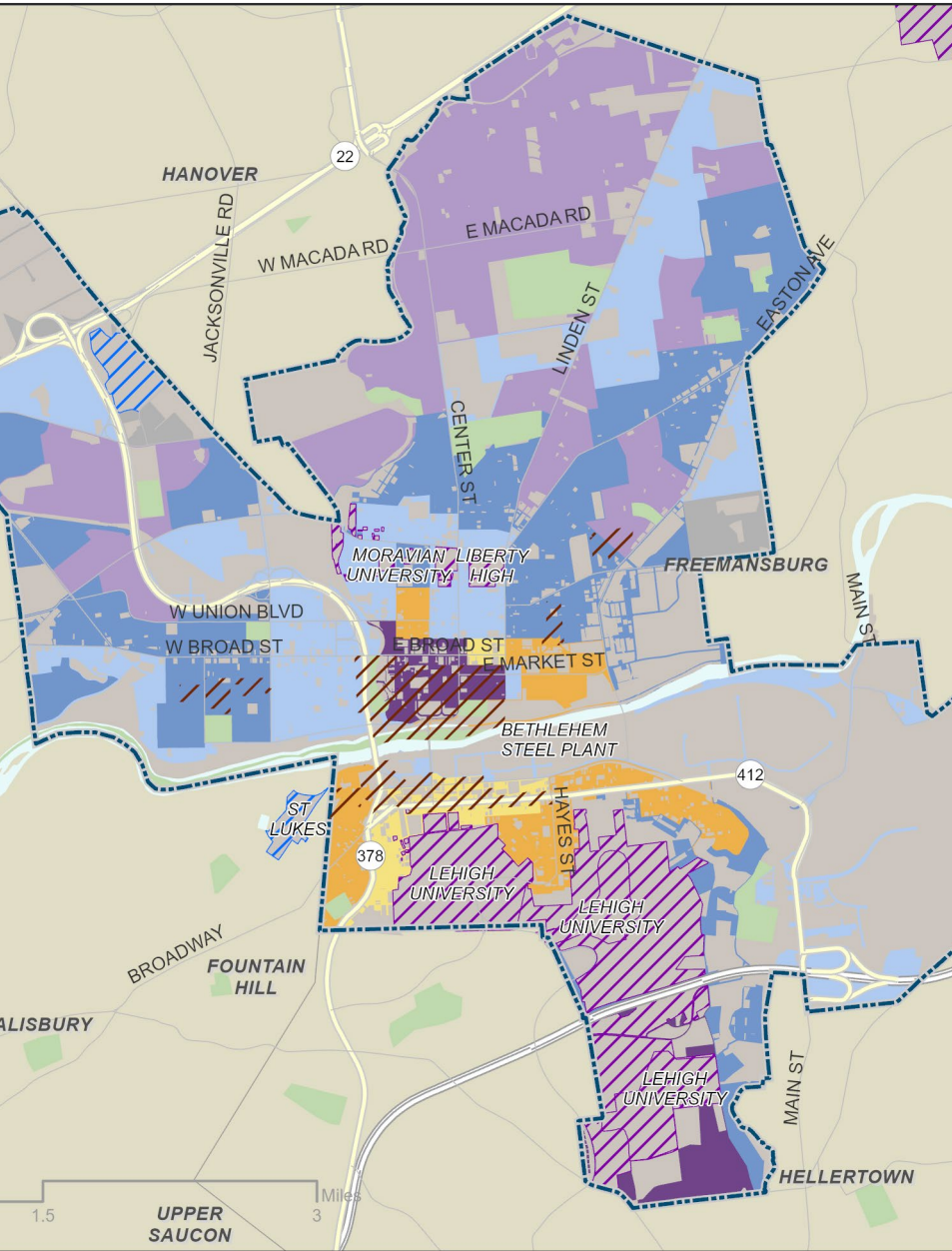
Displacement Risk Ratio, 2019 - 2020
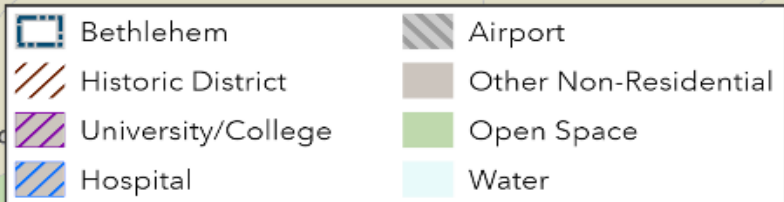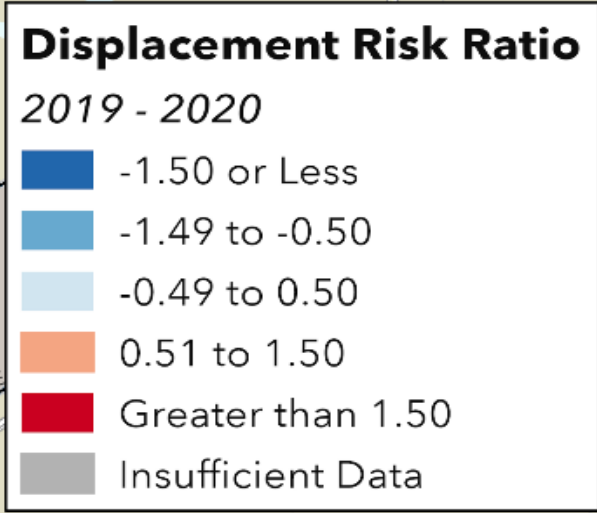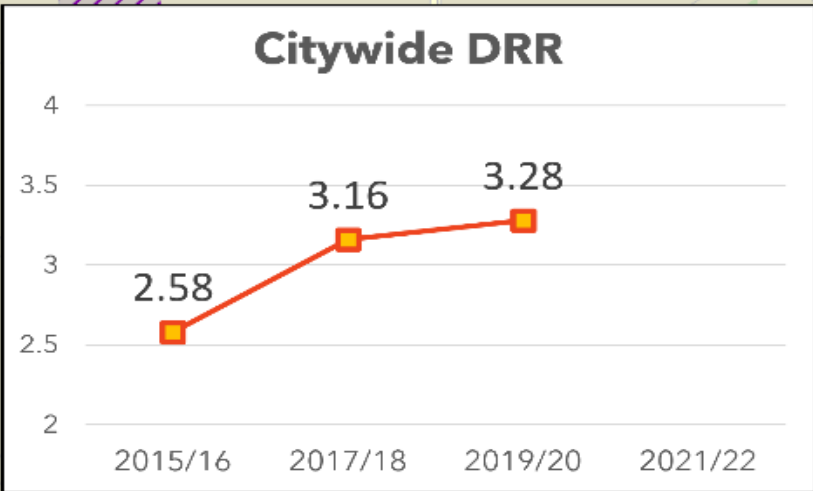
Displacement Risk Ratio, 2021 - 2022

Identifying Types of Housing Stress

Market Value Analysis Classifications

Change in Displacement Risk Ratio

	Strong Markets	Middle Markets	Weaker Markets
Very High Pressure		Highest Immediate Concern for Price-Based Displacement	
High Pressure		Concern for Price-Based Displacement	
Market Affordable		Opportunities to Preserve Affordability	

Priority Areas for Action
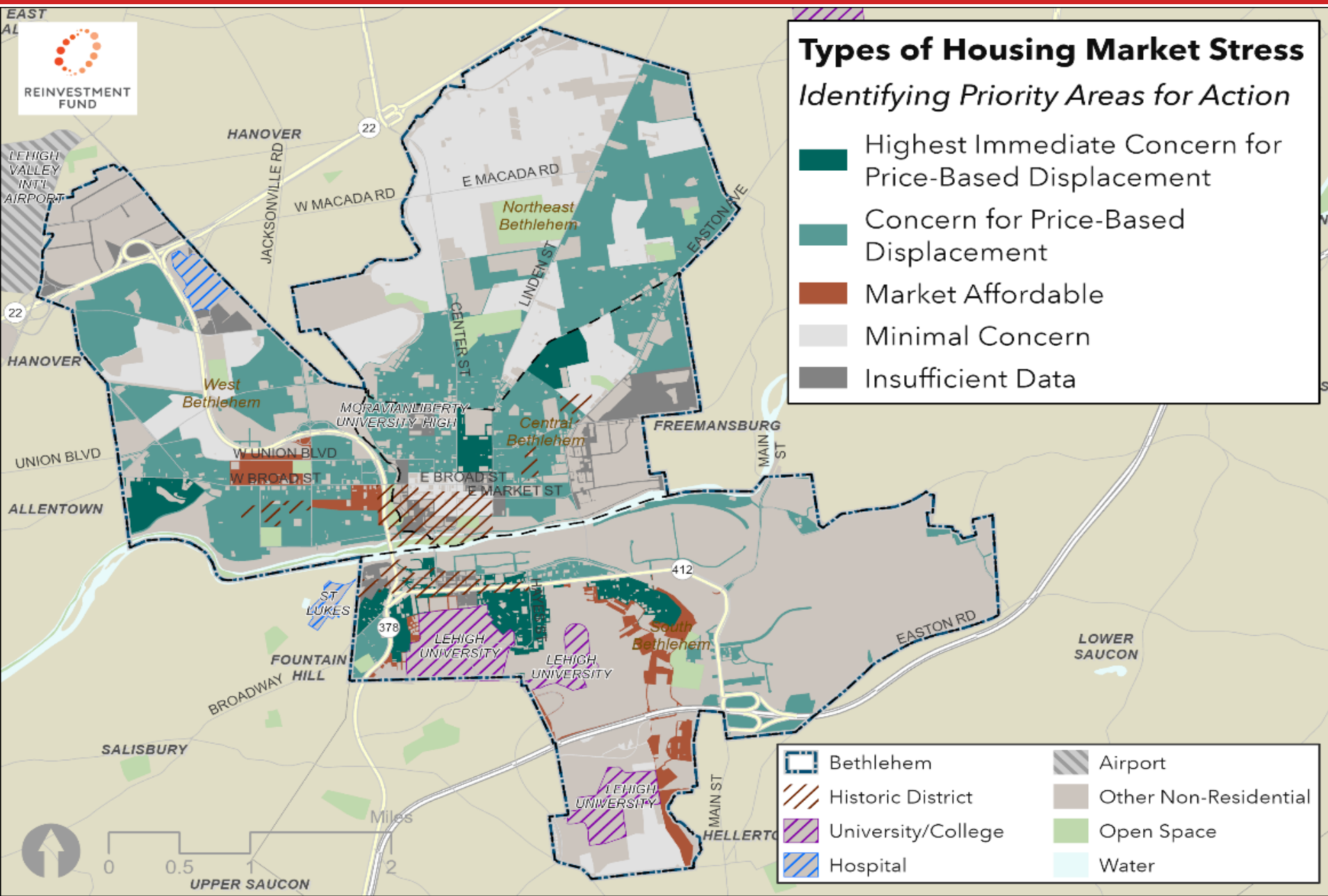
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