

insight2050 Scenario Metrics Summary

The comparative scenario metrics summarized here are described in more detail in the following sections. For clarity, values are rounded. All costs are expressed in 2014 dollars.

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Land Consumption

Includes all previously undeveloped land that is urbanized from 2010-2050.



Local Fiscal Impacts

Capital and ongoing operations and maintenance (O&M) costs for new local roads, sewer, water, wastewater infrastructure, and select services (2010-2050).



Transportation

Miles driven in passenger vehicles in Central Ohio in 2050.



Public Health Costs

Annual costs due to health incidences related to auto emissions, including hospitalization, premature mortality, and lost work days, in 2050.



Building Energy Use

Cumulative energy (electricity and gas) consumed by new and existing residential and commercial buildings from 2010-2050.



Building Water Use

Cumulative water used to serve and maintain new and existing homes from 2010 - 2050.



Greenhouse Gas Emissions

Annual CO₂e emissions from passenger vehicles, and residential and commercial buildings, in 2050.



Household Costs

Annual automobile transportation (fuel, insurance, maintenance) and home energy and water costs, in 2050

	Land Consumption	Local Fiscal Impacts	Transportation	Public Health Costs	Building Energy Use	Building Water Use	Greenhouse Gas Emissions	Household Costs								
scenario A <i>Past Trends</i> This scenario extends the land use and transportation investment decisions of the past decades forward to 2050.	 495 square miles	<table border="1"> <tr> <td>O&M</td> <td>Capital</td> </tr> <tr> <td>12</td> <td>4.4</td> </tr> </table> \$16.4 billion \$408 Million Average Annual Costs Capital + O&M 2010-2050	O&M	Capital	12	4.4	 15.9 billion miles 8,450 miles / year (per new resident, 2050)	Scenario A used as baseline for comparison	 4.27 quadrillion Btu (British thermal units) \$78.2 Billion Cumulative Costs 2010-2050	 3.19 trillion gallons	<table border="1"> <tr> <td>Buildings</td> <td>Transport</td> </tr> <tr> <td>29.06</td> <td>6.71</td> </tr> </table> 35.8 MMT / year (Million Metric Tons)	Buildings	Transport	29.06	6.71	 \$13,100 per new household
O&M	Capital															
12	4.4															
Buildings	Transport															
29.06	6.71															
scenario B <i>Planned Future</i> The housing and job distribution of this scenario reflects the direction of local plans and policies from the cities and townships across the Central Ohio region.	 270 square miles	<table border="1"> <tr> <td>O&M</td> <td>Capital</td> </tr> <tr> <td>11.3</td> <td>4.5</td> </tr> </table> \$15.8 billion \$393 Million Average Annual Costs Capital + O&M 2010-2050	O&M	Capital	11.3	4.5	 15.4 billion miles 7,450 miles / year (per new resident, 2050)	-\$41 Million	 4.23 quadrillion Btu \$77.5 Billion Cumulative Costs 2010-2050	 3.12 trillion gallons	<table border="1"> <tr> <td>Buildings</td> <td>Transport</td> </tr> <tr> <td>28.76</td> <td>6.47</td> </tr> </table> 35.2 MMT / year	Buildings	Transport	28.76	6.47	 \$11,600 per new household
O&M	Capital															
11.3	4.5															
Buildings	Transport															
28.76	6.47															
scenario C <i>Focused Growth</i> This scenario seeks to accommodate more growth in infill and redevelopment locations in and around existing cities and towns.	 45 square miles	<table border="1"> <tr> <td>O&M</td> <td>Capital</td> </tr> <tr> <td>10</td> <td>3.2</td> </tr> </table> \$13.2 billion \$329 Million Average Annual Costs Capital + O&M 2010-2050	O&M	Capital	10	3.2	 12.0 billion miles 4,450 miles / year (per new resident, 2050)	-\$246 Million	 4.15 quadrillion Btu \$76.0 Billion Cumulative Costs 2010-2050	 3.03 trillion gallons	<table border="1"> <tr> <td>Buildings</td> <td>Transport</td> </tr> <tr> <td>28.20</td> <td>5.05</td> </tr> </table> 33.2 MMT / year	Buildings	Transport	28.20	5.05	 \$7,700 per new household
O&M	Capital															
10	3.2															
Buildings	Transport															
28.20	5.05															
scenario D <i>Maximum Infill</i> This scenario strives to maximize growth accommodated through infill on previously developed lands and within existing urban areas.	 15 square miles	<table border="1"> <tr> <td>O&M</td> <td>Capital</td> </tr> <tr> <td>10</td> <td>3</td> </tr> </table> \$13.0 billion \$328 Million Average Annual Costs Capital + O&M 2010-2050	O&M	Capital	10	3	 11.1 billion miles 3,850 miles / year (per new resident, 2050)	-\$315 Million	 4.12 quadrillion Btu \$75.5 Billion Cumulative Costs 2010-2050	 3.01 trillion gallons	<table border="1"> <tr> <td>Buildings</td> <td>Transport</td> </tr> <tr> <td>28.03</td> <td>4.67</td> </tr> </table> 32.7 MMT / year	Buildings	Transport	28.03	4.67	 \$6,800 per new household
O&M	Capital															
10	3															
Buildings	Transport															
28.03	4.67															

insight2050 Scenarios Overview

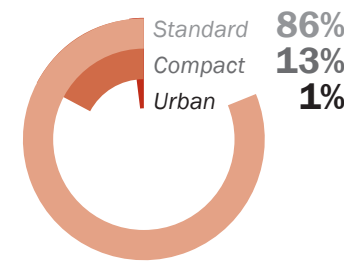
Each of the insight2050 scenarios represents a different way of accommodating projected housing and job growth in Central Ohio to the year 2050. Each includes the same total number of people, homes, and jobs, but varies in where and how they are located across the region. The scenarios

also vary in terms of the types of homes that will be built in the coming decades, and the extent to which their mix of housing types meet the demands of Central Ohio's current and future residents.

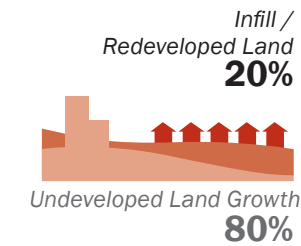
scenario A Past Trends

This scenario extends the land use and transportation investment decisions of the past decades forward to 2050. A majority of growth is accommodated on previously undeveloped land, with most growth (85%) tending towards suburban and rural, auto-oriented development. New development is composed primarily of larger-lot single family homes and suburban office parks and commercial centers.

Place Type Proportions



Infill / Redeveloped Land vs. Undeveloped Land

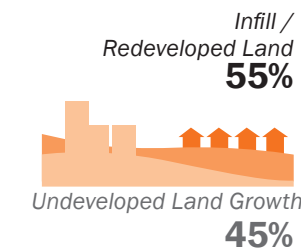
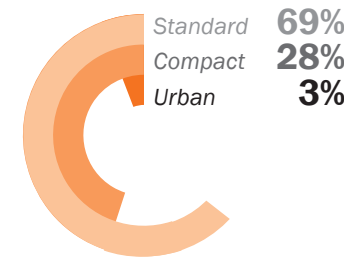


Housing Unit Mix

	2010	New Growth to	Resulting Housing Mix
Multifamily	25%	20%	23%
Single Family Attached	8%	10%	9%
Smaller Lot (<7,200 sq ft)	24%	9%	20%
Larger Lot (>7,200 sq ft)	37%	45%	39%
Rural Lot	6%	16%	9%

scenario B Planned Future

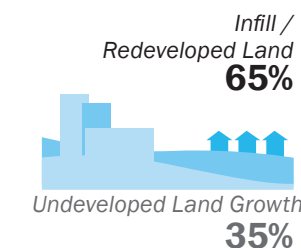
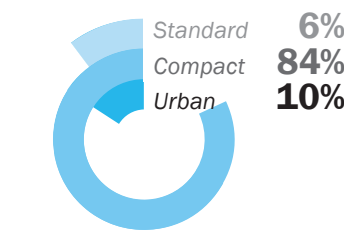
The housing and job distribution of this scenario reflects the direction of local plans and policies from the cities and townships across the Central Ohio region. There is more Compact growth than in the Past Trends scenario, and more smaller-lot single family and attached homes, though the majority of growth is still auto-oriented and tends to be located at the periphery of cities and towns. About half of new growth is accommodated as infill or redevelopment; the rest occurs on previously undeveloped land.



	2010	New Growth	Resulting Housing Mix
Multifamily	25%	26%	25%
Single Family Attached	8%	10%	9%
Smaller Lot (<7,200 sq ft)	24%	25%	24%
Larger Lot (>7,200 sq ft)	37%	35%	36%
Rural Lot	6%	4%	6%

scenario C Focused Growth

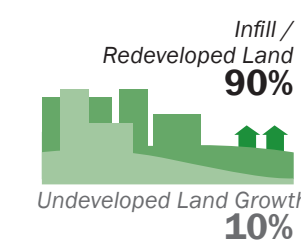
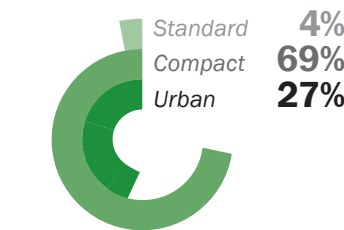
This scenario seeks to accommodate more growth in infill and redevelopment locations in and around existing cities and towns. Land patterns and housing mix are informed by housing demand forecasts, with significantly more smaller-lot single family, attached single family, and multifamily homes than the Planned Future or Past Trends scenarios. A large majority (84%) of growth takes the form of Compact development in walkable, moderate intensity mixed-use areas. There is also significant Urban development (10% of new growth) in Downtown Columbus. There is very little Standard growth or new larger-lot single family housing development in this scenario, as the majority of demand for this product is met through the existing supply.



	2010	New Growth	Resulting Housing Mix
Multifamily	25%	37%	28%
Single Family Attached	8%	16%	11%
Smaller Lot (<7,200 sq ft)	24%	46%	30%
Larger Lot (>7,200 sq ft)	37%	<1%	27%
Rural Lot	6%	<1%	4%

scenario D Maximum Infill

This scenario strives to maximize growth accommodated through infill on previously developed lands and within existing urban areas. The Urban place type assumes nearly 30% of growth in existing city centers and commercial corridors where significant redevelopment opportunities exist. An additional 70% takes the form of moderate intensity and walkable Compact development. Like the Focused Future scenario, the residential mix is informed by housing demand forecasts, with significantly higher proportions of multifamily, attached single family/townhomes, and smaller-lot single family homes. There is very little new larger-lot single family housing development in this scenario, as the majority of demand for this product is met through the existing supply.



	2010	New Growth	Resulting Housing Mix
Multifamily	25%	47%	31%
Single Family Attached	8%	19%	12%
Smaller Lot (<7,200 sq ft)	24%	33%	27%
Larger Lot (>7,200 sq ft)	37%	<1%	26%
Rural Lot	6%	<1%	4%