

# → Housing Needs Assessment Luzerne County, PA

Earth Conservancy

Prepared by ICF via EPA Brownfields Technical Assistance

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## Regionally-Directed Technical Assistance

This project was performed through regionally-directed technical assistance provided by ICF, with the support of U.S. Environmental Protection Agency (EPA) Region 3 through the EPA Office of Brownfields and Land Revitalization (OBLR) Program.

The project was supported by the dedicated staff of Earth Conservancy. Successful brownfields reuse and redevelopment often depends on early consideration of the range of potential future uses for each brownfield site. Local community priorities, market conditions, infrastructure availability, environmental contamination, public health issues, and local ordinances shape brownfield site reuse opportunities. Having this housing needs assessment and site reuse plan grounded in these local conditions will directly influence how that site is characterized, assessed, cleaned up, and redeveloped.

### TA Recipient:

Earth Conservancy



### Site Addresses:

Plymouth Township / 41.231014, -75.977689

Sugar Notch / 41.195361, -75.919496

### Previous Grant:

FY16 Cleanup Grant

FY18 Cleanup Grant

FY19 Cleanup Grant

FY20 Job Training/Cleanup Grant

### DISCLAIMER

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## Introduction and Scope

U.S. Environmental Protection Agency's (EPA) Office of Brownfields and Land Revitalization (OBLR) and EPA Region 3 provided technical assistance to Earth Conservancy to prepare a housing needs assessment for Luzerne County. The housing study will assist in evaluating the redevelopment options for two remediated parcels in Sugar Notch and Plymouth Townships, Pennsylvania. ICF conducted a housing needs assessment with a 10-year projection, using available U.S. Census data to identify housing needs for each income bracket by affordability. This study was supported by interviews with local stakeholders to identify barriers and opportunities in redevelopment for these sites, as well as prevailing preferences and other observed trends.

The two sites were initially purchased by Earth Conservancy in 1994 from Blue Coal Corporation. Earth Conservancy's mission is to reclaim these brownfield sites and support their positive reuse through development. Through collaboration with

the EPA and local municipal and regional partners, the sites were remediated and zoned for residential use in anticipation for housing development as part of an effort to address local housing needs. However, these sites have yet to be developed.

Luzerne County has experienced steady population growth, as identified through Census data and local observations. Housing production, however, has not kept up and prices have increased over the past few years as remote work became a possibility for many employees. Population growth is expected to continue owing to a booming manufacturing and logistic industry in the Lower South Valley. Understanding housing needs across income brackets will inform how the two brownfield sites can provide much-needed workforce housing to address county-wide housing needs and support continued economic development.

## Executive Summary

This study provides insights into demographic trends, industry trends, housing characteristics, and housing needs for the entire Luzerne County, with additional comparison and focus on the region around the Avondale and Sugar Notch sites. This study is designed to support the Earth Conservancy in their mission to rehabilitate and redevelop brownfield sites.

### 1. Demographic Trends

Overall, Luzerne County is experiencing steady population growth. This growth is accompanied by shifting age trends, characterized by a decline in the 40s–60s, and a growth in the younger and senior populations. This growth is likely associated with shifts in employment opportunities within the county.

### 2. Industry Trends

The Warehousing and Manufacturing industry has experienced a boom in the County, with major employers like Amazon Inc., Walmart, and Chewy opening logistics and distribution centers in the Lower South Valley. Continued growth is expected as is reflected in speculative industrial real estate developments.

### 3. Housing Characteristics

The housing stock in Luzerne County is old, with renters overall living in older conditions than homeowners. Few new housing developments have occurred in the past ten years and affordability is increasingly a problem. The County does not currently have enough housing for the influx of workers, and commute times to work are increasing.

## Housing Needs Summary

**Current Housing Deficit**  
(Underproduction)



**-7,452 units**

**Housing Need from Population Growth**



**1,424 to  
2,409 units**

**Total Housing Needs for 2032**



**8,876 to  
9,862 units**

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## Study Overview

Luzerne County has experienced a boom in the manufacturing and logistic industries, causing shifts in population and employment. Compounded with the migration out of large cities during the pandemic, current housing availability in the county has not kept up with population growth. Furthermore, the housing stock within Luzerne County is older on average than those of the state, with most of the housing built prior to the 1970s.

Luzerne County and the Lower South Valley area were once home to large mining activities. The area has since diversified and in 1994, Earth Conservancy purchased over 16,000 acres of former mining land from the bankrupt Blue Coal Corporation. The expressed goal is to reclaim these brownfield sites and support their positive reuse through redevelopment. Most reclaimed properties to date have been sold, with the same intended for the two target properties. Both the Avondale site and Sugar Notch site were mine-scarred and had significant environmental problems across the sites.

Since their purchase, both sites have had basic reclamation activities conducted, supported by Earth Conservancy and the PA Department of Environmental Protection, and are generally topographically flat mine soils with grasses and shrubs. Despite the reclamation effort, neither site has yet been developed. The Avondale site includes 113 acres of developable land and the Sugar Notch site contains 50 acres of developable land. Earth Conservancy requested technical assistance to understand the future housing needs of Luzerne County, as well as how the two target sites may accommodate residential uses to help meet the County's housing goals.

To support the redevelopment of the two target sites, the study identified and confirmed current trends in demographic shifts, employment,

industry, and housing needs, as well as identifying key obstacles and next-steps. The study consists of two parts covering the existing sociodemographic conditions of Luzerne County and a housing analysis that projects housing needs into the next decade.

The existing sociodemographic conditions analysis analyses information regarding current housing stock conditions, industry growth and investment, population shifts, wage standards, and other demographic-related data to pinpoint drivers of change. Information was collected through existing reports from local sources such as the Institute and Census Bureau data and corroborated by targeted interviews with local stakeholders including industrial developers, housing experts, and county planners.

The housing analysis projected future housing needs using available population, household, income, and other relevant data from the U.S. Census Bureau. Projections provide a relative breakdown of current housing shortages and expected future needs based on income brackets by 2032. This study encompasses all of Luzerne County, and the resulting housing needs encompass multiple municipalities. The Earth Conservancy can utilize this report to demonstrate the need for residential development and the potential for the two remediated sites to accommodate such growth. Housing developers often research local conditions to interpret a project's feasibility. The data and analyses presented here can help to inform housing typologies and price points that are appropriate to fulfill county level housing needs.

Recommendations for the two sites are given based on site size, expected income brackets for the area, family sizes, and transportation and connectivity.

# 1 Background

# 1.1 Demographic Trends

Understanding demographic changes will inform a targeted approach to housing that is responsive to changing household sizes, family arrangements, and needs.

## 1.1.1 Population Shifts

The population in Luzerne County in 2021 was estimated to be 325,594, making up more than 50% of the Scranton/Wilkes-Barre Metropolitan Statistical Area (MSA) population of 567,599. Many local stakeholders noted an increase in population over the last 10 years, which is confirmed by Census data. Overall population increased from 2000 to 2020, with growth happening at 0.05% per year between 2000 and 2010, and 0.13% per year between 2010 and 2020.

In 2020 the median age in Luzerne County was 44.9 years, similar to that of the MSA, both having grown from 42.5 years and 42.3 years in 2010 respectively. A further review of disaggregated data by age revealed a consistent pattern. Overall, there is growth in population in the 30s, and is outpaced by the combine growth in the 60s-70s. This growth, combined with and the decline of 40s and 50s have contributed to an aging population.

To estimate the 10-year housing need, population was projected forward to 2032 using Census data points from 2000, 2010, and 2020. American Community Survey estimates for intercensal years between 2000-2010 and 2010-2020 were not used in the population projection due to issues with data accuracy. Intercensal data exhibited a relatively large population jump in 2020 due to census adjustments. A linear projection is used instead. A population range of 328,000 to 330,000 is forecasted with the lower bound using all three census data points (2000, 2010, 2020) and the higher bound using only the 2010 and 2020 data points. This projected growth is approximately 0.09-0.13% per year, slower than Pennsylvania’s average growth rate in the past decade of 0.24% per year.

Figure 1: Luzerne County Population Change 2010–2020 by Age

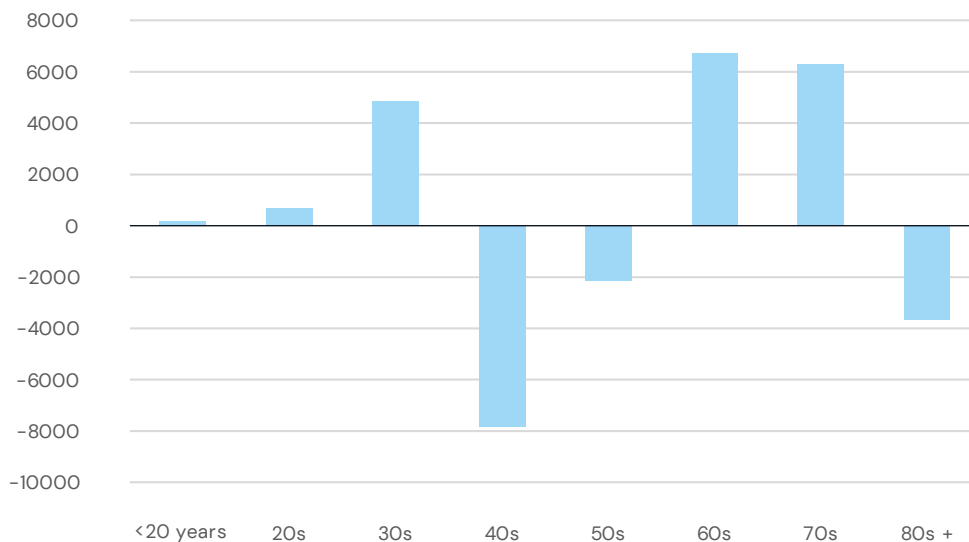
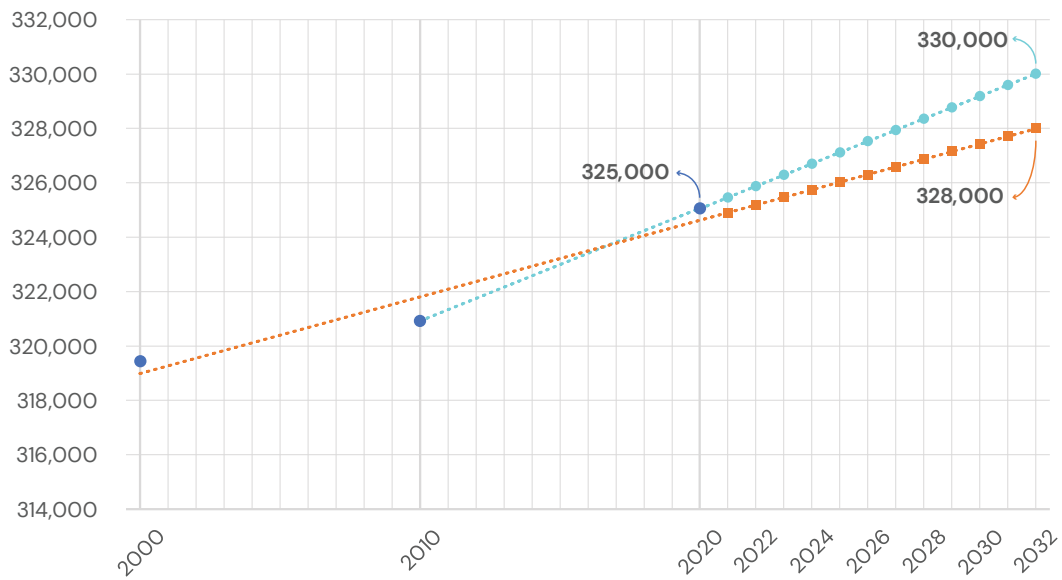




Figure 2: Luzerne County Population 10-year Projection



### 1.1.2 Local Observations

Targeted interviews with local developers, planners, and the Institute further supported trends of expected population growth and provided important insights into the characteristics of this shift. There are three general observations of population shifts: 1) there is a growing minority population, which may suggest potential changes to family arrangements and housing needs; 2) some growth comes from individuals moving away from the city for remote work; 3) young professionals are a likely demographic fitting both job growth and urban flight. Stakeholders also stressed a growing need for intergenerational housing as the population grows both in the young family and senior age groups. These observations point towards a need for housing catering towards young professionals, young families, seniors, and at times, intergenerational multi-family arrangements.

## 1.2 Industry Trends

An examination of industry trends revealed income characteristics, which in turn provide insights on rental rates and affordability of housing.

### 1.2.1 Luzerne County Employment and Wages

Luzerne County has seen a tremendous growth in the warehousing and storage industry, and it now represents the top industry by employment. Growth trends in the past five years showed 29% growth in employment in General Warehousing and Storage, while other top 5 industries, by employment, experienced a slow decline. Just five years ago, the largest employers in Luzerne County were governmental agencies and medical services. In 2021, of the top 10 largest employers in the

county, four operate within the warehousing and storage sector, with Amazon taking the top spot. This is reflective of the large growth in warehousing and storage facilities within the county over the past five years. These companies also represent the only private sector employers within the top 10 employers, with the remaining employers being either federal, state, or local government, or private medical services. The employment growth in warehousing and storage has been driven by major e-commerce and retailers such as Amazon, TJ Maxx, Walmart, Chewy among others

Table 2: Luzerne County Employment Data

Industry by Average Annual Employment	2021 Employees	Employment Growth (5-years)	2021 Avg. Annual Wage	2021 Avg. Monthly Wage
1. General Warehousing and Storage	12,744	+29%	\$47,762	\$3,980
2. Temporary Help Services	4,092	-1%	\$28,640	\$2,387
3. General Medical and Surgical Hospitals	3,934	-8%	\$64,087	\$5,341
4. Full-Service Restaurants	3,569	-19%	\$20,088	\$1,674
5. Supermarkets and other Grocery Stores	3,117	-5%	\$22,171	\$1,848

Source: BLS Employment and Wages Data NAICS 6-Digit Industries Annual Averages

Similar trends are reflected in wage growth, with wages in General Warehousing and Storage growing both at the industry level and employee level. Total wage growth for General Warehousing and Storage outpaced per employee wage growth in the past five years, suggesting a large operational growth and an even larger employment growth where total wage growth comes from both

an increased workforce and increased individual wages. On the other hand, while medical industries make up a larger portion of wages in Luzerne County, wage growth in the industry has hovered around inflation levels and had been outpaced by per employee wage growth, reflected in a combined -3% employment decline (-205 employees).

**Table 3: Luzerne County Wage Data**

Industry by Total Annual Wage	2021 Total Annual Wage	2021 Employees (% change from 2017)	Total Wage Growth (5-years)	Per Employee Growth (5-years)
1. General Warehousing and Storage	\$608,660,775	12,744 (+29%)	+66%	+28%
2. General Medical and Surgical Hospitals	\$252,117,659	3,934 (-8%)	+8%	+18%
3. All Other Outpatient Care Centers	\$229,059,366	1,400 (+21%)	+36%	+12%
4. Offices of Physicians, except Mental Health	\$144,000,531	1,804 (-5%)	+7%	+13%
5. Temporary Help Services	\$117,185,404	4,092 (-1%)	+47%	+48%

Source: BLS Employment and Wages Data NAICS 6-Digit Industries Annual Averages

### 1.2.2 Scranton / WB MSA Employment and Wages

Overall employment trends in the Scranton/WB MSA are similar to that in Luzerne County. As there is incomplete reporting for Wyoming County data and it is not representative of employment conditions on average in the MSA, only Luzerne and Lackawanna County data is used, unless otherwise stated. The top 5 industries by employment are the same in both geographies albeit ranking differences. General Warehousing and Storage remains the top industry by employment in the region, driven largely by employment numbers in Luzerne County.

Temporary Help Services in the Scranton/WB MSA also has high employment numbers in Luzerne County.

Wage growth in the Scranton/WB MSA generally reflects trends in Luzerne County despite ranking changes. However, with the inclusion of adjacent counties, Colleges and Universities account for higher total wages in the region, suggesting a larger educational presence.

**Table 4: Luzerne and Lackawanna Combined Employment Data**

Industry by Average Annual Employment	2021 Employees	Employment Growth (5-years)	2021 Avg. Annual Wage	2021 Avg. Monthly Wage
1. General Warehousing and Storage	15,222	+28%	\$46,770	\$3,898
2. General Medical and Surgical Hospitals*	6,999	-9%	\$63,363	\$5,280
3. Full-Service Restaurants	6,360	-19%	\$19,542	\$1,628
4. Supermarkets and other Grocery Stores	5,767	-1%	\$23,528	\$1,961
5. Temporary Help Services	5,721	-18%	\$28,395	\$2,366

\* 622110 General Medical and Surgical Hospitals did not have disaggregated data, and as such includes data from Wyoming County. However, Wyoming County represents a relatively small population and is not expected to affect ranking nor significantly affect income averages.

Source: BLS Employment and Wages Data NAICS 6-Digit Industries Annual Averages

**Table 5: Luzerne and Lackawanna Combined Wage Data**

Industry by Total Annual Wage**	2021 Total Annual Wage	2021 Employees	Total Wage Growth (5-years)	Per Employee Growth (5-years)
1. General Warehousing and Storage	\$711,933,686	15,222	+58%	+23%
2. General Medical and Surgical Hospitals*	\$443,470,156	6,999	+9%	+19%
3. All Other Outpatient Care Centers	\$261,058,207	1,822	+38%	+9%
4. Colleges and Universities	\$248,128,724	4,785	+2%	+11%
5. Temporary Help Services	\$162,445,612	5,721	+20%	+46%

\* 622110 General Medical and Surgical Hospitals did not have disaggregated data, and as such includes data from Wyoming County. However, Wyoming County represents a relatively small population and is not expected to affect ranking nor significantly affect income averages

\*\* 621111 Offices of Physicians, except Mental Health did not report data from Lackawanna County. There are significant number of businesses in this category in Lackawanna County that, should it have been reported, would have placed this industry within the Top 5 industries by total annual wage.

Source: BLS Employment and Wages Data NAICS 6-Digit Industries Annual Averages

### 1.2.3 Local Observations

Targeted interviews were conducted with several local developers to assess future growth in manufacturing and logistics industries and their interpretation of the impacts on housing needs in the area. Interviews with Jim Cummings from Mericle and Brian Stahl and Farrah Fink from Northpoint confirmed an expected, continued industrial development of logistics hubs and warehouses. Anecdotally, it was observed that about 40 million SF of industrial development has been built since 2014, as well as an additional speculative development of 30–50 million SF is expected in the coming years. Some stakeholders noted that individual developers are looking to

bring 5–6 million SF in the next 5 years, at roughly a million SF per year per developer. Local observations have also confirmed an increase in wages, with new positions paying an hourly rate between \$18\$ to \$25. This finding supports trends shown through data analysis of continued growth within the manufacturing and logistic space. Employment growth in these sectors expected to make up a significant portion of projected population increases. Understanding the needs and demographics of this population, such as family size and income range, will inform the type of housing needs in the future.

## 1.3 Existing Housing Characteristics

Reviewing existing housing stock age, size, and condition can identify gaps in supply and mismatch between household sizes and available housing options.

### 1.3.1 Housing Stock

The average age of housing stock in Luzerne County is considerably older than that of Pennsylvania and the US.<sup>1</sup> 78% of housing stock in the county was built in the 1970s or earlier. In the Sugar Notch Borough and Plymouth Township, where the target sites are located, over 50% of housing stock was built in the 1940s or earlier. The aging housing stock and low availability of newer housing poses a significant risk to renters and owners alike. Older housing is more likely to have problematic health and environmental concerns, such as the presence of asbestos, lead, and other chemicals, and is associated with increased respiratory and cardiovascular risks.<sup>2</sup> Older homes may also pose a challenge for seniors planning to age in place. Without the necessary accessibility upgrades, the housing stock may not accommodate the aging population. The rental market is also more adversely affected by older housing stock. Only 16% of rental households occupy newer housing built since 1980s compared to 27% of homeowners. Not only are renters more likely to live in older units, but the overall market will also become less attractive to new residents over time, as new housing stock fails to keep up with growing demand and potential tenants choose elsewhere in the Valley to live.

In Luzerne County 32% of all households are renters, similarly 33% of households in the Scranton/WB MSA are renters. These trends have not fluctuated significantly in the past 5 years.

Figure 3: Housing Stock Breakdown by Year Built

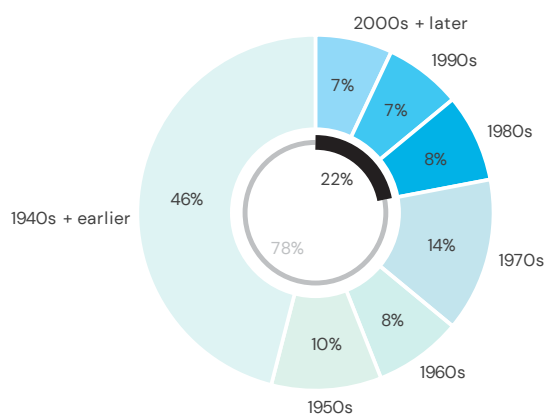
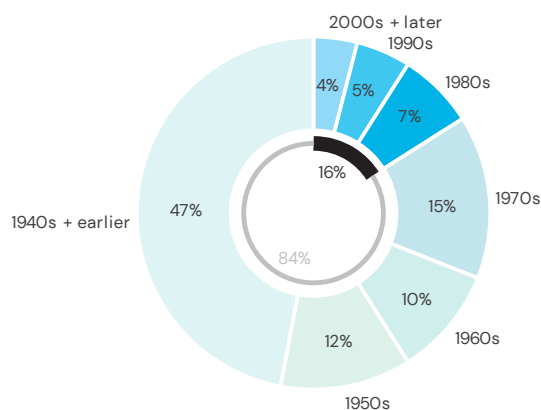


Figure 4: Age of Renter-Occupied Housing Breakdown by Year Built



<sup>1</sup> The Institute: Implications of an Aging Housing Stock ([http://www.institutepa.org/wp-](http://www.institutepa.org/wp-content/uploads/2021/11/implications-of-an-aging-housing-stockthe-institute-1.pdf)

[content/uploads/2021/11/implications-of-an-aging-housing-stockthe-institute-1.pdf](http://www.institutepa.org/wp-content/uploads/2021/11/implications-of-an-aging-housing-stockthe-institute-1.pdf))

<sup>2</sup> Ibid.

The percentage of renters within tenant age groups decreases with increasing age as more mature households become able to afford their own homes. Rental percentages increase again for the senior population.

A comparison of renters in each age group between 2015 and 2020 highlight future demand shifts. According to PolicyMap, the number of renters in 2020 has increased in the ages 15–24 group by 5.2% over 2015 levels, in the 25–34 age group by 6.1%, in the 55–64 age group by 7.5%, and in the 65–74 age group by 20.5%. On the other hand, demand from the groups between ages 35–54, and 75+ have dropped. These trends are echoed by the local stakeholders, who have noted that finding quality, affordable rental housing has been a barrier to filling open job postings for local industries.

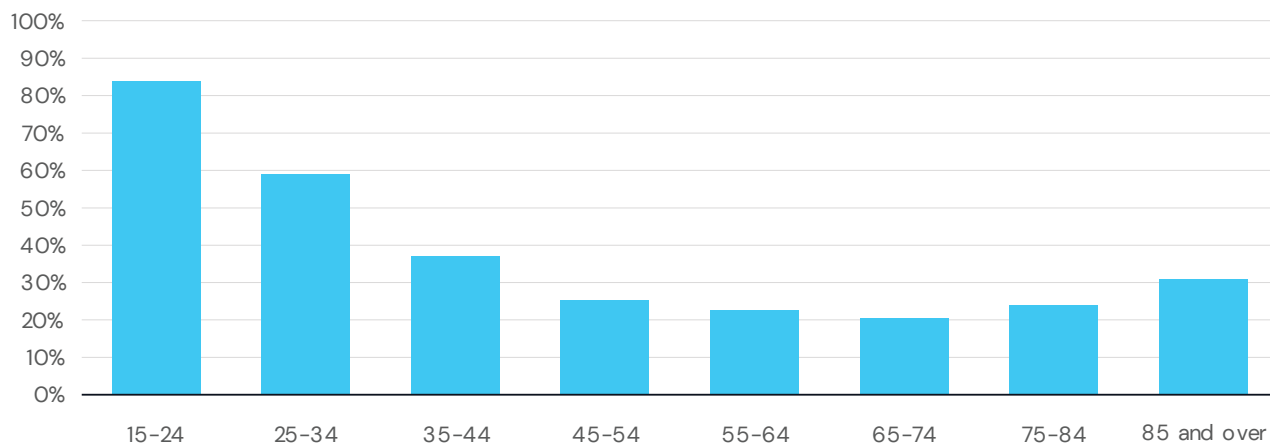
The demographic groups of ages 15–34, and 55–74 are expected to drive new rental demands. These demographic groups typically have similar housing preferences in terms of smaller unit sizing (studios and one-bedrooms) and unit arrangements. A study by the Institute considered data collected between 2012–2016 and found only 34.0% of units have two rooms or fewer, lower than adjacent

Lackawanna County (36.6%), Pennsylvania (35.4%), and the US (39.7%)<sup>3</sup>.

Households in the 15–34 age group are more likely to be renters living in non-familial arrangements. 71% of individuals between 20–34 have never been married<sup>4</sup>. This demographic group live in household sizes between 2.3 and 3.0, suggesting rental arrangements made up of multiple roommates. These arrangements can be supported both by for-rent detached homes and multi-family housing options. This age group is of the primary demographic for the expected influx of new workers in the logistics and manufacturing industries.

Households in the 55–75 age group are likely seniors living with their immediate family, with grandchildren, or living within group settings. Within this age group, household sizes range from 1.6 to 2.4<sup>5</sup>, decreasing with age. Housing needs will likely correspond to renter profile of seniors living alone, with a spouse, and/or with one other family member. These arrangements may benefit from additional supportive services and multi-family housing options with daily amenities, such as grocery stores and pharmacies, within walking distance.

Figure 5: Share of Renter in Each Age Group 2021



<sup>3</sup> The Institute: *Implication of an Aging Housing Stock*  
<sup>4</sup> CPS ASEC America’s Families and Living Arrangements 2021

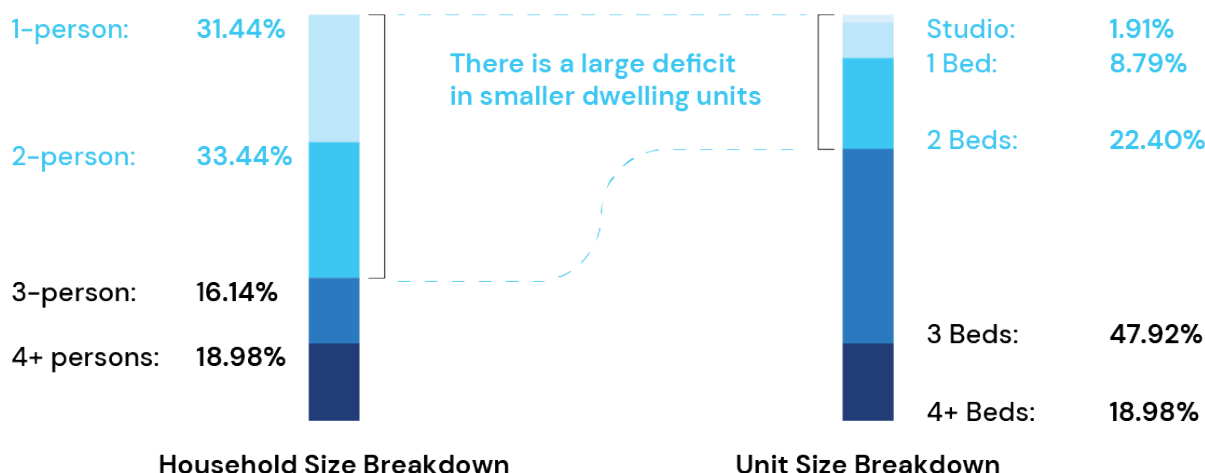
<sup>5</sup> Ibid.

### 1.3.2 Housing Mixes

A secondary effect of an older housing stock is a mismatch between current household sizes and available unit mix. The housing stock in Luzerne County has limited amounts of smaller units between a studio and 2-bedroom units, and is oversaturated with larger, 3+ bedroom units. Of the occupied units, only 32% are 2-bedroom or fewer, with 1-bedroom and studios making up only 11% of occupied units. In reviewing Census data from

2010, 1- person and 2-person households make up 31% and 33% of households in the County, respectively<sup>6</sup>. This suggests smaller households are typically within apartment-sharing arrangements of much larger units. With the influx of younger families, young professionals, manufacturing and logistics workers, and general growth within populations in their 30s, there will be a growing need for these smaller 1- and 2-bedroom units.

Figure 6: Comparison of Household Size and Housing Unit Size



### 1.3.3 Local Observations

Interviews conducted with local developers, planners, and the Institute revealed challenges with current housing. While affordable housing is an expressed need, there are significant barriers to affordability on the target sites, including transportation and connectivity, income brackets, and community buy-in. Transportation constitutes a major impediment both for logistic and manufacturing workers, and for general affordability of the unit. Expected new industrial development is concentrated around the Hanover area and the Greater Hazleton area. Some workers

are commuting 30 minutes, and at times over an hour, to work. In considering potential affordable housing development, accessibility and amenities are competitive factors for the 9% Low-Income Housing Tax Credit. Local developers have expressed that getting this competitive tax credit for the Sugar Notch and Avondale sites would be difficult given a lack of connectivity, utilities, and amenities. Furthermore, current salaries for manufacturing and logistic jobs are above affordability brackets to qualify for affordable housing. Community sentiments towards

<sup>6</sup> Approximated using Census PCT20, S2504, and B25041 datasets. These datasets are available for 2010,

but demographic and housing trends have not shifted significantly enough to affect this analysis.



affordable housing is also not one of support, given past histories of subsidized housing degradation and associated crime rates.

On the other hand, all interviewees expressed a need for housing to support the growing workforce. This type of housing is characterized by higher density communities supporting young professionals and young families. There has been an expressed sentiment of wanting a certain level of privacy and control in line with typical single family housing typologies within Luzerne County. These preferences suggest a need for Missing Middle Housing typologies such as rowhouses, duplexes, and other semi-private arrangements. Multi-family housing targeting a middle-income block of 80-120% average median income would address this need.

## **2 Housing Analysis**

## 2.1 Housing Projections

### 2.1.1 Methodology

A housing needs projection was conducted to understand the current housing deficit and future needs of Luzerne County. The study used available Census population, housing, and income data to understand current (2020) population and housing stock, income brackets, growth, and housing burden to provide a housing needs projection out to 2032.

The housing needs assessment is a combination of current housing deficits (underproduction) and future needs from population growth. These two parts use different statistics of housing burden and income to identify needs and are not either-or scenarios. To achieve sufficient housing in 2032, both underproduction and growth need to be accounted for. Housing need is not a 1:1 ratio between housing stock and households. Due to housing units aging out of the housing stock, maintenance, and other activities that prevent

units from being rented out, a national average of 1.14 : 1 ratio between housing stock and households is the general rule of thumb to accommodate attrition rates and other lack of availability. Even if current occupied housing is less than the available units in the housing stock, there may still be a deficit of housing reflected in housing burden caused by unaffordability, overcrowding and homelessness. As seen in Table 5, using 2020 population and household size data, the expected number of households within Luzerne County is 138,322, which leaves 8,283 households unaccounted for. Consequently, the expected housing needs in 2020 is 157,687 units. Furthermore, in this analysis, housing needs through underproduction and future needs are each broken down by income categories using Area Median Income (AMI) to inform potential rental rates.

**Table 5: Luzerne and Lackawanna Combined Wage Data**

<b>Total Population</b>	
2000	319,429
2010	320,918
2020	325,057
<b>Avg Household Size</b>	2.35
<b>2020 Housing Stock</b>	150,235
<b>Occupied Housing</b>	130,039
<b>Expected # of Households 2020</b>	138,322
<b>Current Housing Need</b>	157,687

### 2.1.2 Underproduction

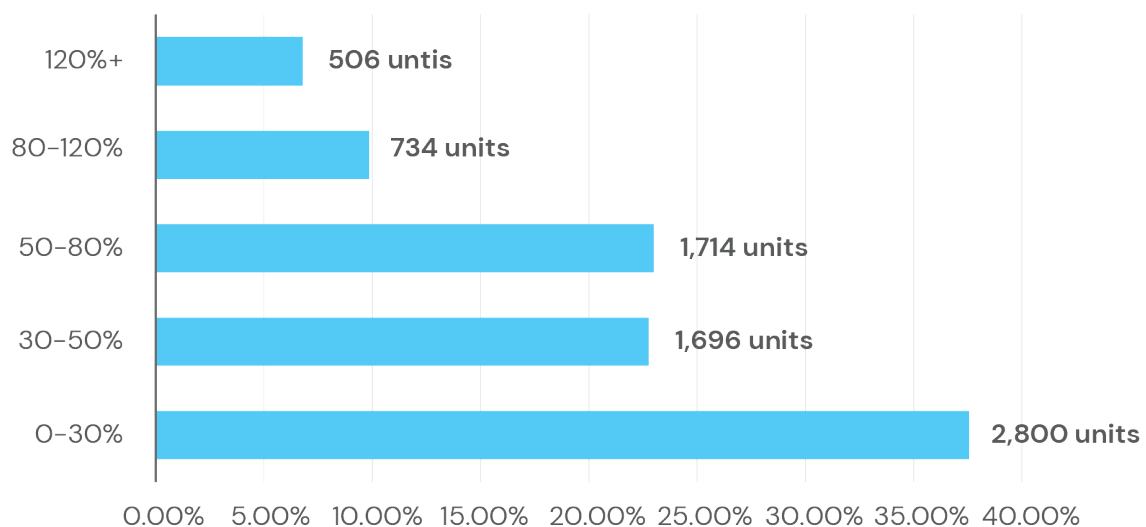
Underproduction is the number of housing units needed to meet current household needs. The expected number of households in Luzerne County based on population in 2020 is 138,322 which would require 157,687 units of housing. The deficit between this need and the current housing stock, 7,452 units, is the number of underproduced units. This need is reflected in the unhoused population, housing burdened population, and overcrowding. Consequently, housing rates that addresses underproduction will reflect income breakdown within the burdened population.

The percentage breakdown by income bracket within the burdened population is given in [Table 6](#). The underproduced units are allocated based on this percentage into each income bracket in [Figure 7](#). Within the underproduced units, there are significant needs in the affordable housing categories. Addressing affordable housing requires strong institutional support, funding, amenities, and public buy-in. Underproduced units for market and above market rate housing is much less significant.

**Table 6: Underproduction by AMI Brackets**

Median Income			Underproduction		
		\$53,194.00			
Income Bracket	Bracket Floor	Bracket Ceiling	Burdened Pop.	Percent of Total	Unit Breakdown
120%+	\$63,832.80+	-	2,222	6.79%	506
80 – 120%+	\$42,555.20	\$63,832.80	3,229	9.87%	736
50 – 80%	\$26,597.00	\$42,555.20	7,524	23.00%	1,714
30 – 50%	\$15,958.20	\$26,597.00	7,446	22.76%	1,696
< 30%	\$0.00	\$15,958.20	12,289	37.57%	2,800
<b>Total</b>			<b>32,710</b>		<b>7,452</b>

**Figure 7: Underproduction AMI Breakdown**



### 2.1.3 Future Needs from Population Growth

Population growth for Luzerne County is projected to be between 328,000 and 330,000 in 2032, using Census population data from 2000, 2010, and 2020.

Housing needs for that population is split into income categories based on 2020 income bracket breakdowns. This population increase amounts to roughly 3,000 to 5,000 individuals from 2020

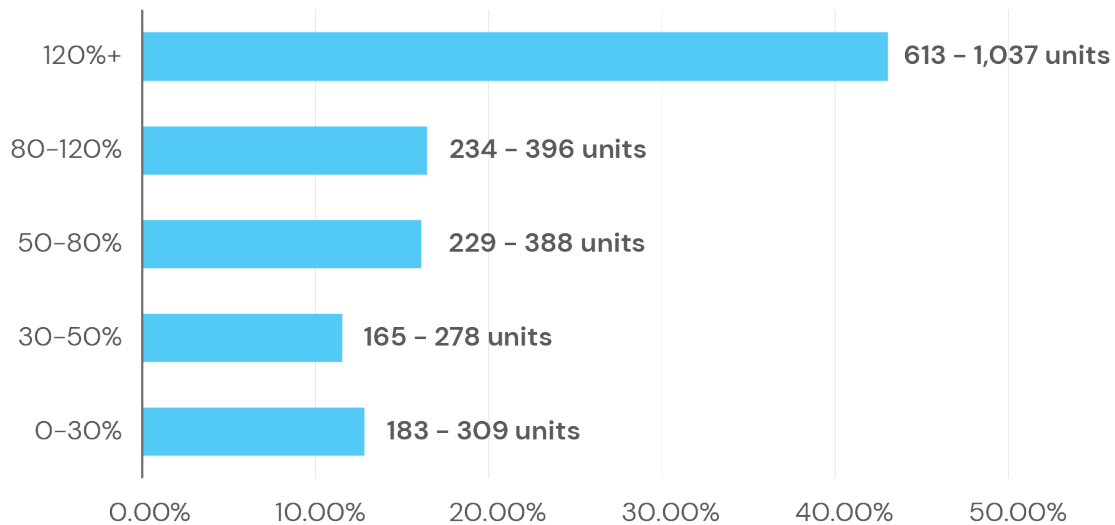
levels, which will increase housing needs for an additional 1,400 and 2,400 households.

The percentage breakdown of all households per income bracket is given in [Table 7](#). Housing units to account for population growth are allocated based on this percentage into each income bracket in [Figure 8](#). These units are, as expected, centered around the median income, with roughly 40% of housing needs in affordable housing categories.

Table 7: Future Needs from Population Growth by AMI Brackets

Median Income		\$53,194.00	Population Growth 2032			
Income Bracket	Bracket Floor	Bracket Ceiling	HH 2020	Percent of Total	(Low) Unit Breakdown	(High) Unit Breakdown
120%+	\$63,832.80+	-	55,983	43.05%	613	1,037
80 – 120%+	\$42,555.20	\$63,832.80	21,391	16.45%	234	396
50 – 80%	\$26,597.00	\$42,555.20	20,950	16.11%	229	388
30 – 50%	\$15,958.20	\$26,597.00	15,025	11.55%	165	278
< 30%	\$0.00	\$15,958.20	16,690	12.83%	183	309
<b>Total</b>			<b>130,039</b>		<b>1,424</b>	<b>2,409</b>

Figure 8: Future Needs AMI Breakdown



## 2.1.4 Total Housing Needs

Based on the income brackets in Luzerne County, affordable housing needs account for 73–76% of future housing needs. This reflects an ongoing need to address housing affordability within the County, similar to trends across the state and overall U.S. However, an acute need for housing for incoming population due to industrial shifts and economic growth is captured by needs in the 80–120% and 120%+ income categories. While needs in these categories are lower than those in lower income brackets, this housing will support continued economic growth, workforce development and increase housing quality and affordability in the long run as new units replace the oldest existing housing stock.

In municipalities near the target sites, median income varies widely, and thus there is the ability

to support different types of housing ownership and rental rates. Median income in Nanticoke and Plymouth are much lower than Luzerne County overall, at \$45,310 and \$39,842 respectively. Sugar Notch and Hanover both have higher median income at \$62,679 and \$54,306 respectively. However, given the economic growth within Luzerne County, it is expected that housing markets will attract renters and homeowners outside of their immediate municipalities. Income bracket trends for Luzerne County are a good estimator for appropriate rental rates and home prices for these sites. As renters makes up 32% of households, future housing needs should provide approximately one-third of housing for the rental market.

Table 8: Total Housing Needs by AMI Brackets

Income Bracket	Underproduction	Growth Needs	(Low) Unit Breakdown	(High) Unit Breakdown	Monthly Rental Rates (per person)
120%+	506	613–1,037	1,119	1,543	>\$1595.82
80 – 120%+	736	234–396	970	1,132	<\$1595.82
50 – 80%	1,714	229–388	1,944	2,102	<\$1063.88
30 – 50%	1,696	165–278	1,861	1,975	<\$664.93
< 30%	2,800	183–309	2,983	3,109	<\$398.96

## 2.1.5 Transit-Oriented Development Potential

Throughout the interview process, many stakeholders noted the lack of public transportation and accessibility of these sites to nearby towns as a barrier for affordable or senior housing development. Many felt that additional car-oriented development may limit the marketability of the sites and potential tenants. Transit-oriented development (TOD) may evoke ideas of a train or subway but instead, suburban or ex-urban sites such as the two target sites, can accommodate TOD through the addition of bus lines. There are several key elements of a TOD that could influence the success of housing redevelopment on these sites. In addition to the elements below, mixed use development adds a critical addition of local amenities such as shopping, restaurants, and other retail or office space that supports walkability, and provides an identity and improves quality of life around the transit stop. While mixed use development was not the focus of this report, it should be kept in mind as site plans are further developed.

**Appropriate Density.** In general, higher densities support greater transit ridership and ensure the viability of a transit line. Typically, the minimum density of residential units required to operate any regular, on-street bus service is about 6 to 8 dwelling units (DUs) per acre.<sup>7</sup> Other types of rapid bus lines that operate on a more frequent schedule require at minimum about 15 DUs per acre. However, given the location of these two sites away from downtown and the market conditions, a typical, on-street bus line may be the most viable.

**Mix of Housing Typologies.** The range of housing typologies suggested by this report, including duplexes, triplexes, and other multi-family arrangements can appeal to a variety of potential tenants that could support transit ridership. For example, seniors looking to downsize and reduce property maintenance can take advantage of smaller unit sizes and utilize the bus line to and from town. Families or roommates that may move to smaller duplexes or multi-family units would have the opportunity to downsize their car or share vehicles if a bus line was available.

**Pedestrian Friendly Design.** Adequate and inviting pedestrian-friendly design encourages walkability and provides a safe atmosphere for residents. It is important to link any transit or bus stops to the neighborhood through sidewalks, signage, lighting, benches, and landscaping so residents feel comfortable taking advantage of transit stops.

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<sup>7</sup> "Transit Oriented Development Fact Sheet", Capitol Region Council of Governments, 2016.

[https://crocog.org/wp-content/uploads/2016/07/Ch05\\_FactSheet\\_TOD.pdf](https://crocog.org/wp-content/uploads/2016/07/Ch05_FactSheet_TOD.pdf)

## Conclusions and Next Steps

Through this research and analysis, it was established that there is indeed growth in both employment and population, and an accompanying lag in housing options that points to the need for additional housing. Growth was identified at both ends, within the 20–30 aged population and the senior population, indicating housing needs that can satisfy arrangements within these age groups. Growth is expected to

come from a booming manufacturing and logistic industries, characterized by wages above current affordability brackets. An examination of existing housing characteristics within Luzerne found an aging housing stock that is typically larger in size, with fewer available units for smaller household arrangements. The Avondale and Sugar Notch sites have the potential to provide much needed housing for the region to address these trends.

### Key takeaways include:

- Luzerne County is projected to require upwards of 9,900 additional housing units by 2032 to accommodate population growth driven by industry and aging.
- Housing typology in the near-term to address needs by young professionals, new families, and seniors living alone or with family. Recommended housing typologies include mid-density duplexes, row houses, and multi-family arrangements.
- Both the Avondale and Sugar Notch sites are situated near growing manufacturing and logistics hubs, making them suitable to provide workforce housing for employees earning 80–120% AMI.
- Based on the existing trends of rental rates, new units could be approximately 30% rental and 70% ownership.
- Using the recommended density of about 6 units per acre and the total developable acreage of each site, the Avondale site would be able to accommodate approximately 670 units and the Sugar Notch site could add about 300 units.

### Upcoming Challenges and Next Steps:

In addition to the key takeaways above, the ICF team identified a series of next steps and implementation recommendations to help the Earth Conservancy (EC) push this redevelopment forward. There are still key questions to be answered before future development can occur on these sites and having a strong project champion to shepherd the project through these challenges will be key.

- First, EC should expand outreach to various developers, stakeholders in the region, and growing businesses to identify partnerships that could support site redevelopment and raise awareness about the availability of the sites.
- Next, EC should identify a suitable ownership option: the sites could be directly sold to developers if there is interest, or EC may pursue a partnership with a non-profit developer to provide housing directly, amongst other options.
- Investigate needed utility and transportation upgrades to the site for future development to address current deficits and concerns that is hampering the sites' competitiveness and marketability.
- In partnership with municipalities, pursue zoning changes to accommodate moderate density residential to address county-wide housing needs.
- Prepare detail site plan and conceptual vision in line with existing topographic, infrastructural, and housing conditions.