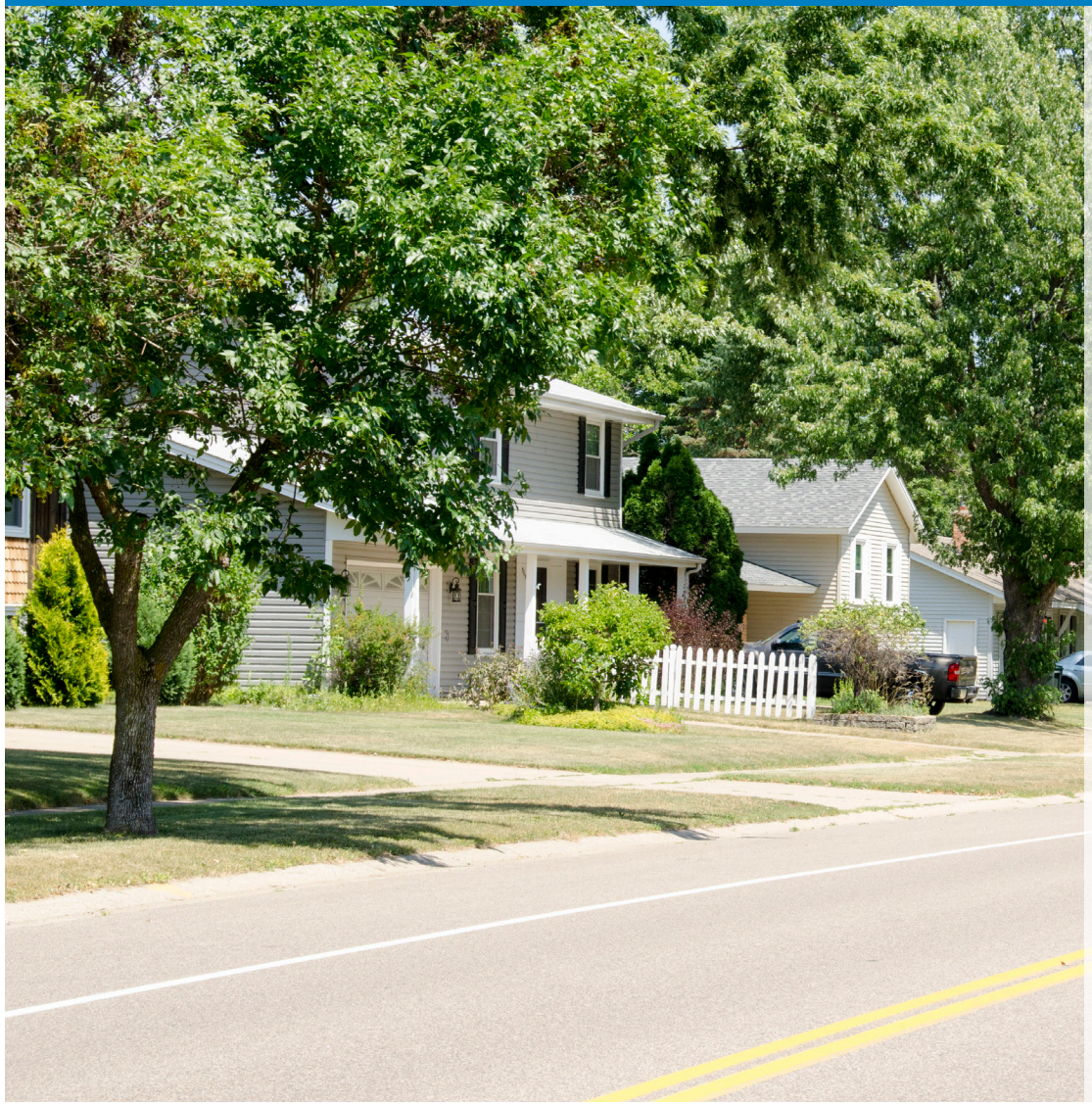
3. Community Context



Introduction

Planning for the future does not start on a clean slate. The future will be built on the foundation of Apple Valley, as it exists today. The community has evolved over time, shaped by a variety of geographic, economic, and sociodemographic factors, as well as historical planning decisions. A clear understanding of these influences provides the context for planning decisions now and in the future.

It is impossible to plan without a careful examination of the physical, demographic, social and economic characteristics of the community. What characteristics exist today and how are they likely to change over the course of this plan? Do these characteristics point to potential public actions through the Comprehensive Plan? The Community Context provides information needed to answer these questions.

Location

Apple Valley is located in Dakota County in the southern portion of the seven-county Twin Cities Metropolitan Area. The community is located approximately 20 miles from downtown Saint Paul and 20 miles from downtown Minneapolis, and 13 miles from the Minneapolis-St. Paul International Airport. This location is ideal for residents who want to enjoy the amenities of the Twin Cities but prefer a more suburban lifestyle.

Two major regional highways, I-35E and Cedar Avenue/Minnesota Trunk Highway 77 (MNTH 77), connect Apple Valley with employment centers and amenities throughout the metro region. These highways also provide local businesses with excellent access to customers, employees, and shipping. **Figure 3.1** shows the location of the City relative to the regional system of highways, regional parks, and outdoor recreation areas.

Regional Planning Designation

Apple Valley is designated as a suburban community in the Twin Cities' regional plan, Thrive MSP 2040. Apple Valley experienced development in the 1908's – 1990's similar to other suburbs in the region. Following this growth, Apple Valley is approaching buildout, but many opportunities remain for development. Similarly, the future roadway network is largely in place. Future transportation investments will primarily focus on continued maintenance and adaptive improvements to manage travel demand. Understanding Apple Valley's suburban context is key to developing the land use plan, transportation plan, and other elements of the Comprehensive Plan.

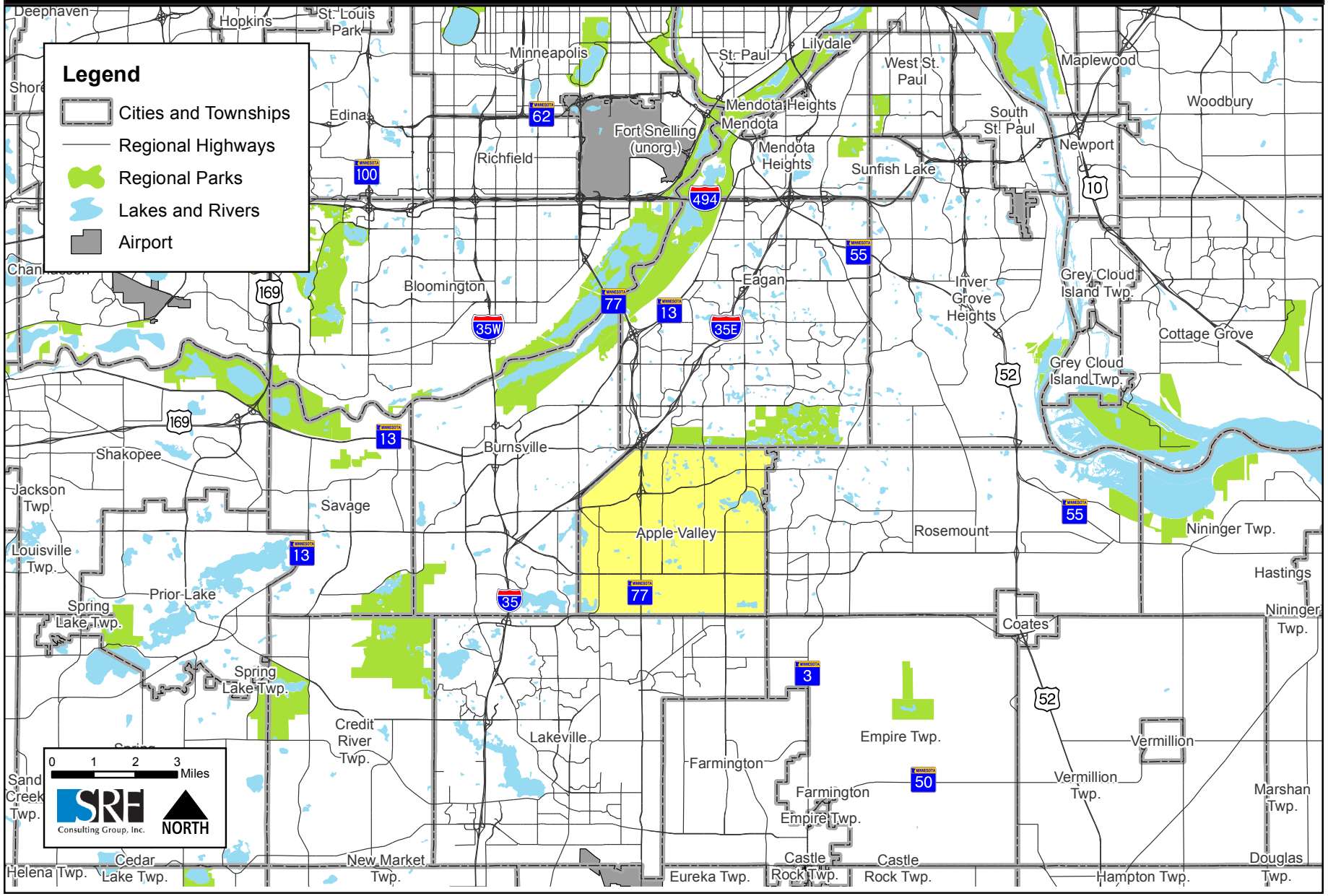
Historic Context

The 2040 Comprehensive Plan update is part of an ongoing process of community planning in Apple Valley. Land use management predates the incorporation of Apple Valley in 1969, Apple Valley became a statutory city on in 1974. The Lebanon Township Board adopted the first zoning ordinance in 1954 and formed the initial Planning Commission in 1962. The first comprehensive plan was prepared in 1972 and used a "new town" concept of seven residential neighborhoods supported by village centers and the downtown area.

The 1979 Land Use Plan responded to the requirements of the 1976 Metropolitan Land Planning Act. The Comprehensive Plan was updated in 2000 (2020 Plan) and again in 2009 (2030 Plan). The 2030 Plan has served as the development guide for Apple Valley since it was adopted in 2009.

Over the past fifty years, Apple Valley has transformed from a rural township to a city of more than 50,000 people. The remainder of this Historic Context section examines key trends, past plans, and recent development that frame the challenges that must be considered in planning for the next twenty years. Other sections of the Community Context chapter provide more detailed information about the demographic and physical characteristics of Apple Valley.

Figure 3.1 - Apple Valley Location



Current Trends

Population Growth

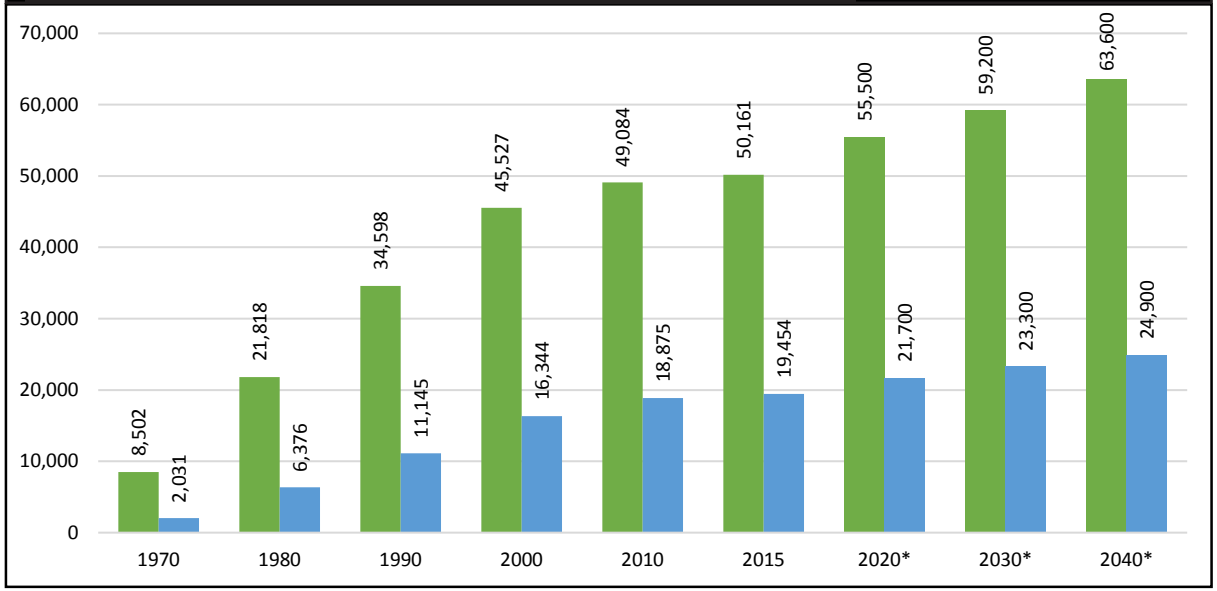
Apple Valley has grown steadily over the past fifty years, At the 2010 Census, Apple Valley's population was 49,084, an increase of 3,557 from 2000. By 2020, the population is forecasted to grow to 55,500, an increase of 6,416 residents. The Metropolitan Council forecasts steady growth from 2020 to 2040, the planning horizon for this update of the Comprehensive Plan. The population is forecasted to grow to 63,600 by 2040, with growth averaging around 400 residents per year over the next two decades. **Figure 3.2** shows historical and forecasted growth.

Apple Valley is forecasted to add 14,000 residents by 2040.

Population growth and housing development go hand-in-hand. **Figure 3.3** shows annual new housing starts, based on building permit data from the State of the Cities Data Systems (SOCDS) for the period 2006 to 2015. This chart makes several important points about residential development trends in Apple Valley:

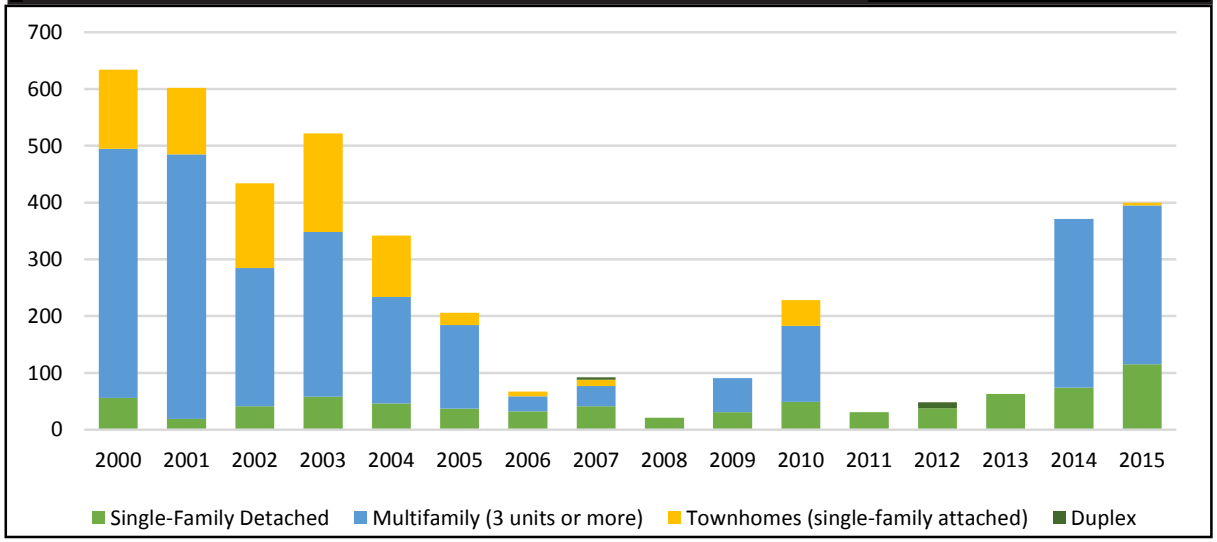
- 1,214 new housing units were built from 2006 to 2015. A revised pace of development occurred at the time of a national economic recession. (The 2030 Plan reported 7,994 new units from 1998 to 2007.) The effect of the national housing bubble and subsequent recession is evident beginning in the late 2000s.

Figure 3.2 - Population and Households in Apple Valley



Source: Decennial Census, 2015 ACS, Metropolitan Council Forecasts

Figure 3.3 - Annual Housing Units Permitted by Apple Valley



Source: Metropolitan Council

- 43% of the units were single family, 4% were multi-family structures with 3-4 units, and 53% were multi-family structures with five or more units.
- Traditional single-family detached homes represent 22% of total development since 2000. However, annual demand for new single-family homes was steady from 2000-2015.
- Similarly, single-family attached homes (townhomes) represent 23% of total development since 2000. Townhome and condominium development occurred in the early 2000's, and shows signs of increasing to 2040. This coincides with changes with changes in state statutes that reduce development liability.

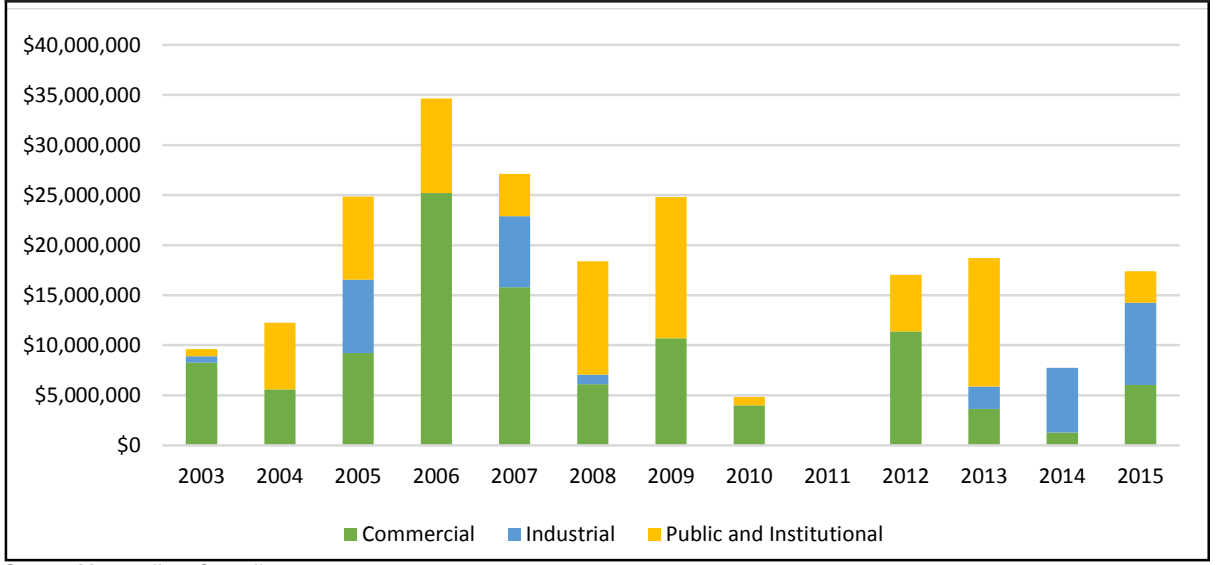
The City has a good mix of housing styles with a core of single-family detached neighborhoods and newer townhomes and apartments.

While these trends do not determine future housing development, they lead to important questions. What pace of new housing development can be expected in the short-term and the long-term? How can Apple Valley best encourage an appropriate mix of new housing options? How does housing influence the characteristics of the future population?

Commercial, Industrial, and Institutional Development

Another means of describing recent development trends comes from the value of new construction reported by building permits. Figure 3.4 shows the reported value of all building permits for commercial, industrial, and institutional from 2003 to 2015. Note that this chart does not express the number of establishments or the number/quality of jobs associated with investment.

Figure 3.4 - Total Permit Value for Commercial, Industrial, and Institutional (New Construction)



Source: Metropolitan Council

New construction of commercial, industrial, and institutional dipped during the recession, although redevelopment did continue to occur. Following the recession, there has been steady development of new commercial, industrial, and institutional facilities.

- The permitted value for new commercial, industrial, and institutional development averaged $16.7 million from 2003 to 2015, ranging from a low of no development in 2011 to $34.7 million in 2006.
- Commercial development, which includes businesses that provide goods and/or services, constituted 47% of the total investment in non-residential development since 2003. Commercial development occurred in every year but 2011.
- Public and Institutional development constituted 34% of total investment in non-residential development. Public uses, such as schools, parks, and public service facilities, are financed with public dollars. There has been sustained investment in public and instructional facilities.
- Industrial development constituted 11% of the

total investment from 2003 to 2015. Industrial development did not occur as regularly as commercial or institutional development. Nevertheless, industrial development is a vital component of the local economy, and led over commercial in 2014 and 2015, following the recession.

Tax Base

New private development creates tax base. In 2015, according to the Dakota County Assessor, City property tax receipts totaled more than $68 million. Approximately $50 million was from residential (single-family and apartments), $17 million was from commercial, and just over $1 million was from industrial.

Property Value Trends

Sustaining and growing property values is a key outcome of urban planning. Understanding local property value trends helps jurisdictions make informed decisions. For example, areas with low or declining property values may be opportunities for redevelopment – or they may indicate locations of functioning affordable housing that should be protected.

Building Value as a Share of Total Property Value

Figure 3.5 maps building value as a share of total property value for the entire City, using the estimated values for taxes payable in 2015. This ratio is intended to identify underutilized parcels that might be opportunities for redevelopment. (White areas on the map indicate parcels with ownership by association maintained development.) In general, the building value share of total property value is lowest in the following situations:

- vacant lots
- lots with large amounts of surface parking
- parks and open space
- lakes, wetlands, and stormwater ponds

Some underdeveloped areas, such as parks and wetlands, provide a valuable public function. Others, such as two manufactured home parks areas located east and west of Minnesota Trunk Highway 77 (MN 77), provide affordable housing alternatives for inclusive housing options within the City. Areas which are underutilized, and do not provide other public purposes may be candidates for redevelopment.

Taxable Value per Square Foot

Another way to visualize development efficiency is to divide total taxable value (building value plus lot value) by parcel area. Like the previous metric, total taxable value/parcel area is contingent on the use of the parcel, the total property value, and the intensity of development. For example, the downtown focus area shows a noticeably higher taxable value per square foot than the surrounding residential area—this is largely due to the concentration of retail and related commercial businesses in the area. However, some areas within the downtown focus area perform better than others from a tax-efficiency perspective. Valuations are determined by the Dakota County Assessor using county wide trends in property type.

Figure 3.6 maps total taxable value per square foot of parcel area, for taxes payable in 2015, in the downtown focus area.

From a parcel utilization standpoint, commercial properties that are developed at higher intensities/densities perform better than properties that are developed at lesser intensities/densities. One critical variable that influences tax efficiency (taxable value per square foot) is total property value/square foot. Clearly, higher-value properties provide more total tax revenue. However, the most efficient developments are those that have a high property value per square foot, and therefore a higher taxable value per square foot.

Parcel size is also a critical determinant. Once commercial parcels approach 4-5 acres (approximately 200,000 square feet), it is nearly impossible to achieve a taxable return greater than $1 per square/foot. This is because a large percentage of "big-box" development is devoted to parking and internal vehicle circulation. Also, large commercial buildings tend to be single-story and permit only one use of the parcel.

Figure 3.5 - Building Value as a Share of Total Property Value

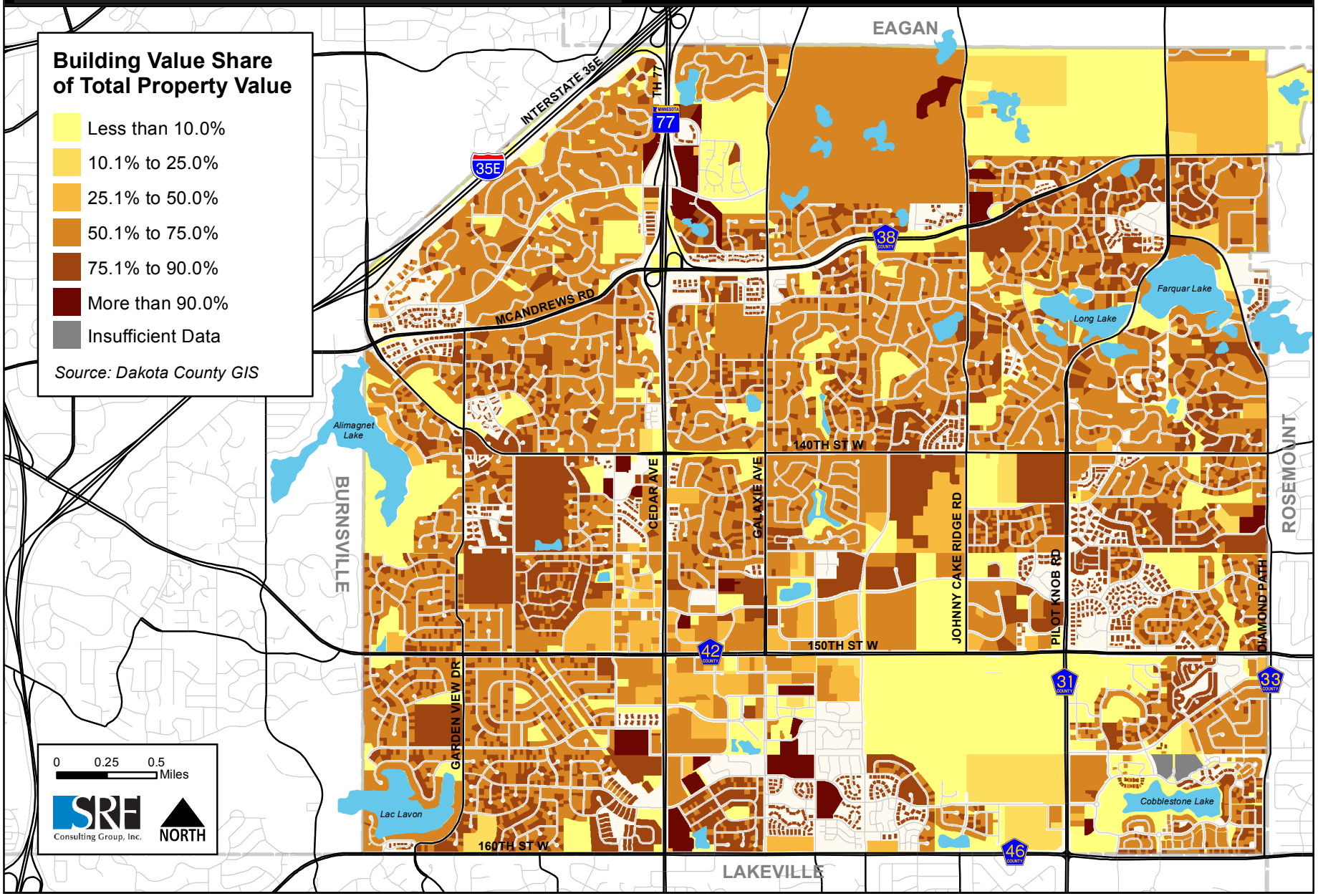


Figure 3.6 - Taxable Value per Square Foot for Downtown Commercial Properties

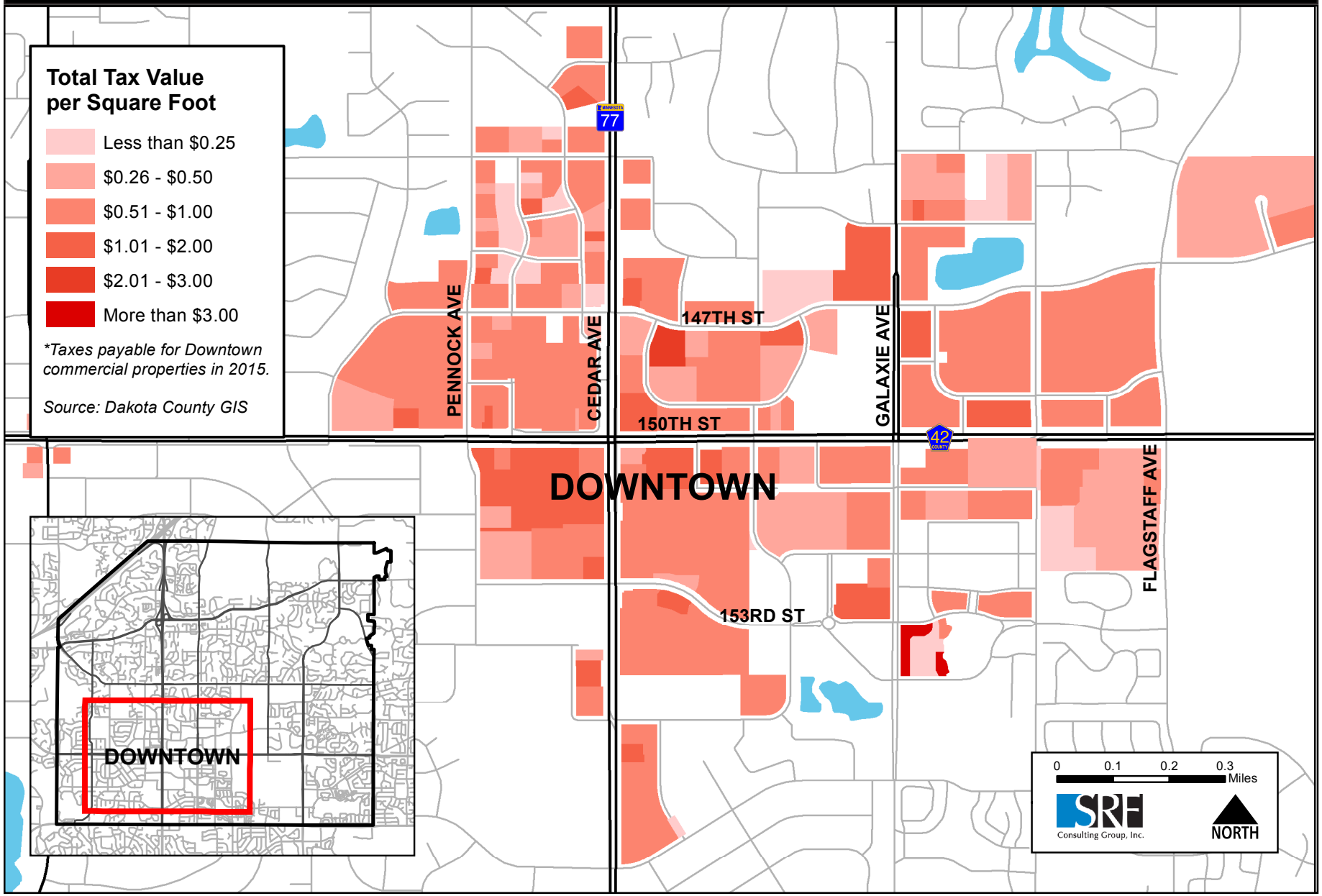
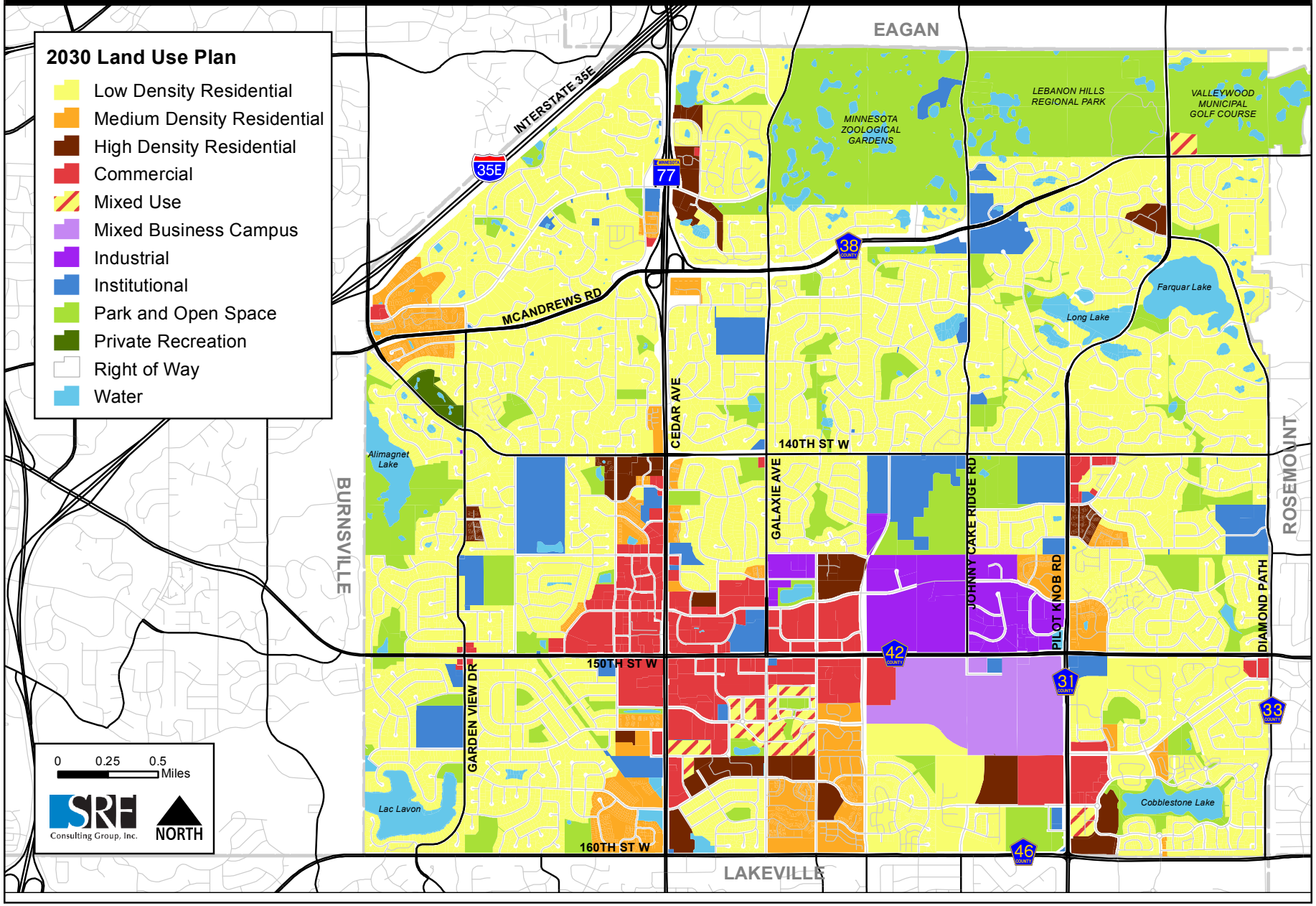


Figure 3.7- 2030 Land Use Plan



2030 Plan

The 2030 Comprehensive Plan was adopted in 2009. **Figure 3.7** shows the pattern of development and types of land use envisioned at that time. The 2030 Plan provides a frame of reference for viewing changes in the community since that plan was adopted.

Recent Development

The previous sections show broad trends for growth and development. It is useful to look inside these trends. Since 2000, a variety of actions have laid the foundation for future development.

Cobblestone Lake

In 2002, Tradition Development began construction of Cobblestone Lake. This 323-acre master-planned community lies in the southeast portion of the South Central Planning Area. The Cobblestone Lake development contains a variety of single-family and multifamily housing types, parks, and commercial uses.

The commercial element of Cobblestone Lake took shape in 2007. The master plan for the commercial area contained an 180,000 square foot Super Target and four other buildings (26,400 square feet). The Cobblestone Lake commercial area is located on the east side of Pilot Knob Road at 157th Street. This commercial district represents the first major commercial area not physically connected to the downtown area.

Development at Cobblestone Lake has continued through 2018. A senior living facility, Orchard Path, has been completed at the west entrance to the development. This complex will provide 193 units for senior residents in the first phase. Potential expansion could add an additional 64 independent units an 80 bedroom skilled nursing facility. A rental townhome development of 196 units has been applied for and plans to begin construction in 2018/2019.

Central Village

In December 2003, the City Council approved the "Central Village Plan". This plan established the development principles for a 60-acre area focused around Galaxie Avenue and 153rd Street. The Central Village includes approximately 450,000 square feet of commercial/retail/office space and a mix of medium- and high-density housing types, including townhouses, condominiums, apartments, and senior-only dwelling units.

In 2017, the Parkside Gabella opened with 196 units, the Planning Commission approved a mixed-use senior housing cooperative with 58 units. The Parkside at Galante apartments on the southeast corner of Galaxie Avenue and 152nd Street W added 134 multi-family units to the city's housing stock. Infill development on Founder's Lane continues to take shape.

The Central Village design plan was intended to promote a more dense, walkable, mixed-use en-







Top: The Shops on Galaxie; Middle: Multifamily apartments under construction on Galaxie Avenue; Bottom: Senior Cooperative Housing and Mixed-Use is planned for the vacant parcel on Galaxie Avenue and 153rd Street

vironment, which stands in contrast to the suburban superblocks and power centers located along Cedar Avenue and County Road 42. Market conditions during the recession effect the timing of development, however renewed growth has occurred coinciding with the economy. The development evolved to match the marketplace, adding rental housing square footage and a paired one way road circulation network. Chapter 4, Land Use, includes a series of Downtown Design Guidelines that build on the successful elements of the Central Village.

Kelly Park Area East of Galaxie Avenue

Development activity has included the following multi-family apartment projects;

- Parkside Village Gabella, a 196-unit market rate apartment building
- Parkside Village Galante, a 134-unit market rate apartment building
- Remington Cove I and II, 201 units of market rate apartments in two buildings
- Remington Cove II was constructed in 2016.

Cedar Avenue Improvements/BRT

After more than a decade of planning, the State of Minnesota's first bus rapid transit (BRT) line, the METRO Red Line, began operating in 2013. This line provides station-to-station service between the Mall of the America and the Apple Valley Transit station located at 155th Street and Cedar Avenue. This station includes a parking deck, shelters for northbound and southbound riders, and an overhead skyway. Additional shelters were constructed at the 140th and 147th station stops. To facilitate the shoulder-running BRT system, Cedar Avenue was reconstructed to include a thru lane between 138th and 160th Streets.



Red Line transit station and walkway on Cedar Avenue.

In 2015, the Dakota County Cedar Avenue Transitway Implementation Plan Update (IPU) was completed. This plan identifies a series of goals, evaluation measures, investment thresholds, and other progress indicators to help establish priorities for

future transitway development through 2040. Expansion of the Apple Valley Transit Station was programmed for Stage 2 (2015-2020.) A park-and-ride capacity expansion has been discussed for northern Apple Valley at 127th and Cedar Ave to bring online transit services to the surrounding neighborhood in Stage 4 (by 2040). Various bicycle and pedestrian improvements, technological improvements, and maintenance will occur over the life of this plan.

One of the goals of the IPU is to "enhance and promote transit-oriented development that is compatible with community goals and helps increase ridership." Apple Valley can leverage regional transit investments by encouraging a dense mixture of residential and employment-based redevelopment in the Cedar Avenue Transitway., Regional planning authorities also recognize that TOD implementation should occur on a scale that is compatible with the community's goals. To this end, the Future Land Use Plan identifies practical, "suburban-intensive" Transit Oriented Development (TOD) strategies for the Cedar Avenue Transitway Planning Area. (See Chapter 4.)

Senior Housing Development

- As its population ages, Apple Valley has prioritized development of senior housing facilities. Numerous ongoing developments offer varied living and affordability arrangements. These developments include: Legends, a housing facility with 163 affordable units, located on the southeast corner of Cedar Avenue and 140th Street W.
- Orchard Path, with 193 continuum of care market-rate units, located at the west entrance to the Cobblestone Lake Development.
- Zvago, a 58 unit senior cooperative under construction in 2018.

Existing Land Use

Apple Valley's physical setting forms the foundation of the Comprehensive Plan. Existing land use patterns influence the type and location of future development. Housing is the largest land use and a defining characteristic.

Figure 3.8 shows a snapshot of land use in 2017. **Table 3.1** contains the estimated area in each land use category. The map uses an interpretation of property tax data to determine existing land use. The purpose of this map is not to precisely specify the use of each parcel, but to illustrate the overall pattern of development.

Figure 3.8– Existing Land Use

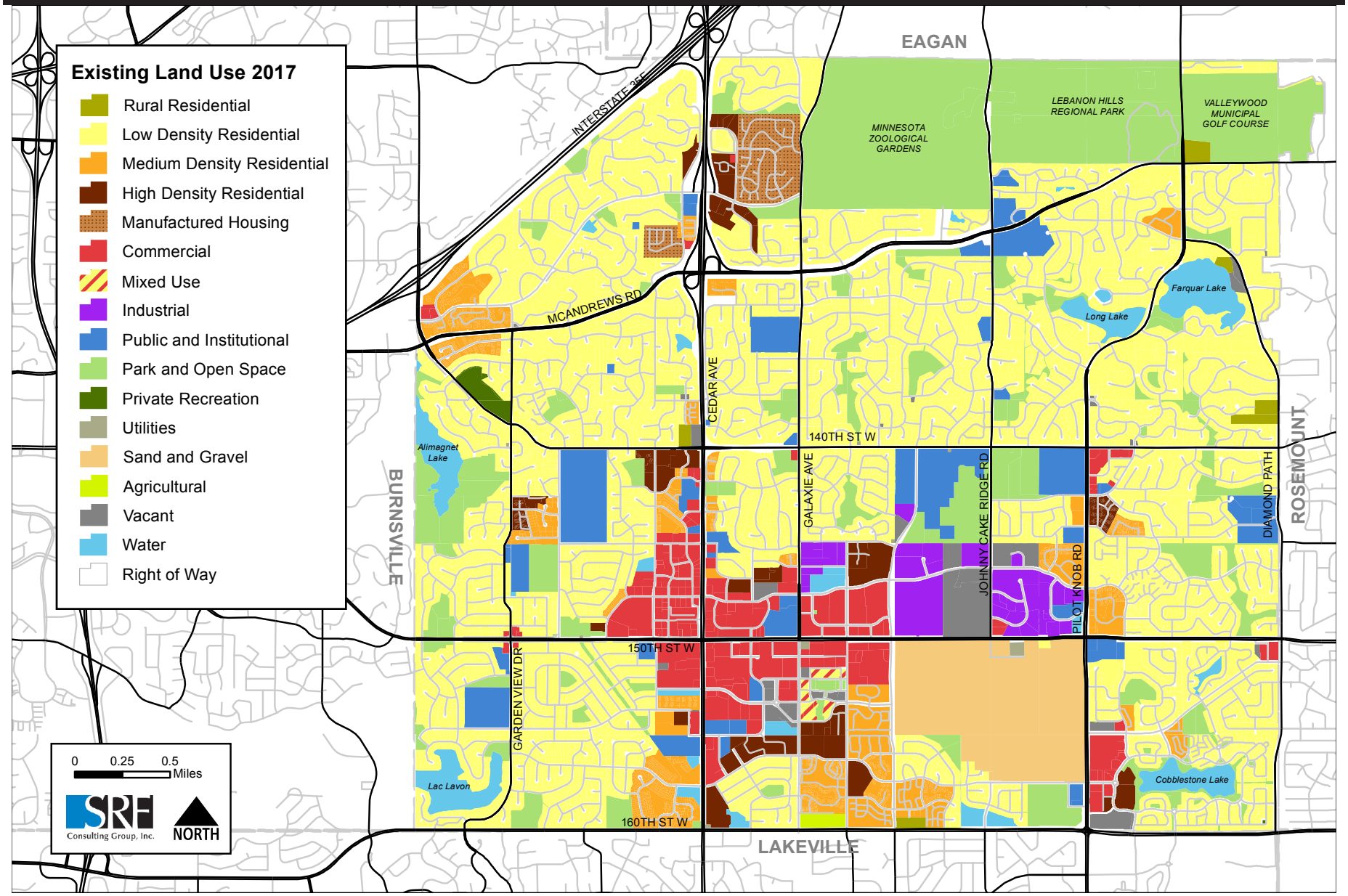


Table 3.1 - Existing Land Use, 2016		
LAND USE	ACRES	PERCENT
Agricultural	11	<1.0%
Rural Residential	42	<1.0%
Low Density Residential	4,528	40.5%
Medium Density Residential	512	4.6%
High Density Residential	240	2.3%
Manufactured Housing	108	1.0%
Commercial	486	4.4%
Mixed Use	15	0.1%
Industrial	187	1.7%
Sand and Gravel	412	3.7%
Public/Institutional	490	4.4%
Park and Open Space	1,753	15.7%
Private Recreation	23	<1.0%
Vacant	7	1.3%
Water	144	2.5%
Right-of-Way	~2,000	18.2%
Total Calculated Acres	**11,181**	**100.0%**

Some key aspects of the existing land use pattern include:

- Low density residential is the dominant land use. Single-family detached housing occupies approximately 41% of Apple Valley's total land area.
- Commercial uses, including retail, restaurants, and commercial offices/services are primarily concentrated in the Downtown Focus Area, along the Cedar Avenue and County Road 42 corridors.
- Parks and open spaces are located throughout the community and include the Minnesota Zoo, Lebanon Hills Regional Park, and Valleywood Golf Course. Between the zoo, golf courses, and numerous parks, Apple Valley maintains substantial acreage for open space and recreation. These parks and recreation amenities are a point of community pride and a defining quality-of-life asset for the City.
- The last large area of undeveloped land is the sand and gravel mining area located in south central Apple Valley, which contains 414 acres. The Fischer mining area is currently in operation and is expected to be reclaimed for a variety of uses over the next several years

Other physical characteristics influence the future growth and development of Apple Valley. The following elements are discussed in greater detail in other chapters of the plan:

- Major street corridors are an important factor in organizing land uses. Most high-volume commercial uses are located on higher classification streets, such as arterials and collectors, which ensure that they are highly visible to customers and reduces through traffic on residential streets. (Transportation - Chapter 8).
- The extension of a regional sanitary sewer interceptor provides the capacity for land to be developed in southern sections of Apple Valley (Water Resources - Chapter 9).
- The municipal water system provides safe drinking water and support for fire suppression. (Water Resources - Chapter 9).
- Stormwater management systems are required to support development, but also become defining physical features (storm water collection ponds are among the more notable physical features) (Water Resources - Chapter 9).
- Parks, Trails and Open Space (Chapter 7) influence the form of development and the quality of life in Apple Valley.
- Public objectives for Economic Development and Redevelopment (Chapter 6) influence the use of land for commercial and industrial purposes. As existing land uses grow older, the need for reinvestment and the opportunity for redevelopment will increase.

Aggregate Resources

Municipalities must consult the Minnesota Geological Survey, Aggregate Resources Inventory of the Seven-County Metropolitan Area for the location of identified aggregate resources. The extraction of aggregate resources and the reclamation of mining areas has been a defining characteristic of Apple Valley. The last remaining aggregate mining site in Apple Valley is Fischer Sand and Aggregate mine located south of County Road 42. The 2009 Comprehensive Plan identified this site for redevelopment, with a focus on establishing new job opportunities within a "mixed-business campus."

Portions of this area labeled as "Sand and Gravel" on the Existing Land Use Map, is being reclaimed and redevelopment planning is under way. Development of this site will occur in stages as mining is phased out.

Reclamation of the Fischer Sand and Gravel Mine is a significant economic development opportunity.

Housing

Housing comprises most of the land area in Apple Valley, accounting for nearly 50% of the existing land use. Housing shapes the form and character of the community. It influences who lives in Apple Valley today and in the future. According to the Census, there was net growth of 3,389 housing units from 2000 to 2015, a 20% increase. **Figure 3.9** illustrates this growth for different types of housing, including single-family attached, single-family detached, and multi-family buildings of various sizes.

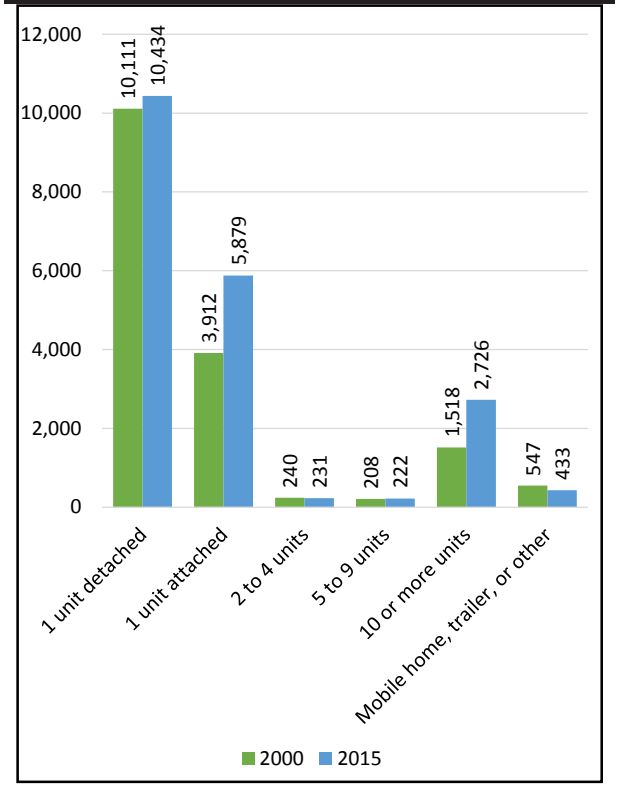
Housing Types

Single-family detached housing is the most common type of housing in Apple Valley. Nearly 53% of all existing housing in 2015 was single-family detached housing. This type of housing is occupied by a single family and is not physically connected to any other housing unit. However, the housing supply is becoming more diverse, and the share of single-family detached housing continues to decline due to an increase in higher density multi-family development. In 1990, 68% of the City's housing stock consisted of single-family detached housing. In 2000, that share was 61%, and in 2015, it was down to 52%. Single-family attached homes (townhomes) and apartment structures/senior housing with 10 or more units account for 94% of the housing stock growth. Most multi-family growth is attributed to apartment facilities with 10 units or more. From 2000 to 2015, there was a net increase of 1,208 dwellings in multi-family structures containing 10 or more units. The share of this housing type increased from 9% of the overall housing stock to 14%.

The housing supply contains a mix of architectural styles. Newer single-family housing is most commonly a two-story design. Houses that are two or more stories represent 32% of all units. Nearly 40% of homes are "split level" style. Split-level and multi-story homes may not be suitable for older residents wishing to age in place.

The median finished size for Apple Valley homes is 2,122 square feet. Over the last several decades, the trend has been towards increasing square footage. While larger homes are desirable today, it is important to ensure a variety of home sizes and floor plans to continue to improve the flexibility and affordability of Apple Valley's housing stock. **Figure 3.10** illustrates various dwelling types in Apple Valley.

Figure 3.9 - Growth by Housing Type



Source: 2000 Census, 2015 ACS

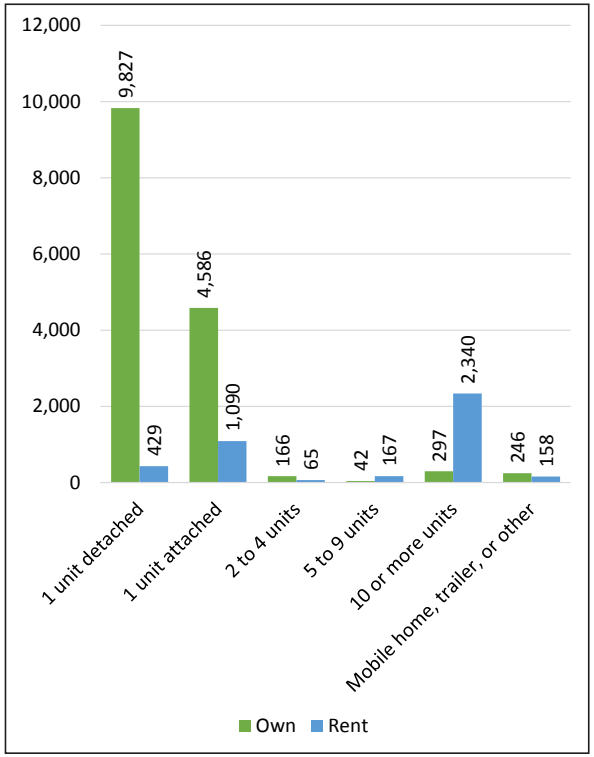
Housing Tenure

Most housing in Apple Valley is owner-occupied; however, the share of renter-occupied housing units is increasing. The 2000 Census reported that 87% occupied housing units were owner-occupied. The 2015 ACS estimates that 78% of occupied housing is owner-occupied. This represents a significant change and is consistent with the increase in multiple-family and attached housing that took place between 2000 and 2015. This trend has contin-

ued through 2017, with more than 1,000 additional multi-family units either planned or under construction.

Rental housing is provided primarily by multiple-family structures. More than 55% of rental housing was in structures with 10 or more units. Approximately 26% of rental housing was single-family attached units. Approximately 10% of rental units were single-family detached. Since 2009, approximately 1,300 multi- family dwelling units have been added to Apple Valley's housing stock, which has increased the percentage of renter-occupied housing in the city. **Figure 3.10** depicts housing tenure in Apple Valley.

Figure 3.11 - Housing Tenure



Source: 2015 ACS

Age of Housing Stock

The age of the housing stock is a useful planning statistic. It is one indicator of historic growth patterns. It is also a useful guide for future housing maintenance needs. As housing ages, it requires reinvestment to retain its value and integrity.

Figure 3.12 illustrates the age of Apple Valley's housing stock by decade of construction. Over half of all housing units are more than 30 years old. According to Dakota County property tax data, 52% of all housing units (through 2016) were built prior to 1987. These units are primarily single-family.

Figure 3.10 - Dwelling Types

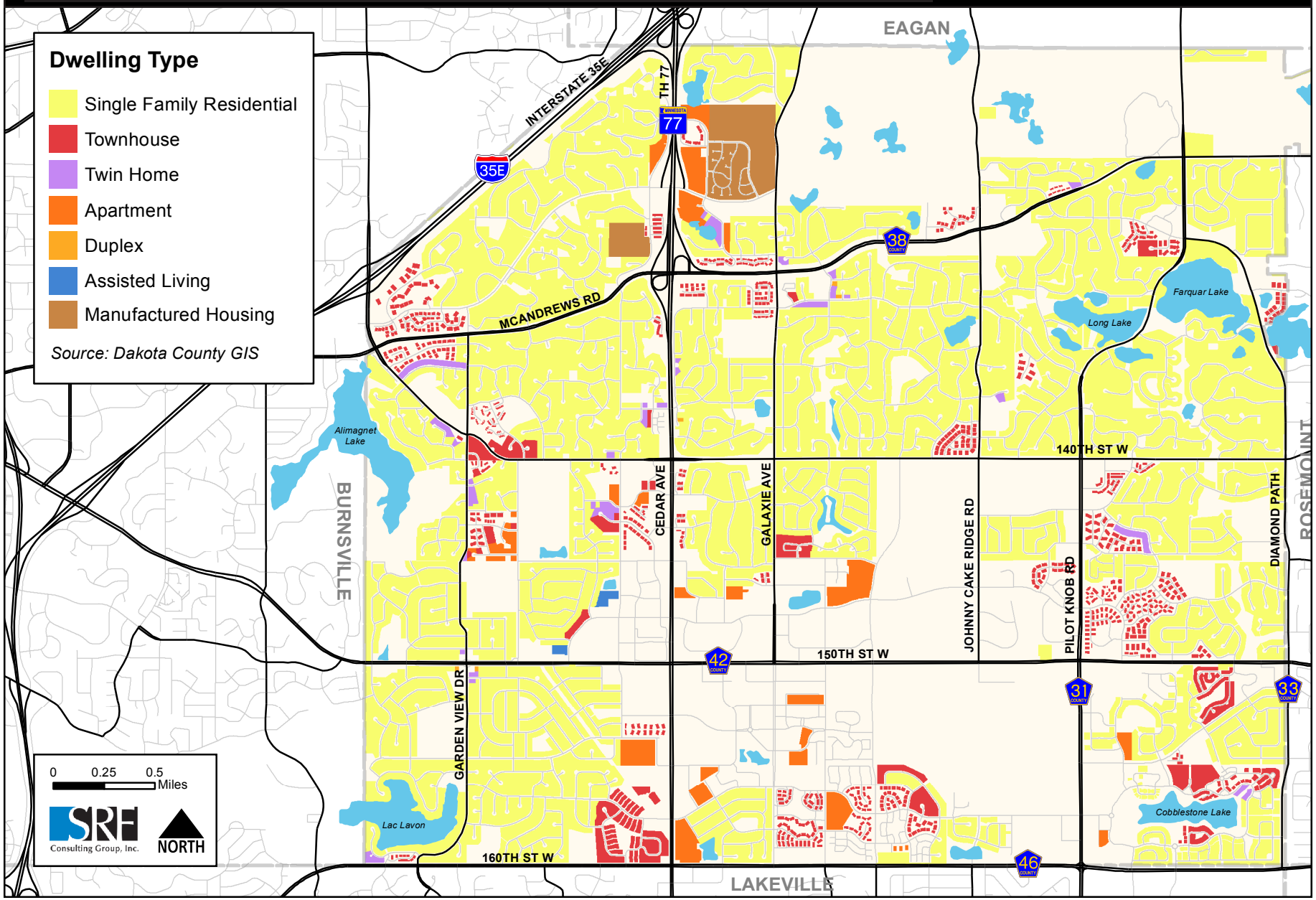
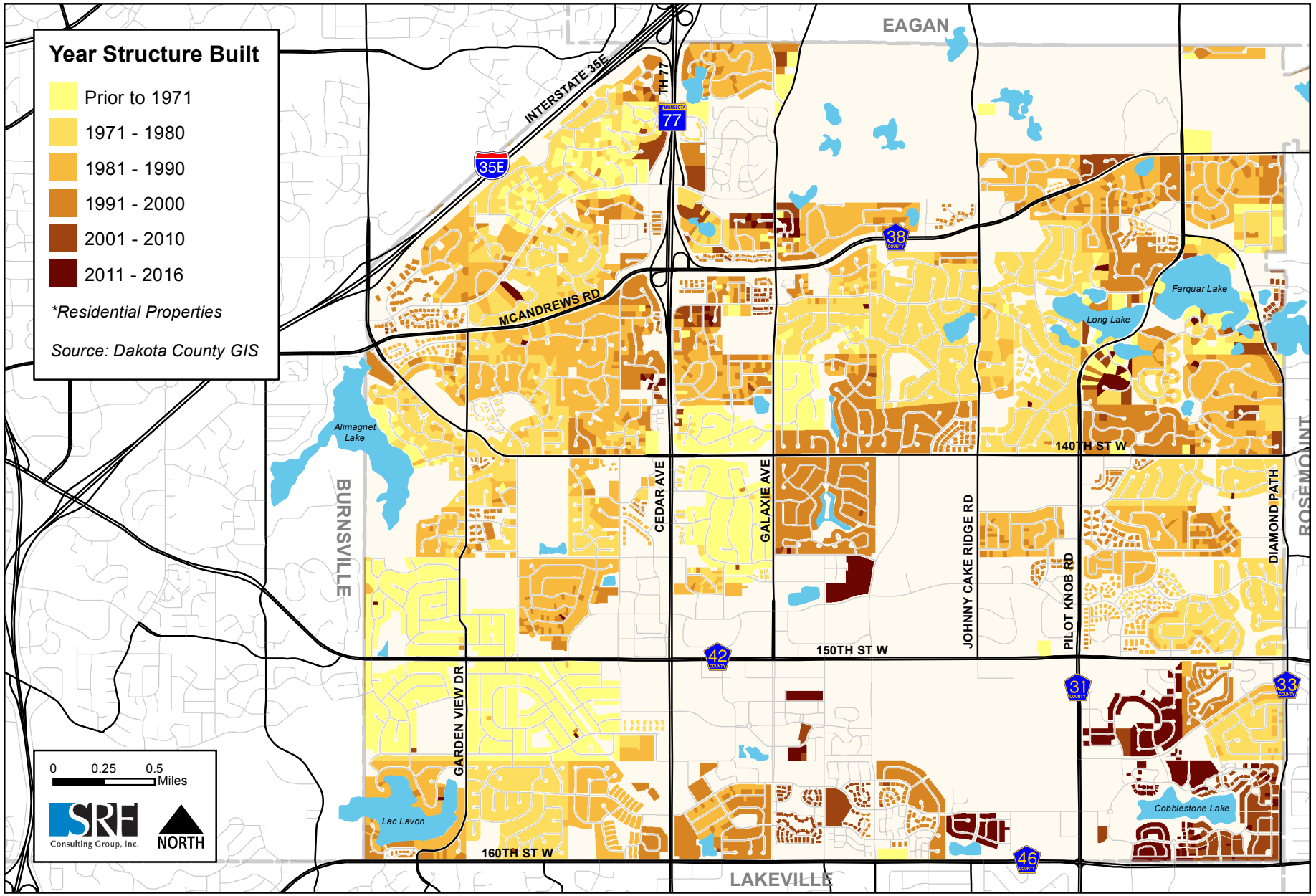


Figure 3.12 - Age of Housing Stock



Growth Forecasts

Growth trends and projections are critical elements of the Comprehensive Plan. Historic trends describe how current conditions evolved and may offer insights about future development. Looking to 2040, Apple Valley will continue to grow as a place to live, work and shop. Projections of future development determine the demand for land, the need for infrastructure and municipal services.

Metropolitan Council Forecasts

Future growth is a critical consideration in updating Apple Valley's Comprehensive Plan. The Comprehensive Plan relies on the most recent forecasts made by the Metropolitan Council. **Table 3.2** contains population, household and employment forecasts for 2020, 2030 and 2040 with comparisons to actual totals for 2000 and 2010.

Table 3.2 - Council Growth Forecasts

YEAR	POP	HH	EMP
2000	45,527	16,344	12,103
2010	49084	18,875	14,279
2020*	55,500	21,700	15,800
2030*	59,200	23,300	16,400
2040*	63,600	24,900	17,100

*Census Count

**Council Forecast

These forecasts show Apple Valley's population increasing by more than 13,000 people (30%) from 2010 to 2040. Growth is anticipated to be steady, ranging from 400 to 600 persons per year.

The Census data implies that average household size was 2.60 in 2010. The forecast assumes that average household size will remain steady, declining slightly to 2.55 persons per household by 2040.

Metropolitan Council has revised its previous forecast to project a slower rate of job growth in Apple Valley. The updated forecast anticipates an increase of 2,821 jobs from 2010 to 2040, or 20% growth. This rate of job growth is slower than the rate of population growth. In 2010, there were 0.29 jobs per person; that ratio is expected to decline to 0.27 jobs per person in 2040. Most job growth in Apple Valley is forecasted to occur by 2020. This forecast will likely be revised following refinement and approval of a development plan for the Fischer Sand and Aggregate mining area.

Forecasting for any local jurisdiction is a challenge. The Metropolitan Council's forecasts were made with the best available data. One benefit of the forecasts is that they are rooted in a regional socio-economic model. Thus, they account for regional economic factors that are anticipated to exercise general effects throughout the metropolitan area.

The level of uncertainty associated with the forecasts for Apple Valley is tempered by geographical constraints. The city is unlikely to grow dramatically more than the forecasts given, simply because it is running out of available land for development. Future growth will be driven primarily by redevelopment. Population growth will be primarily driven by migration. As the metropolitan area grows outward, Apple Valley will have the advantage of being a suburb that is closer to Minneapolis and St. Paul than developing fringe cities, centrally located within the southern suburbs. Therefore, it may be more likely to retain and attract residents who would prefer to avoid longer commute times.

Looking ahead to 2040, a variety of macroeconomic factors will influence actual growth outcomes, including the following:

- National economic and housing market conditions.
- Local development of suburban intensive housing, utilities, and other infrastructure to support the forecasted growth.
- The cost and availability of energy.
- Changing climate conditions that make the Twin Cities more or less favorable relative to other regions in the United States.
- Competition from other communities, particularly other communities in the Twin Cities metro.
- Redevelopment

Note that some of these factors are related. An important element of implementing the Comprehensive Plan will be to monitor these changes and their implications for the future of Apple Valley.

Local Housing Forecast

A study of future housing needs in Dakota County provides insights on future development in Apple Valley. In 2013, Maxfield Research Inc. prepared a Comprehensive Housing Needs Assessment for the Dakota County Community Development Agency. This study forecasts housing demand in two stages, from 2010-2020 and 2020-2030 The study breaks down demand for rented and owner-occupied single-family, multi-family, and senior housing. Table 3.3 summarizes Apple Valley's forecasted housing demand for 2020-2030.

Table 3.3 - Housing Demand Forecast, 2020-2030

Tenure	Type	Forecast Units
Own	Single-family	625-636
	Multi-family	550-560
	Senior	50
Rent	Market rate	590-610
	Affordable	100-275
	Senior market rate	100-115
	Senior affordable	155-162
Total, all units		**2,170-2,408**

Source: Dakota County Housing Needs Assessment

The total forecasted demand for new units ranges from 2,170 to 2,408. This forecast is approximately 50% higher than Metropolitan Council's forecasted household growth for 2020-2030, which is 1,600 households.

Commercial Retail Trends

Apple Valley is thriving commercial hub. Commercial development slowed during the recession but has since picked up. According to market studies by Maxfield Research Inc. there will be continued demand for commercial uses through 2030.

The success of online shopping has greatly impacted brick-and-mortar retail. In early 2017, for example, there were more than 100 closures each by J.C. Penney, Sears, and Macy's. It is also recognized that the top 25 online retailers all have brick and mortar retail. The emerging model for successful brick-and-mortar retail is focused around delivering a unique shopping experience. Over the course of this plan, the City will likely be affected by the closure of one or more large retailers, with impacts to local employment, consumption, and revenue generated by property and sales taxes. This would provide opportunities for infill, adaptive reuse, and redevelopment. One of the intents of the future land use plan is to establish a community vision and provide guidance for the City to capitalize on these opportunities when they occur.

Characteristics of the Population

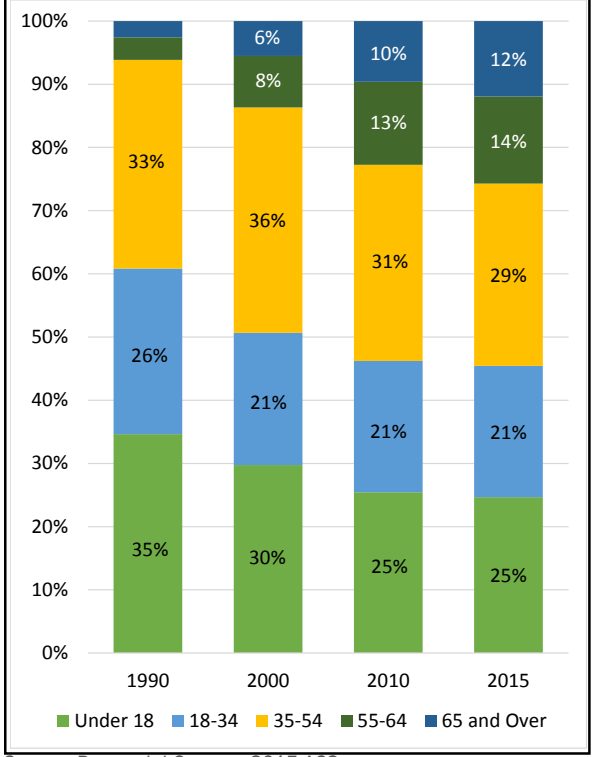
A comprehensive plan focuses most closely on the physical aspects of community – land use, parks, streets, and utilities. Nevertheless, planning must recognize that the physical and social aspects of community are intertwined. In fact, one of the primary goals of city government is to sustain/improve the health, safety, and welfare of the citizens of the community. The land use and built environment of a community influence a variety of social, cultural, and economic characteristics, including the following:

- Household size and composition
- Housing affordability
- Availability of good local jobs at a livable wage
- Work/housing balance and commuting trends of those working and living in the community
- Access to commodities and services
- Places for interaction among residents
- Community diversity

In turn, the characteristics of the population influence many aspects of the community, including:

- Demands for goods and services
- Demands for public services (recreation, social services, education, public safety)
- Economic capacity to support both private businesses and local government. .

Figure 3.13- Age Distribution

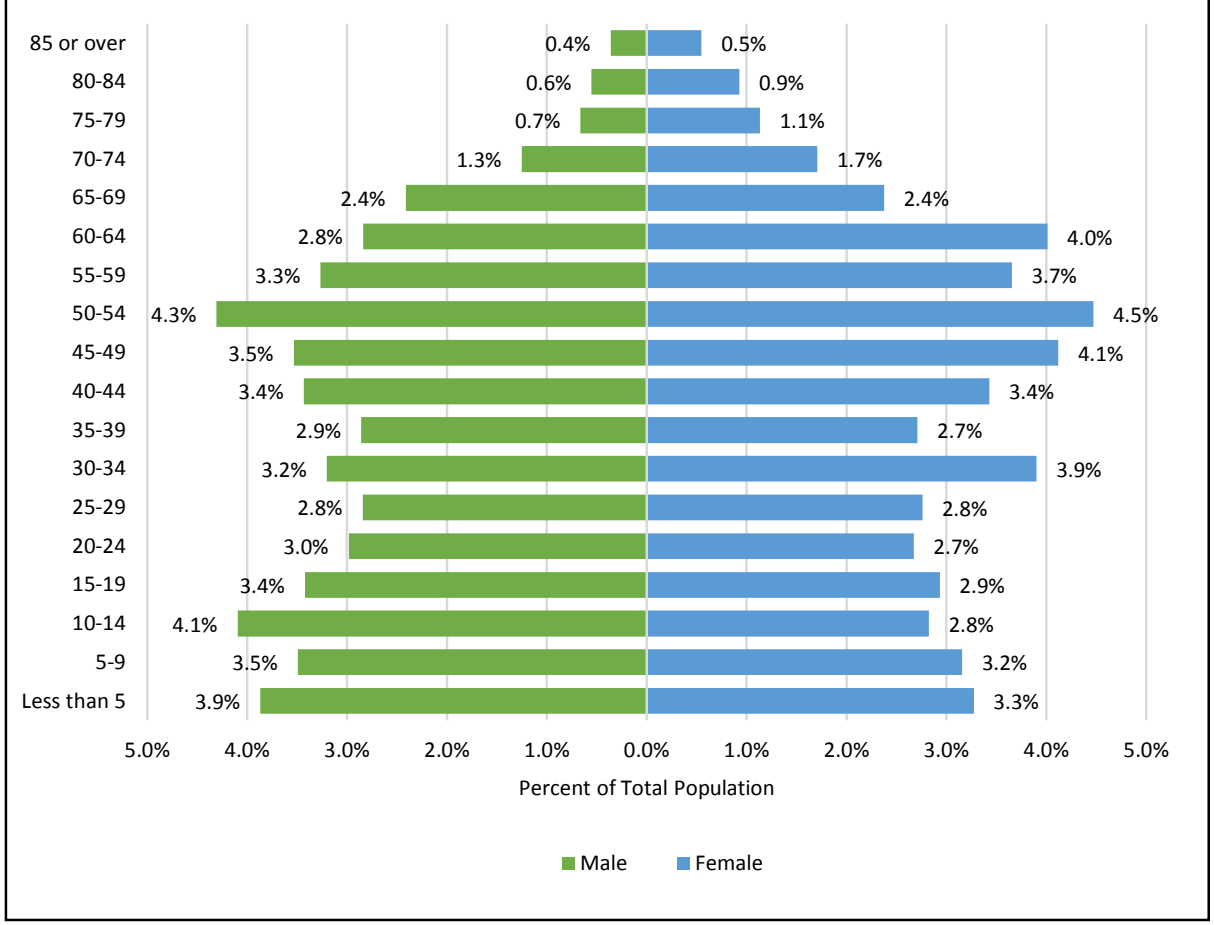


Source: Decennial Census, 2015 ACS

Age of Population

The characteristics of the Apple Valley's population are changing. Figure 3.13 shows that population has aged consistently. In 1990, Apple Valley was a place primarily made up of families with children. Thirty-five percent (35%) of the 1990 population was under age 18 and only 7% of Apple Valley residents were 55 years of age or older. By 2015, the proportion of residents age 18 or younger had fallen to 18% while the share of residents aged 55 or over had grown to 26%.

Figure 3.14 - Population Pyramid



Source: 2015 ACS

trends in Apple Valley are similar to Dakota County as a whole.

Roughly half of the population growth in Dakota County will occur in the population group aged 65 or over.

Existing Cohort Composition

Figure 3.14 shows the existing composition of Apple Valley's population, broken down by age and sex. The distribution is consistent for children through young adults. This shape corresponds to steady, but not rapid, growth in Apple Valley. There

is a bulge for baby boomers focused around the age 50-54 cohort. This bulge will move toward the top of the pyramid over the timeline for this plan. There are more males than females for every cohort under age 24.

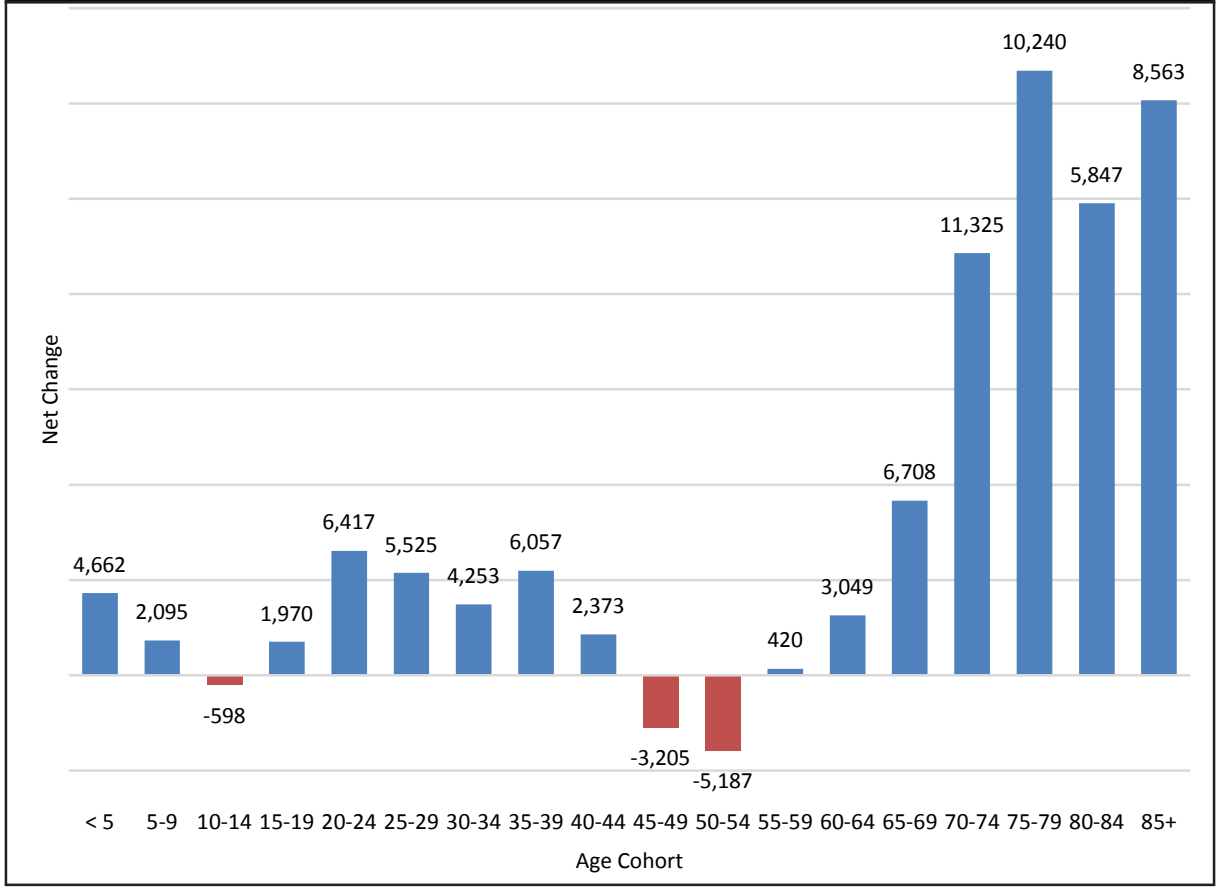
Forecasted Age Composition

The aging of the population will be one of the primary demographic trends over the life of this Comprehensive Plan. The State Demographer provides detailed population forecasts for each county, broken down by age cohort. These forecasts can be used to supplement the forecasts from Metropolitan Council. **Figure 3.15** illustrates the change that is forecasted for each cohort in Dakota County, from 2015 to 2040. The height of the bars indicates percent change and the data labels indicate the total magnitude of the change.

Roughly half of the forecasted population growth in Dakota County will occur in the population group aged 65 or over.

The State Demographer projects total population growth of 70,514 for Dakota County. Growth in the cohorts aged 65 or over account for more than half of this increase. The largest net increase is for the age 70-74 cohort, which is projected to grow by 11,325. This increase is accompanied by a decline in the number of individuals aged 45-54. Little growth is anticipated for the cohorts of children, youth, and teenagers.

Figure 3.15 - Forecasted Population Change by Age Cohort in Dakota County, 2015-2040



Source: Minnesota State Demographer

Because this projection is for Dakota County (population 413,000), Apple Valley will experience only a fraction of the growth depicted. Nevertheless, the general trends for Dakota County are similar for Apple Valley, and the City will experience similar impacts as demand for goods and services responds to the needs of changing demographics.

While the overall population will grow older, it is more difficult to predict what this trend means for Apple Valley. Several questions highlight the challenge of forecasting the aging of Apple Valley's population:

- How long will current baby boomer residents of larger single-family houses choose to stay in these homes?

- Will more seniors opt to live alone, with family, or with peers?
- Will seniors have fewer financial resources? If so, how does this affect the community?
- Will Apple Valley offer the housing options, physical characteristics, infrastructure and services that attract seniors?

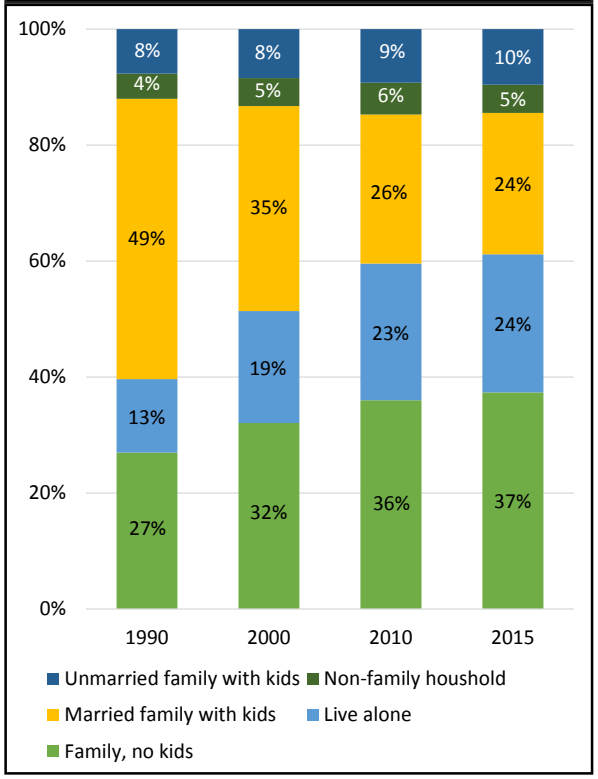
These questions frame important elements of the relationship between land use and the characteristics of the people who live in Apple Valley.

Household Size

A household includes all the people who occupy a housing unit as their place of residence. Historical data shows that household size has decreased each decade for fifty years. After decades of reduction, the number of people living in each home is leveling off. In 1960, the Census reported that average household size in Apple Valley was 5.27 people. Fifty years later, the average household size is 2.58 persons. The current estimate from the 2015 ACS is 2.56. The smaller household size is consistent with societal trends toward smaller families. The average household size in Apple Valley is now similar to the average household size for Dakota County as well as to the rest of the metro.

Household size has decreased steadily for 50 years. This trend is likely to continue with significant growth in the number of one- and two-person senior households.

Figure 3.16 - Household Types



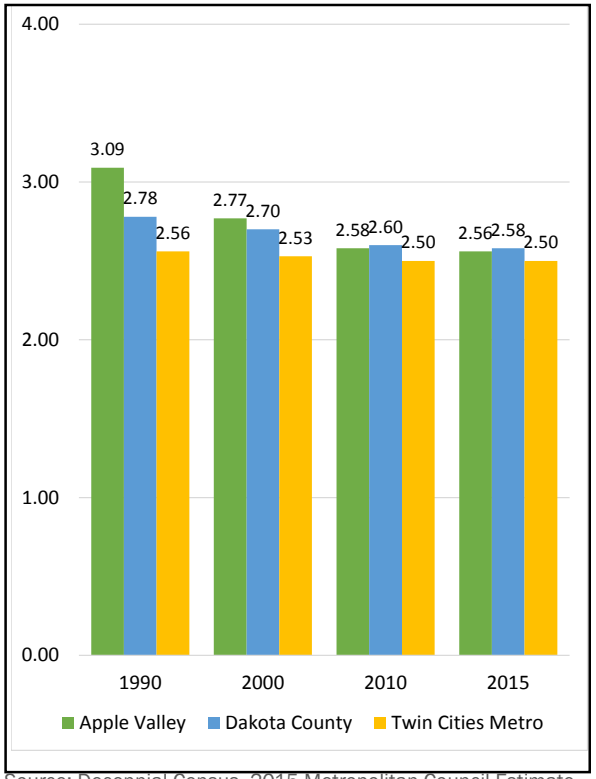
Source: 2015 ACS

Figure 3.16 depicts average household size in Apple Valley. Figure 3.17 shows how the composition of households has changed over time.

Other 2015 trends that are evident from the charts:

- 71% of Apple Valley households are family households. This is down from 83% in 1990.
- From 1990 to 2015, the share of households that included children under the age of 18 decreased from 56% to 34%.

Figure 3.17 - Average Household Size



Source: Decennial Census, 2015 Metropolitan Council Estimate.

- From 1990 to 2015, the share of households that consisted of a family with no children increased from 27% to 37%.

Race

Racial diversity is increasing in Apple Valley. The 2015 ACS reports that 81.2% of the population identifies as white, down from 83.8% in 2010 and 91.8% in 2000. Meanwhile, minority groups are growing. The racial diversity of Apple Valley's 2015

population is similar as that of Dakota County, but less than the region as a whole.

An important factor in understanding race data is the reporting of the Hispanic population. People who identify their origin as Spanish, Hispanic, or Latino are not classified as a separate racial category. The 2015 ACS estimates that 2,268 people are Hispanic or Latino. This represents 4.5% of the current population. Figure 3.18 depicts the racial and ethnic composition of Apple Valley.

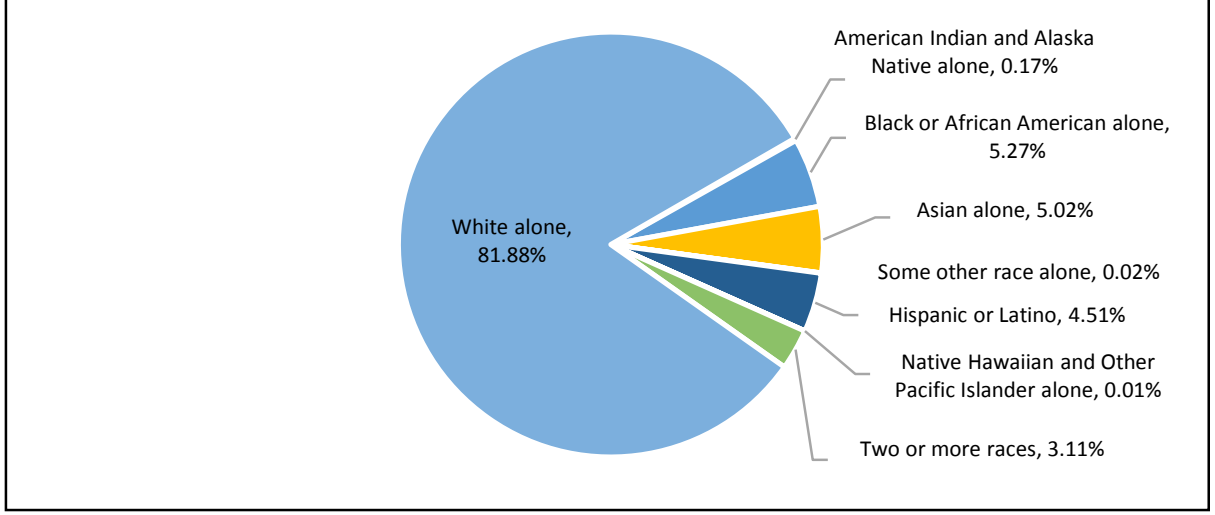
Income

Income influences many aspects of community. Income provides the capacity to acquire housing and to purchase goods and services from local businesses. Higher incomes tend to correlate with better public school systems. Figure 3.19 shows median household incomes in Apple Valley, Dakota County, and the Twin Cities metro. The values in **Figure 3.19** are reported in nominal terms – they have not been adjusted for inflation. The most important takeaway from the figure is that the average household income in Apple Valley is consistently higher than the average household income for Dakota County as well as the Twin Cities metro.

The distribution of incomes provides additional information about the economic standing of the community:

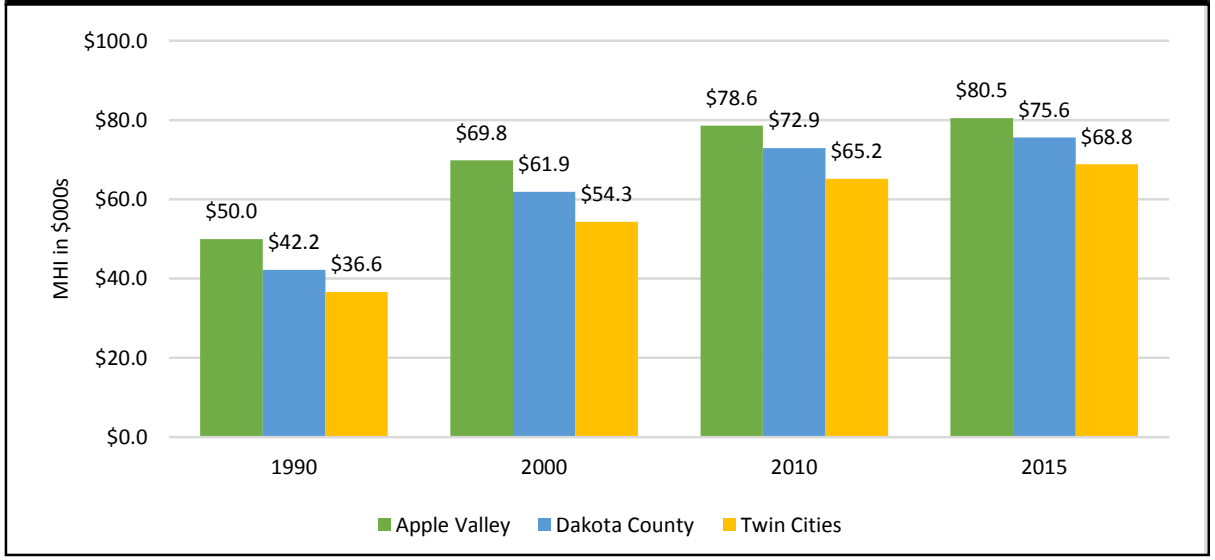
- 37.7% of households earn $100,000 or more.

Figure 3.18 - Race and Ethnicity



Source: 2015 ACS

Figure 3.19 - Median Household Income



Source: Decennial Census, 2015 ACS

- 7.1% of households earn $200,000 or more.
- 10.3% of households earn less than $25,000.

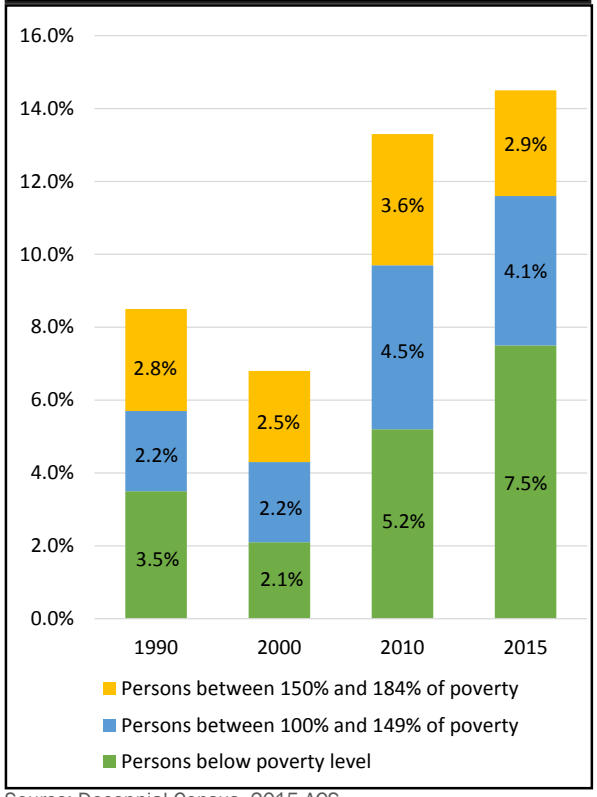
Poverty

To estimate the incidence of poverty, the Census defines a set of income thresholds based on household characteristics. These thresholds vary by the size of the household and the age of household members, and are adjusted yearly for inflation. No distinction is made for geography and cost of living. Thus, it is misleading to compare the poverty rates for areas with significantly different characteristics. Likewise, it is misleading to isolate one poverty statistic with no reference to trends over time. Instead, it is useful to review historical poverty data to identify the extent to which poverty is increasing or decreasing for a given community. It can also be helpful to compare poverty rates within a region if there is minimal variance in the cost of living.

Historically, Apple Valley has relatively low levels of poverty, but poverty has increased in recent years. In 2000, 2.1% of the population reported incomes below the poverty level. In 2010, the poverty rate was 5.2%. The current ACS estimate from 2015 shows that 7.5% of the population of Apple Valley is living below the poverty level. This is similar to the poverty rate for Dakota County (7.7%), but less than the poverty rate for the Twin Cities metro area (10.3%).

Figure 3.20 shows poverty trends over time, including the percent of the population below the poverty level, as well as the as the percentage of people earning 100-149% percent of the poverty threshold, and the percentage earning 150-185% of the poverty threshold. From 2010 to 2015, the poverty level increased while the percentage of individuals earning 100-185% of the poverty threshold decreased, a general indication that many individuals who were close to the poverty level in 2010 have now fallen below. Wage stagnation is one explanation for this trend, noticeable during the recession period discussed.

Figure 3.20 - Percent Poverty



Source: Decennial Census, 2015 ACS

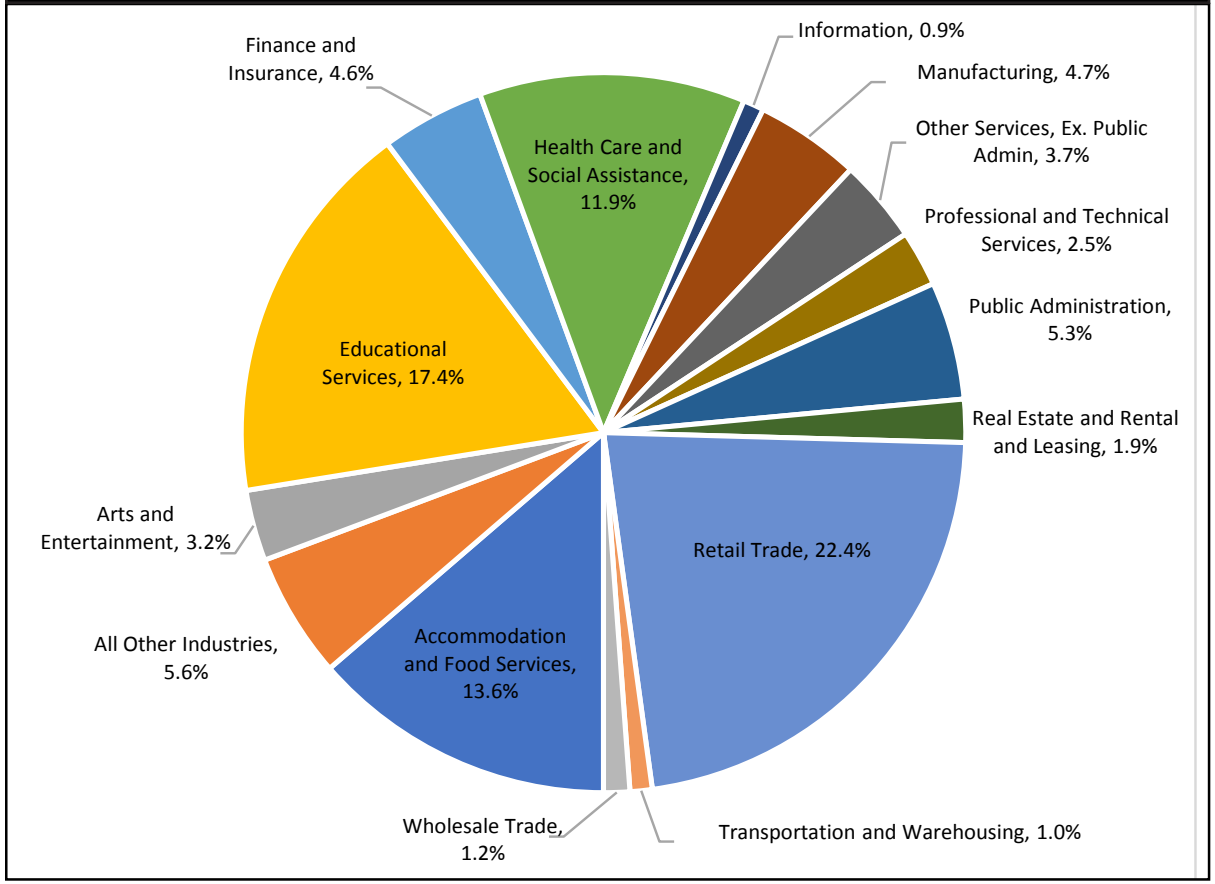
Educational Attainment

The Census shows that Apple Valley residents are increasingly well educated. From 1990 to 2015, the percentage of the population aged 25 or older that did not attend college decreased from 29.8% to 22.7%. Meanwhile, the percentage of the population with a graduate or professional degree increased from 7.8% to 14.5% In 2015, 29.3% of the population aged 25 or older had obtained a bachelor's degree and another 14.4 percent had obtained a graduate or professional degree, bringing the total percentage of adults with bachelor's degrees and beyond to over 43.7 percent.

Employment

Employment touches many aspects of community life. Jobs provide the income to pay for housing and to purchase goods and services. The location of jobs influences the amount of time that Apple Valley residents are in the community each day. Commuting decisions affect transportation systems, and the work-housing balance impacts local tax revenue and expenditures. Apple Valley residents who commute to another jurisdiction for work utilize public services outside Apple Valley throughout the day and contribute to the local economies of other jurisdictions.

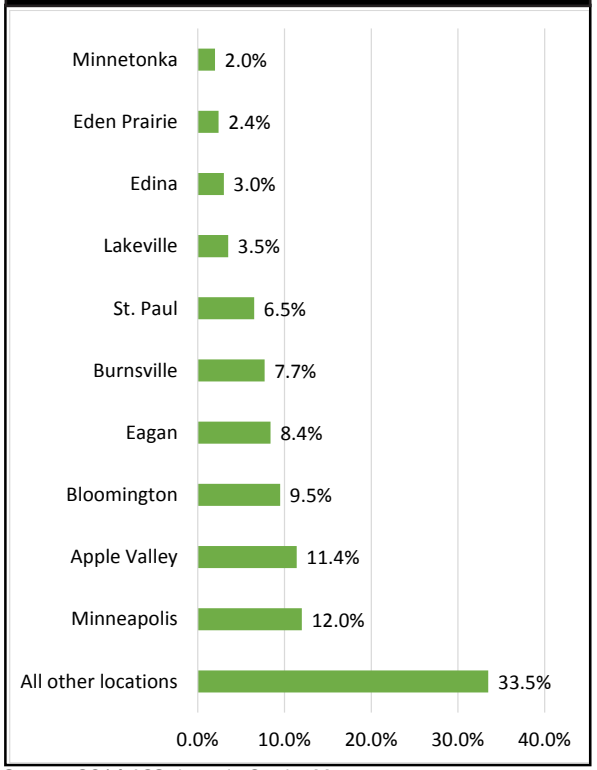
Figure 3.21 - Employment By Industry



Source: Quarterly Census of Employment and Wages, 2nd Quarter, 2015

The Quarterly Census of Employment and Wages (QCEW) provide quarterly data on employment by industry for local geographies. Three industries employ more than half of the workforce: Retail Trade, Educational Services, and Accommodation and Food Services. Health care, another major industry, employs 12 percent of the workforce. Note that the majority of local jobs are filled by individuals who live outside of Apple Valley. Figure 3.21 shows a breakdown of employment by industry for Apple Valley residents for the second quarter of 2015.

Figure 3.22 - Place of Work



Source: 2014 ACS data via On the Map.

Place of Employment

The Census tracks the location of work place for the population. In 2014, only 11.4% of residents in Apple Valley reported a place of employment in Apple Valley; the other 89% of residents commuted outside the city. Approximately 37.7% of Apple Valley residents work in Dakota County, while 39.5% travel to Hennepin County. The City of Minneapolis employs a higher share of Apple Valley residents than Apple

Valley itself. Figure 3.22 depicts the place of work for Apple Valley residents.

In 2014, the Census recorded 16,327 jobs in Apple Valley. Of these, 13,312 (81.5%) were filled by people living elsewhere, and 3,015 (18.5%) were filled by the local workforce. Meanwhile, 23,367 workers commuted outside the city for work. Therefore, Apple Valley is a net exporter of jobs. This is reflected in its land use patterns, with relatively more residential acreages than commercial and industrial acreages. Workplace location also affects daily commuting trends, with high shares of workers commuting by personal vehicle.

Commuting

Travel-to-work data shows a strong dependence on automobiles. The share of Apple Valley's workforce that drives alone to work is 81.6%. The workforce makes limited use of public transportation, with 4.7% of commuters using that mode. However, use of public transit has grown 1.6% since 2000 due to the increase in transit services available. The percentage of workers who work from home is increasing, consistent with global trends. The 2015 Census reported a mean commute time of 24.5 minutes.

These commuting patterns are reflective of Apple Valley's suburban setting in the Twin Cities region. The decision to live or work in Apple Valley will continue to be influenced by the cost of travel, which includes the cost of fuel and the cost of travel time, which reduces worker productivity and/or workers' leisure time. Over the timeline of this plan, these factors will be influenced by emerging technologies such as automated vehicles (AVs) and connected vehicles (CVs), and changing economic conditions, such as the scaled transition to renewable energy sources.

Practicing Sustainability and Resilience

Apple Valley values the natural environment. Natural amenities promote physical, cognitive, and emotional health. The natural environment provides ecosystem services, such as water filtration and recharge. Most amenities and services – clean water and air, forests, sunlight, wind – are or can be commoditized to some degree, meaning they have economic value as well as environmental value. For example, in 2017, the Urban Land Institute reported analytics for green infrastructure and water management demonstrating added public and private value. Thus, there is intrinsic and economic value in conserving resources and, increasingly, by investing in partnerships, technologies, and industries that advance sustainability goals. Recognizing these benefits, Apple Valley seeks to maintain the quantity and quality of its natural resources for future generations to use. This is a common definition of sustainability.

A related term that has gained wider usage is resilience. Resiliency is the ability to avoid, withstand, or bounce back from stress or shock. These shocks may stem from environmental, economic, or societal changes,. Thrive MSP 2040, the Twin Cities regional plan, encourages cities to plan for the effects of climate change and other vulnerabilities. Many cities in America have adopted resilience plans and shared their strategies with one another. (www.100resilientcities.org).

Both terms, sustainable and resilient, are used in this plan. Sometimes, either word may be appropriate. For example, efforts to expand the use of solar as an energy resource are sustainable – this resource is renewable – and resilient, because solar, combined with an adequate energy storage system, is an ideal backup power source to protect against potential outages.

Sustainability – *Maintaining the quality and abundance of natural resources and the services they provide for future generations to use and enjoy.*

Resilience – *The capacity of natural, political, and economic systems to avoid, withstand, and recover from disruptions without losing the ability to perform their basic functions.*

The following text describes Apple Valley's recent efforts regarding environmental sustainability and resilience. The City has undertaken a variety of initiatives in recent years to demonstrate best practices in its own endeavors and encourage similar practices by the private sector. By setting and achieving goals for sustainable action and environmental stewardship, the City promotes a high

quality of life that is attractive to prospective residents and employers, and which reflects the values of current citizens and industry. By cementing these goals and expanding its sustainability and resilience initiatives, the Comprehensive Plan will continue to promote wise, efficient management of local resources to foster enduring prosperity.

GreenStep City

The Minnesota GreenStep Cities program is a public-private initiative that guides and recognizes communities for achievement of sustainability goals. Apple Valley resolved to become a GreenStep City in 2011 and achieved level three status in 2015, having implemented many new best practices during that time. At the time, level 3 was the highest status that could be achieved. Since then, the GreenStep program has expanded to levels 4 and 5. The City aspires to become a level 5 GreenStep City, which requires it to establish additional performance metrics and demonstrate quantifiable progress toward achieving its goals. The Comprehensive Plan is a starting point for achieving this goal. For example, the Great Plains Institute produced a report of Apple Valley's baseline energy usage. Using GPI's Wedge application, the City can model the effect of the various carbon-cutting strategies. GPI's report is included in Appendix A. To demonstrate quantitative improvements in other sustainability areas, the City must establish a similar method for quantifying existing conditions and policy impacts. During preparation of the Comprehensive Plan, a high level of public support for sustainable initiatives indicates there is local momentum to create a citizen task force charged with overseeing the GreenStep initiative.

Performance Buildings

Several public facilities demonstrate principles of sustainable building design and operation. The following buildings have attained recognition from LEED or Green Globe, two national rating systems.

- A. V. Municipal Center, features extensive use of daylight harvesting to minimize artificial lighting, as well as an innovative storm water management system (LEED)
- Liquor Store 3, sources its power entirely from a geothermal well located under the parking lot, a first-of-its-kind facility in the state. (Green Globes, Two Globes)
- Apple Valley Senior Center, features daylight harvesting, in-floor radiant heating, and a green roof. (Green Globes, Two Globes)
- Valleywood Clubhouse, features extensive use of daylighting and other energy efficient elements. (Green Globes, Three Globes)

Efficient Utilities

The City has used funding from the American Recovery and Reinvestment Act (ARRA – the economic stimulus package of 2009) to install energy efficient lighting and automated building and HVAC controls in many public facilities. It partnered with Dakota Electric Company to create a pilot zone for LED street lights, which has allowed it to test these fixtures and expand the program to other areas of the City. The ongoing partnership with Dakota Electric also enabled positive change for private residences. Using grants from the Joyce Foundation and the Environment and Natural Resources Trust Fund, the City created incentives for homeowners to participate in its Better Energy Program. In two years, this program helped 780 households install 16,680 CFL light bulbs, 759 low-flow shower heads, and 1,491 low-flow aerators. Simple, low-cost improvements like these can have a big impact on energy savings.

Water Monitoring and Restoration

Apple Valley supports several volunteer opportunities to monitor water quality. This data helps the City understand the local and regional impacts to the watershed and make informed decisions about future development and mitigation. As the saying goes, cities can't manage what they don't measure. Through the Council's Citizen Assisted Monitoring Program (CAMP), volunteers collect water quality samples from five local lakes. A similar initiative, the Wetland Health Evaluation Program (WHEP), is used to track the health of Apple Valley's wetlands.

Recycling

City recycling is conducted by Dakota Valley Recycling, which also performs recycling services for Burnsville, Eagan, and Lakeville. Dakota Valley Recycling conducts residential curbside recycling in Apple Valley. The program also offers funding and assistance to help businesses evaluate their waste disposal needs and implement right-sized recycling services. The County is updating its solid waste master plan with the goal of recycling 75% of waste by 2030.

Energy

To become more resilient and sustainable, one of the biggest improvements Apple Valley can make is to increase the amount of energy that is consumed from renewable sources. The award-winning design of several public buildings demonstrates the City's commitment to minimize its carbon footprint and improve efficiency. Performance buildings feature daylight harvesting, geothermal power, or a green roof. There is potential for larger savings when best practices are extended to the private sector. Since 2007, Apple Valley business have installed more than 100 efficiency projects and cut annual energy bills by $285,000.

State Guidance

In February 2016, Minnesota introduced the 50 by '30 Initiative, a bipartisan bill formalizing the State's intent to increase its renewable standard from 25 percent to 50 percent by the year 2030. If this goal is met, the State will benefit from improved air quality, lower energy costs, and the creation of skilled jobs in emerging industries. Statewide, the renewable standard – the amount of energy sourced from renewables – surpassed 20 percent in 2016.

Regional Guidance

Apple Valley has chosen to participate in the Regional Indicators Initiative, a program offered by Great Plains Institute. By partnering with metropolitan communities, GPI provides an assessment of energy usage and helps communities visualize the steps needed to reach their energy reduction targets, through the Local Government Project for Energy Planning (LoGoPEP). This program benefits all localities, which can compare their plans with one another and with the State's 50 by '30 plan. The LoGoPEP assessment for Apple Valley is included in Appendix I.

Solar

Solar energy is the most abundant resource in Minnesota. Solar output has expanded rapidly as technology has improved and the price of solar has dropped. Yet, this resource remains underutilized. Total insolation in Apple Valley is approximately 30 million megawatt hours per year. **Figure 3.23** shows how this gross solar potential is distributed across Apple Valley. Bright orange areas have high potential and dark areas have low potential.

It is estimated that rooftop solar in Apple Valley could generate up to 250,000 mwh/yr, given rooftop availability and current technology, which assumes 10 percent conversion efficiency. If even a fraction of this resource potential were developed, it could power several hundred homes.

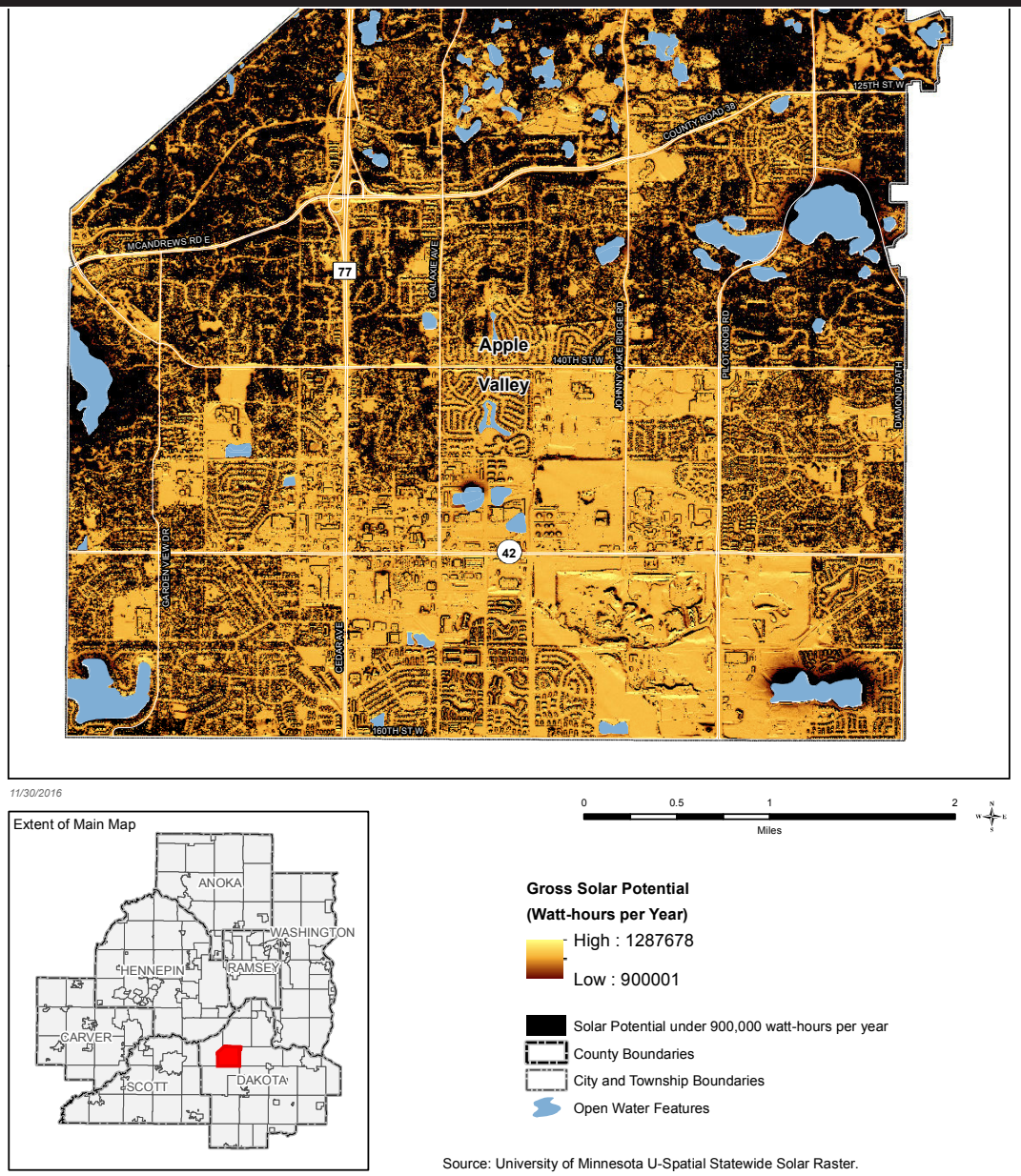
Apple Valley's subdivision regulations protect access to solar in new development and existing developments, stating that in the case of all platting, the subdivision may be evaluated for its orientation for possible solar energy system use and for its potential impacts to adjacent property. This criterion does not expressly prohibit or restrict development which impedes solar potential, but it could be applied as such. The extent to which this criterion is consistently prioritized will affect sustainability outcomes. In addition to local regulations, solar easements are enabled under Minnesota Statute 500.30 Subd. 3. Solar activities can also be regulated through zoning if necessary.

Appendix I provides a further accounting of Apple Valley's energy trends and charts strategies for developing solar potential in addition to other renewables. General energy goals are included for Land Use, Economic Development, and other relevant chapters of the plan.

Wind

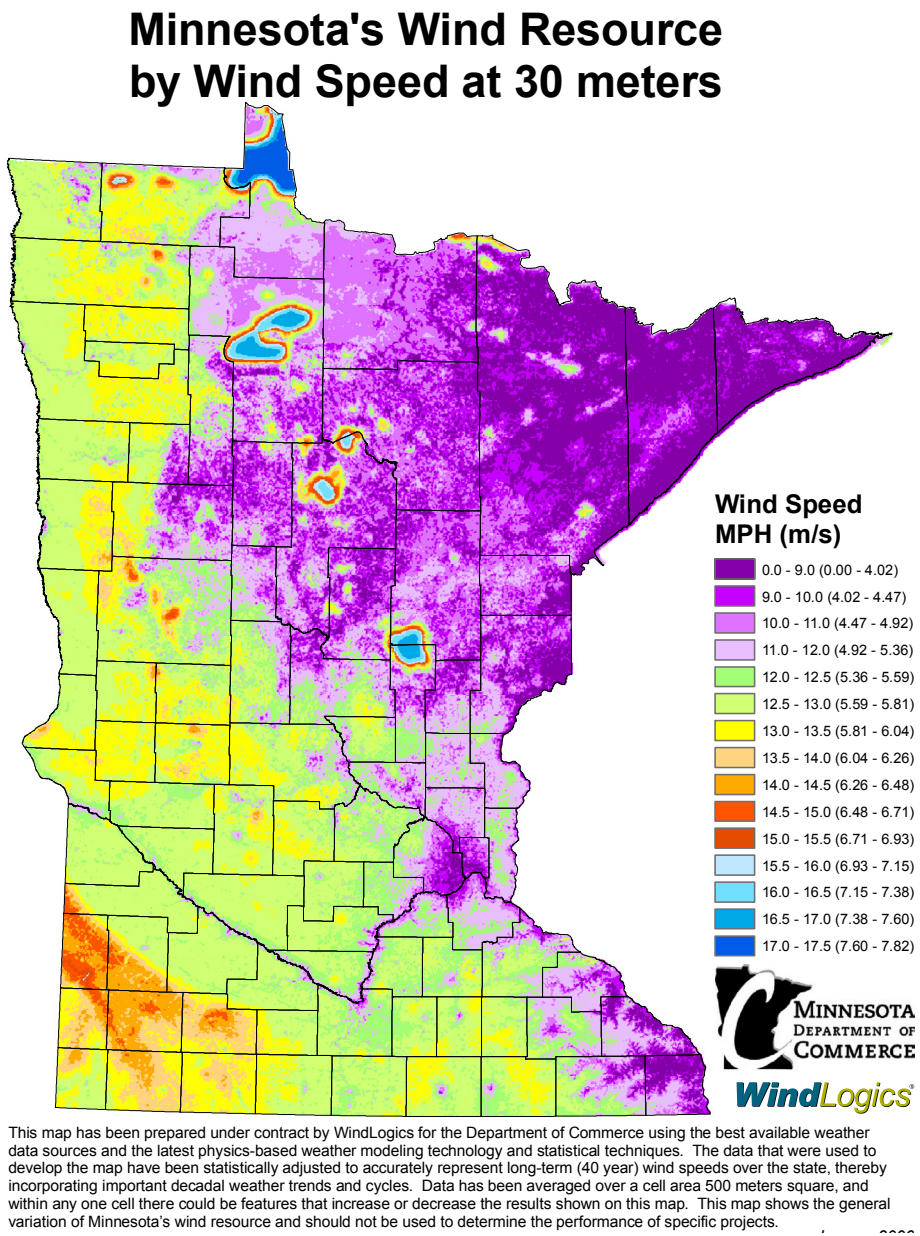
In general, community-sourced wind has less potential than solar. Small-scale wind turbines are less efficient and more visually disruptive than solar. **Figure 3.24** shows wind potential for the state of Minnesota; the urbanized metro has some of the lowest potential for direct wind generation in the state. Nevertheless, electricity produced from regional wind farms provides a significant contribution to Apple Valley's energy supply. Xcel Energy is routinely rated as the nation's top wind energy utility.

Figure 3.23 – Local Solar Suitability Map



Source: University of Minnesota U-Spatial Statewide Solar Raster.

Figure 2.24 – Minnesota Wind Potential



Community Context Implications for 2040

The Community Context chapter is more than simply gauging the existing conditions of Apple Valley and gaining an understanding of various trends affecting the community. Impactful issues can be drawn out of the data that will inform plan policies and strategies. These issues are outlined below.

Community Aging

The age 70-74 cohort is projected to have the largest net increase through 2040 of any age cohort. The population above 65 years is projected to have significant increases in Apple Valley as baby boomers continue to age.

Potential Plan Considerations:

- If seniors are to be kept in the community, housing policies and options will need to be flexible for their needs; offering support to age-in-place and new housing choices sought by seniors.
- Parks and trails are not only important for younger segments of the population. Public recreational spaces can be designed to better accommodate seniors.
- As the population as a whole becomes older, the demand for health care will likely increase. Future land uses need to provide flexibility to allow more clinics, medical offices, hospitals, and related facilities.

Increasing Diversity

Race and ethnicity, as well as the types of households (e.g. live alone, married with kids, non-family, etc.) are becoming increasingly diverse in Apple Valley.

Potential Plan Considerations:

- Planning decisions need to be increasingly sensitive to the needs of a diversifying population.
- Park and recreation facilities and community events will become increasingly important as areas that bring different races, ethnicities, age groups, and others together as a community.
- Encourage new development and redevelopment to provide a variety of household types to better accommodate the changing population.

Jobs-Housing Balance

Apple Valley imports its lower-wage work force. The 4 top employers in Apple Valley by Industry (Health Care and Social Assistance, Educational Services, Accommodation and Food Services, and Retail Trade), representing over 65% of those employed in Apple Valley, support average hourly wages below the metro average. The majority of these jobs are filled by people living outside of the city. Conversely, 89% of those who live in Apple Valley work elsewhere. The relative lack of high wage job opportunities encourages residents to commute to other cities for those types of jobs.

Potential Plan Considerations:

- Focus on attracting and accommodating more development that caters to higher wage jobs, such as:
  - ✓ Commercial Office; medical office/ clinics
  - ✓ Business Parks; mixed use
  - ✓ Industrial Parks; limited industrial
- Reduce in-commuting of the lower wage workforce by expanding housing options and other pathways to increasing housing affordability.

Housing Affordability

Average household incomes are higher in Apple Valley than for Dakota County and the Twin Cities metro. However, the incidence of poverty is increasing in Apple Valley and throughout the region. While Apple Valley is affordable for most residents, there is a general lack of affordable housing for low-income earners throughout the Twin Cities metro. Apple Valley is committed to meeting its share of the regional affordable housing requirement and increasing local access to well-paying, head-of-household jobs.

Potential Plan Considerations:

- Increase the supply and mix of housing types to allow more opportunities for affordable rents and mortgages.
- Consider housing proximity to below-average wage industries in order to retain and grow

this workforce in Apple Valley and support associated industries.

- Continue to strengthen multimodal infrastructure: pedestrian, bicycle, and transit options need to be made increasingly available.
- Maintain the Manufactured Home Park as a valuable affordable housing commodity.

National Retail Trends

The current nationwide retail bubble requires monitoring and repositioning, given the significant amount of retail space currently available in Apply Valley. Moving forward, new retail development opportunities have the potential to in-fill sought after and amenity retail choices. Top internet sellers continue to have brick and mortar stores.

Potential Plan Considerations:

- The conventional formula of big box stores and strip malls with significant retail square footage is not the only way to provide retail opportunities. Encourage the diversification of the city's retail development. Consider increased intensity of retail space, allowing for smaller square footage retail space to increase opportunities for small and medium sized businesses, to reduce the city's reliance on large chain retailers.
- For older, or more at-risk big box store and strip mall locations, provide contingency plans in the event such locations cannot attract replacement retail businesses. Envision what post-retail uses might fit into targeted locations.

Development Opportunities

The Fischer Sand and Aggregate Mining Area and the downtown Central Village area represent the last areas with significant opportunities for new development of significant scale.

Potential Plan Considerations:

- The City must leverage these coveted areas to provide development that solves issues identified in the Community Context, primarily including development that:
  - ✓ Attracts a high-wage workforce
  - ✓ Allows for medical services
  - ✓ Provides a variety of housing options on a limited basis in the mining area
  - ✓ Provides multiple uses at a higher intensity and density than how the City has historically developed
- Ensure that these areas are well connected into the surrounding urban fabric through careful development design and the consideration of multimodal connections.

Technology Trends

As technological change opens new frontiers, Apple Valley envisions itself as a regional leader for new technology deployment and investment. Technological improvements increase work efficiency, resulting in greater financial savings, further investment, and economic growth. Many technologies will enable progress toward sustainability or resiliency initiatives – for example, the price of harvesting solar energy is rapidly decreasing to the point where transition from conventional fuels is justifiable on economic grounds, not just ethical ones.

Several emerging technologies could impact Apple Valley between now and 2040, although there is uncertainty about when or whether they will be adopted, the scale of adoption, and the magnitude of their effects on urban systems. For example, the emergence of automated and connected vehicles is widely touted as a defining moment for personal transportation, but the commercial adoption of these technologies has been limited thus far; and while American automakers have invested in electric vehicle production, their ability to meet their production goals is still largely dependent on public subsidy. The best way Apple Valley can accommodate these and other nascent technologies is to develop a policy framework that addresses them now. This will allow the City to leverage public-private relationships and make guided, strategic investments when opportunities become available.

Apple Valley seeks to promote equitable technology development and expanded access to technology through continued reinvestment in public services and consistent community engagement. Fiber to the home and business is one example with the ability to grow one the cost/benefit has been addressed.